



Population Projections

for the City of St. John's

June 2014

ST. JOHN'S

Newfoundland
Labrador

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About the Economic Research and Analysis Division

Economic Research and Analysis (ERA) is one of two divisions in the Economics and Statistics Branch of the Department of Finance. The other is the Newfoundland and Labrador Statistics Agency. The Economic Research and Analysis Division is the central point within Government for economic and demographic analysis. The division's mandate is to provide macroeconomic analysis and forecasting; demographic analysis and projections; analysis of the provincial, national and international economies; and policy and project impact assessments. It is responsible for the Newfoundland and Labrador Econometric and Input/Output Models, as well as, the Population Projection Model. ERA is also responsible for the publication of the budget document, *The Economy* and the mid-year report, *The Economic Review*. As part of its mandate, ERA is responsible for monitoring and briefing Government on demographic trends in the province, and preparing long-term population projections for planning purposes. Population projections for various regions within Newfoundland and Labrador are produced annually and are available on ERA's website (economics.gov.nl.ca).

Introduction

This report outlines population and household projections to 2036 for the City of St. John's.¹ They were prepared by the Economic Research and Analysis Division (ERA) of the Department of Finance at the request of the City of St. John's.

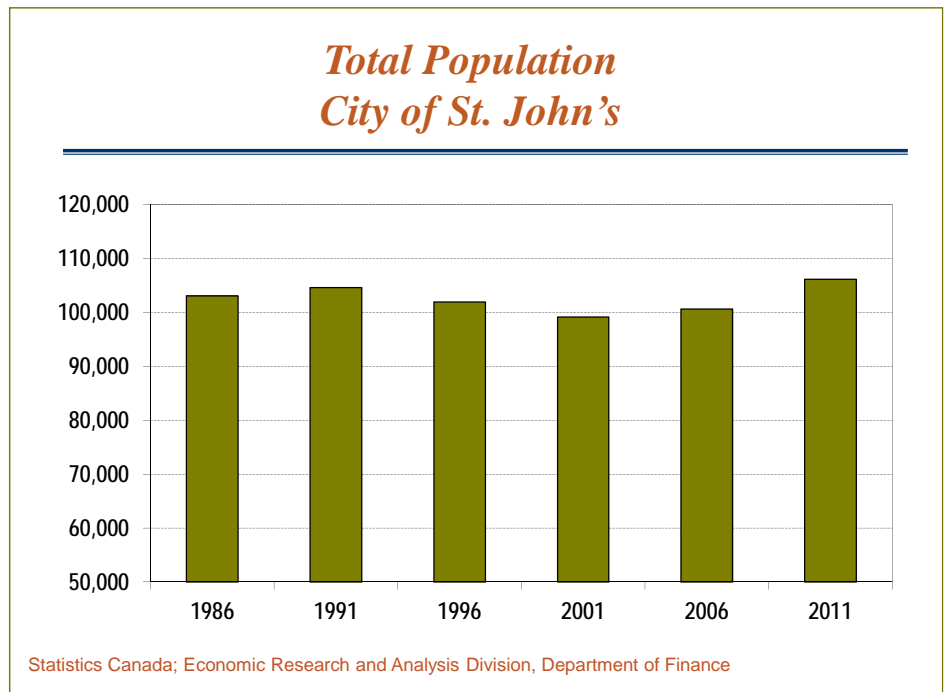
These projections are founded on Census data from 1986 to 2011. This is the most reliable information available on the population of the municipality of St. John's and provides the benchmark for the projections. Population estimates for St. John's, combined with assumptions involving fertility rates and age and gender specific cohort survival rates, were used to project the City's population to 2036. Three scenarios were developed (high, medium and low) by varying the future fertility rate and cohort survival rate assumptions.

Recent Trends

The population of the City of St. John's has fluctuated around 100,000 over the past 25 years. The population declined from approximately 105,000 in 1991 to around 99,000 in 2001 as the provincial economy adjusted to the collapse of the groundfish fishery. However, population growth has resumed in recent years anchored by buoyant economic conditions, climbing to roughly 106,000 in 2011.

The population decline from 1991 to 2001 was entirely due to net out-migration which more than offset low natural population growth (births less deaths). However, from 2001 to 2011 the City recorded modest population gains due to net in-migration and moderate natural population growth.

Between 1991 and 2004 the number of births in the City trended down from 1,336 births in 1991 to a low of 909 births in 2004. This trend was due to declining fertility rates and, since 1996, a decline in the number of women of childbearing age (15-49 years). Since 2004, net in-migration and a modest uptick in the total fertility rate have produced a small rebound in births. Births averaged just over 1,000 annually over the 2005-2012 time span (see chart on next page).

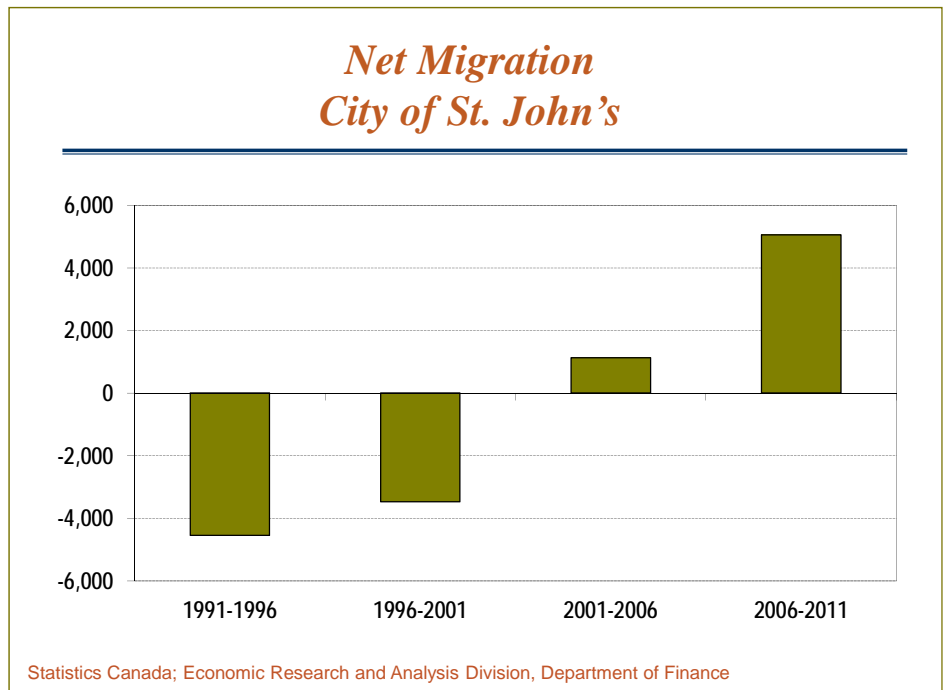
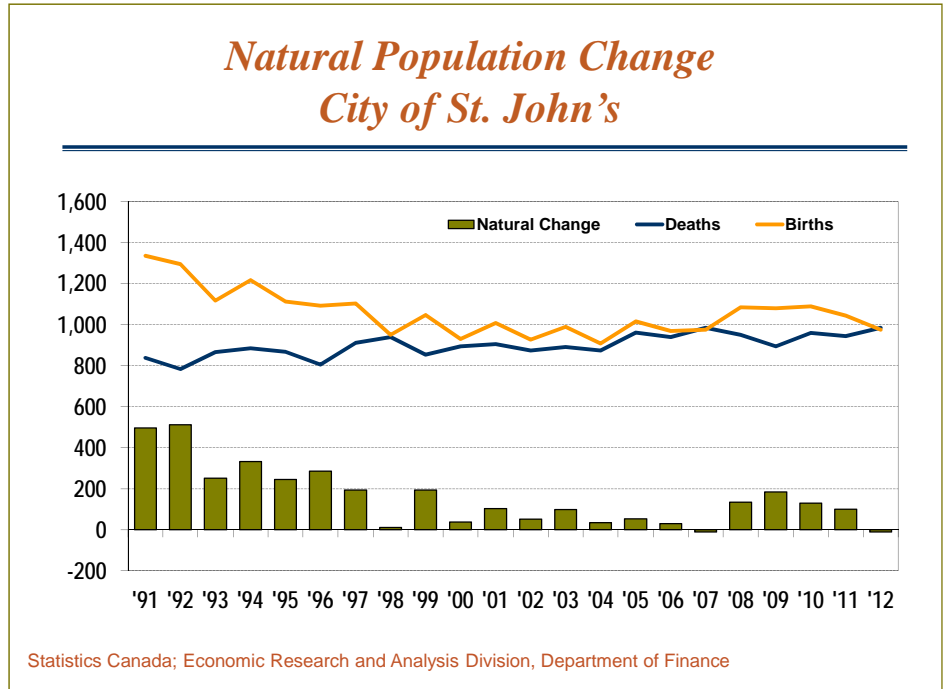


¹ Note this analysis only covers the City of St. John's. It does **not** include surrounding municipalities which are often combined with the City of St. John's and referred to as the St. John's Census Metropolitan Area (CMA).

The most reliable demographic information for the City of St. John's is only available every five years from the Census. Therefore, net migration flows for the City can only be calculated in five year intervals. Between 1991 and 2001, the City lost approximately 8,000 people to net out-migration (see chart below). These losses more than offset natural growth and reduced the population. Between 2001 and 2011 the City experienced net in-migration of about 6,200 and population grew by nearly 7,000 as the City experienced robust economic conditions.

The latest population estimates from Statistics Canada for the St. John's Census Metropolitan (which includes the City of St. John's and surrounding communities) indicates an upward trend in the CMA's population from 2011 to 2013.

In addition, strong housing starts over the past two years also point to further net in-migration and population growth in the City.



Projections

Low, medium and high population scenarios were developed for consideration. Each scenario contains different assumptions for fertility rates and cohort survival rates. A cohort survival rate reflects the net effects of deaths and migration on each 5 year age cohort over a five year period.²

Assumptions

Fertility Rates

For the low scenario, it was assumed that the total fertility rate for the City of St. John's will gradually trend down from an average of 1.36 observed for the City over the 2008 to 2012 period to 1.16 by 2036. This results in annual births trending down from about 1,000 in recent years to roughly 730 in 2036.

For the medium scenario, it was assumed that the City's total fertility rate remains stable at 1.36 until 2036. This results in annual births trending down from 1,000 in recent years to approximately 900 in 2036. Births fall despite the stable fertility rate because of the aging population and a further decrease in the number of woman of childbearing age over the projection period.

For the high scenario, it was assumed that the City's total fertility rate will gradually trend up from 1.36 to 1.56 by 2036. This results in annual births trending up slightly from 1,000 in recent years to approximately 1,100 in 2036.

Cohort Survival Rates

Cohort survival rates were used to project all age groups except the 0 to 4 year group, which was projected based on fertility rate assumptions.

For the low scenario, it was assumed that beyond 2011, future cohort survival rates would be similar to the average 1986-2011 rates, with higher weights given to the latter two Census periods. This implies high rates of in-migration among the 15 to 24 age cohorts, fairly high net out-migration of the 25 to 34 cohorts, and little net-migration of older cohorts. The net in-migration of 15 to 24 age cohorts and the subsequent out-migration of 25 to 34 age cohorts are linked to post-secondary educational institutions in the City. Post-secondary students migrate to the City to attend school and then a portion of new graduates leave for employment opportunities elsewhere.

For the medium scenario, it was assumed that beyond 2011, future cohort survival rates would be similar to the average of 2001-2006 and 2006-2011 rates. This assumption results in total net in-migration into the City similar to levels experienced during the 2001 to 2011 period (see chart on previous page).

For the high scenario, it was assumed that beyond 2011, cohort survival rates would be similar to the weighted average of 2001-2006 and 2006-2011 rates, with a higher weight given to the 2006-2011 rates.

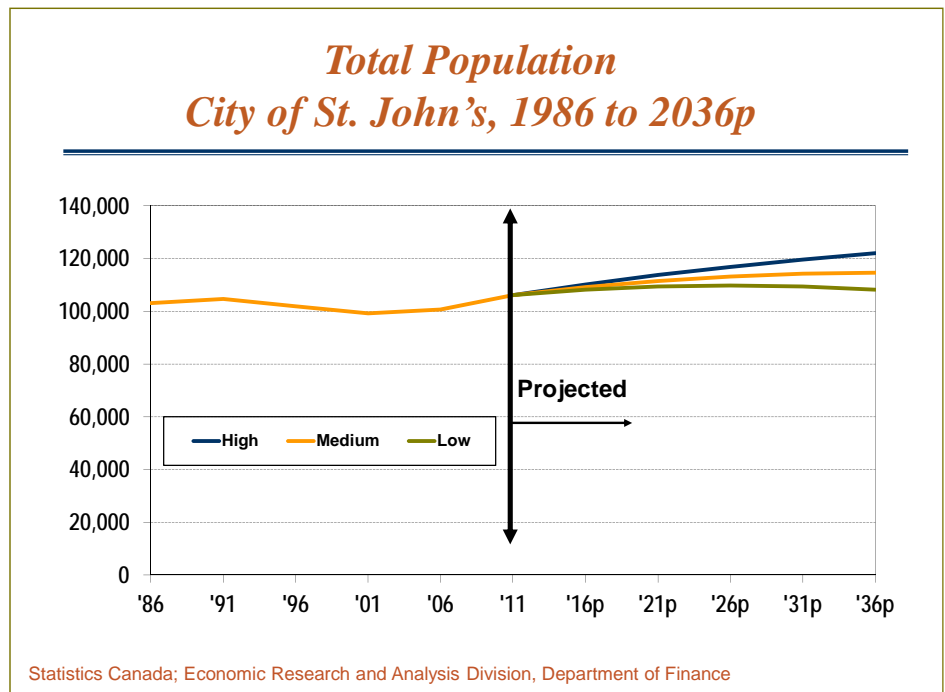
² This concept is best explained through example. Assume that in 1990 there are 100 persons in the 25 to 29 age group in a community. Over the next five years five persons die and 10 new individuals move into the community in the same age group. This implies that by 1995 there would be 105 persons in the community in the 30 to 34 age group (remember that everyone has matured five years). This means that the cohort survival rate for the 25 to 29 age group would be 105 per cent.

Results

Total Population

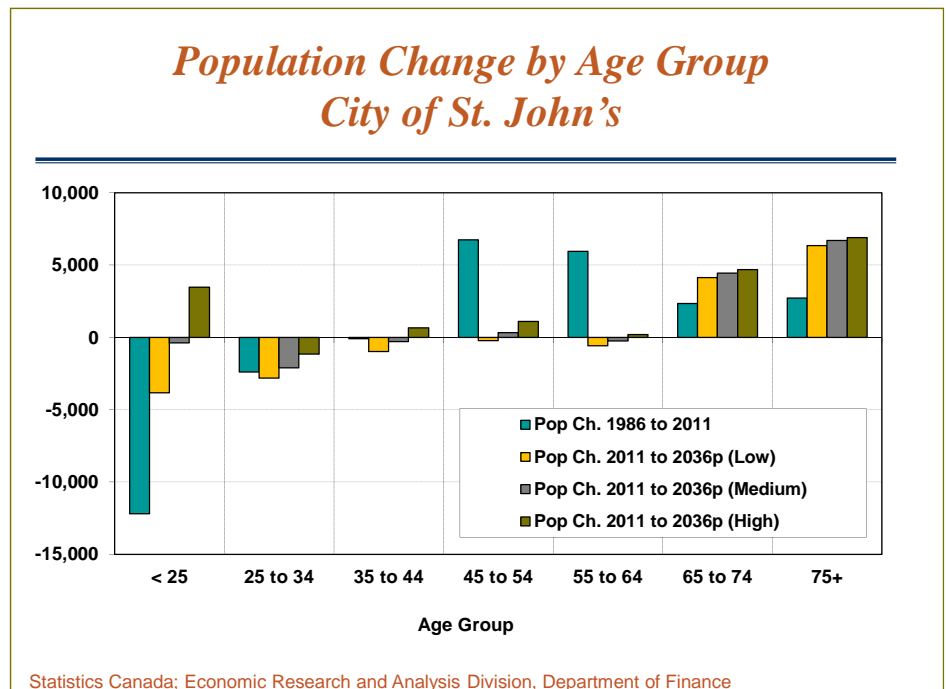
The results from the three scenarios are illustrated in the chart to the right. In the low scenario, population increases slightly from 106,170 people in 2011 to roughly 108,222 in 2036. The medium and high scenarios show population increasing to 114,649 and 122,037 respectively by 2036.

In all three scenarios the population structure continues to age, with the proportion of the population 65 years of age and over in the medium scenario increasing from 14.7 per cent in 2011 to over 23 per cent in 2036 (detailed population projections by age for the City of St. John's can be found in Appendix A).



Age Distribution of Population Gains

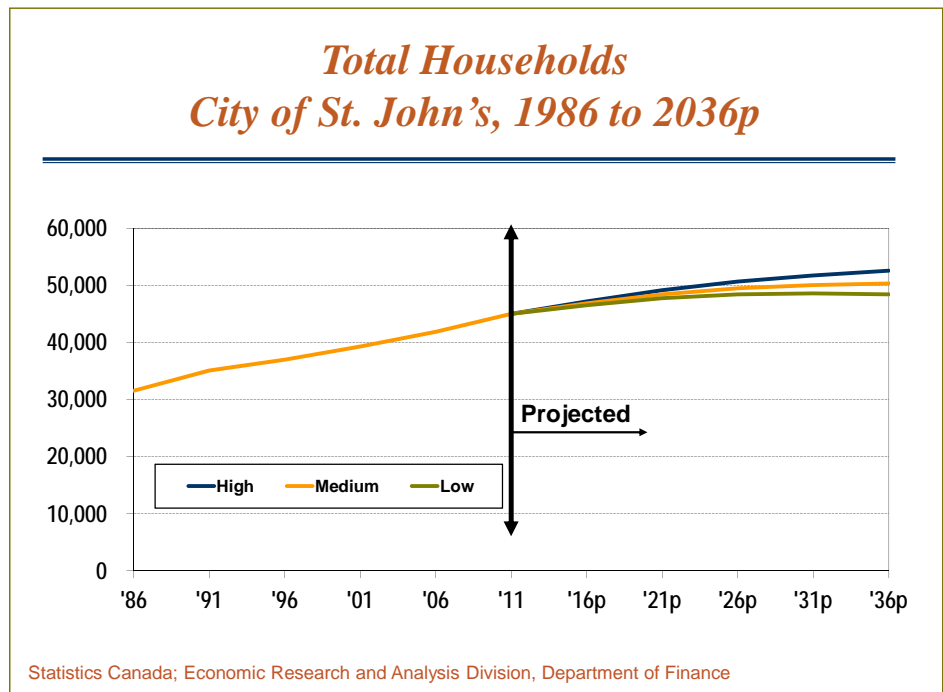
As the population ages the distribution of the population gains will change. As can be viewed in the chart to the right, between 1986 and 2011 the largest population gains were in the 45 to 54 and 55 to 64 year age groups, while those under 25 showed the sharpest decline. In all three projection scenarios those aged 25 to 34 years show the strongest decline. However, in the low and medium scenarios all cohorts less than 65 years show declines or only modest growth with most of the population growth occurring in 65 years and over age groups. In the high scenario, there is significant growth in the less than 25 age group but nonetheless the 65 years and older age groups also show large population increases.



Households

Despite a decline in the population of St. John's in the past, the number of households has risen steadily. This can be partially attributed to the fact that the portion of the population heading households (known as the headship rate) tends to rise with age. Thus, the growth in the population aged 45 to 64 from 1986 to 2011 contributed to an increase in the number of households while the decline in young population, which has very low household headship rates, exerted a smaller drag on household formation. From 1986 to 2006 the number of households

increased from approximately 31,500 to 41,500 (a 31.6 per cent increase) even as the overall population in St. John's fell from 103,000 to 100,650 (a 2.4 per cent decrease). After 2006, the resumption of population growth and declining household size resulted in total households increasing to 45,035 by 2011.



Household projections are produced by applying assumed future headship rates by age and gender to the population projections.

In the low population scenario the modest population increase over the projection period combined with population aging results in a continued increase in households. The total number of households increases 7.6 per cent from 2011 to 2036, while the population increases by 1.9 per cent.

In the medium scenario, aging and population gains causes the number of households to increase by 11.8 per cent over the projection period while the population increases by 8.0 per cent.

In the high scenario, population growth together with aging produces further increases in the number of households. The number of households increases by 16.8 per cent and the population rises by 14.9 per cent from 2011 to 2036.

As household formation outpaces population growth there is a natural decline in average household size. This occurs as the incidence of one-person and two-person households increase in the community. As the baby boomers continue to age and their children mature and leave home, two-person households become more common. In addition, the death of a spouse in an older household will result in more one-person households as the population ages.

Appendix A

Population and Household Projections For the City of St. John's Low, Medium, and High Scenario