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*Charting Progress Towards a “Better Life” in  
Newfoundland and Labrador:  
Starting with the Basics*

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**CARE Research Report 2016-02**



*Charting Progress Towards a “Better Life” in  
Newfoundland and Labrador:*

# Starting with the Basics

## 1.0 Introduction

Over the last decade, Newfoundland and Labrador has seen tremendous economic growth. Provincial Gross Domestic Product (GDP) has increased significantly, while household income has reached its' highest level in our province's history. Traditionally, economic indicators like these have been used to symbolize progress within our society. However, it is also important to consider whether we should be looking at something different. How do these indicators reflect the well-being of our residents? What about the social progress of our society? Is there something else we should consider?

The Better Life Index works to provide an answer to many of these questions. This index measures the well-being of our society and helps paint a picture of what are the values and priorities for Newfoundlanders and Labradorians. Rather than just income or GDP, this index aims to measure how other things, such as job satisfaction or work-life balance, affect one's well-being. More than just numbers, this index will encourage provincial residents to consider how well they are doing, while providing governments and the private sector the tools needed to ensure responsible decision making.

## 1.1 Index Development

Originally developed by the Organization for Economic Cooperation and Development (OECD) to compare wellness across the 34 OECD partnered countries, the Better Life Index has been recently reconstructed to include data for all ten Canadian provinces. In doing so, we can not only review our performance on a provincial level, but can compare our well-being to the other provinces and other OECD countries. These comparisons play a significant role in this paper, as we can analyze what indicators of well-being we are succeeding in, and what indicators we have not seen rise in, despite improvements in our traditional economic indicators.

The original OECD Index collects data from numerous reputable sources including OECD and National Accounts, United Nations Statistics, and the Gallup World Poll. For the provincial-level expansion, data has been extracted from similarly reputable Canadian sources, including our provincial community accounts, and uses a similar methodology as the original OECD index. This reliable methodology, as well as annual updates, ensures that comparisons are both up-to-date and accurate.

## 1.2 Eleven Dimensions of Well Being

The Better Life Index is based upon the measurement of eleven topics or "dimensions" which the

OECD has previously identified as essential to well-being. These are further divided into two categories: material living conditions (including housing, income, and jobs) and quality of life (including community, education, environment, civic engagement, health, life satisfaction, safety, and work-life balance). The measurement of these dimensions each consist of different indicators which are explained in-detail later in this paper.



*Figure 1.0 – The Eleven Dimensions of Well-Being*

### 1.3 Setting Your Own Index

The adjusted provincial version of the OECD Better Life Index is available for viewing on the website

of the Newfoundland and Labrador Community Accounts. Users are able to visit here to have a graphical look at the index. Furthermore, they are able to assign a “weight” to each of the eleven dimensions, and calculate their own index. This custom, user-made index illustrates how the provinces compare based upon what dimensions are important to a specific user.

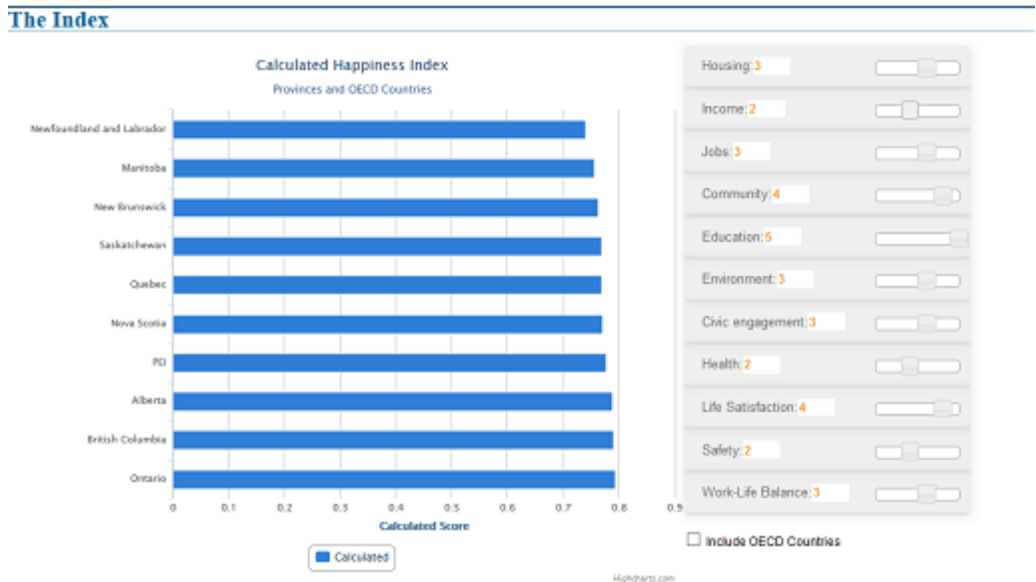


Figure 1.1 – User-Calculated Index Chart

### 1.4. Wellness in Motion

A feature that is unique to our modified Better Life Index is the motion chart application. This application allows users to compare changes in two variables as time changes. For example users can compare changes in Life Satisfaction as GDP per capita changes from 2000 (the base year) to 2013. This makes it easy to draw comparisons of social progression (whether in terms of specific dimensions or indicators) between the ten provinces used in the measure.

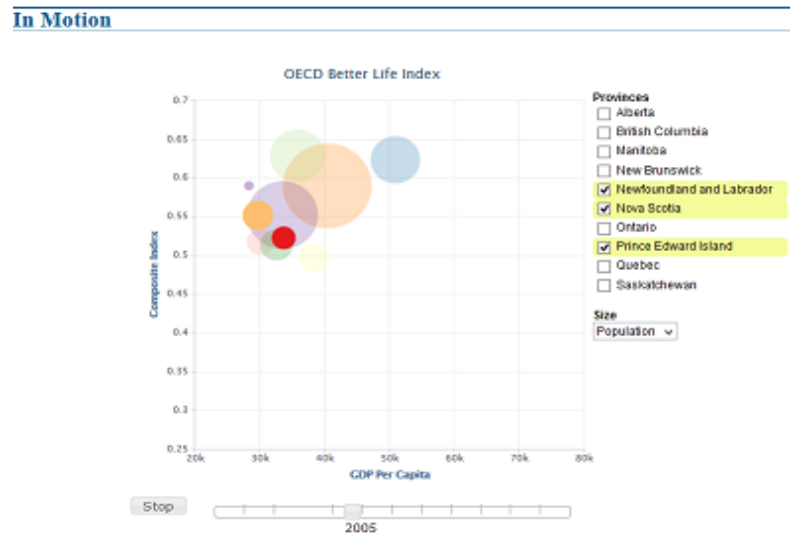


Figure 1.2 – User-Calculated Motion-Chart Comparison

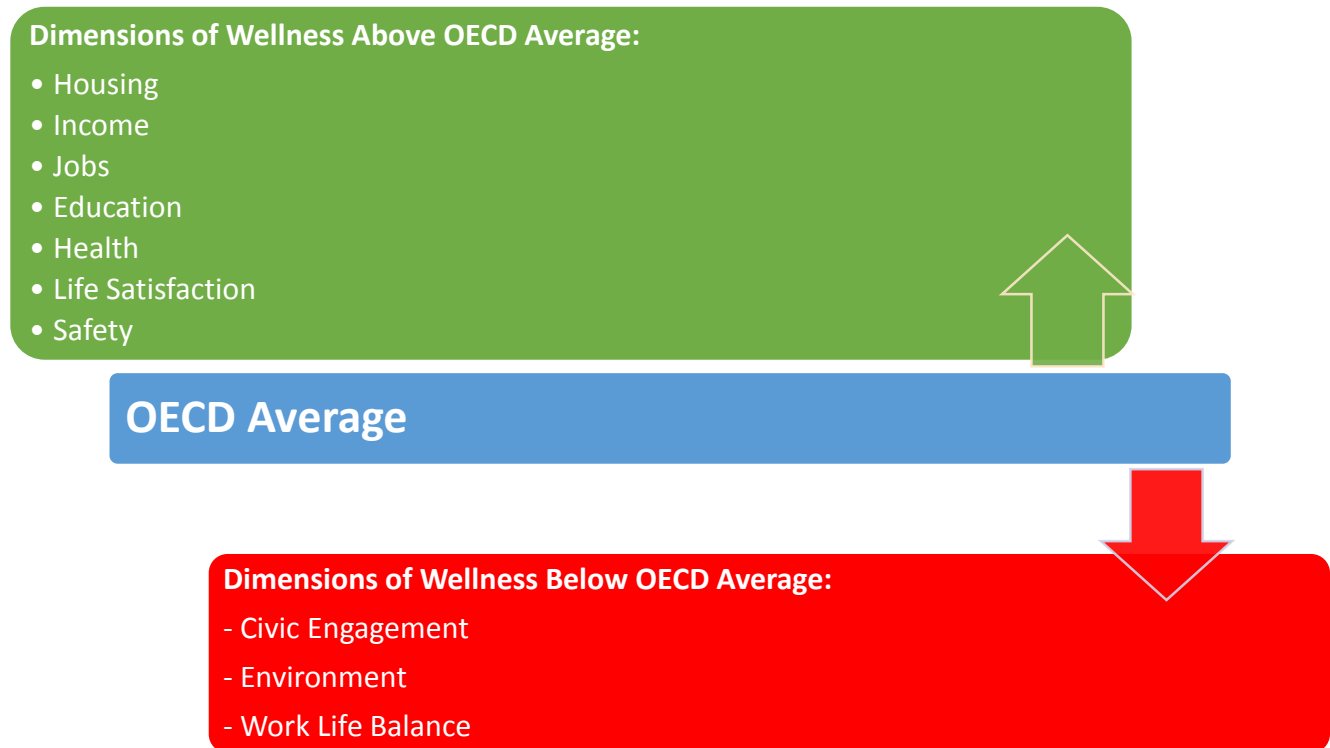
## 2.0 How We Are Doing: Life in Newfoundland and Labrador

The Better Life Index can be used to paint a clear picture of overall well-being and social progress in a

particular nation or country. In reviewing this model with respect to Newfoundland and Labrador, we can see the province to be amongst world leaders in many measurements of well-being when compared to OECD nations and other Canadian provinces.

## 2.1 Individual Indicators

Newfoundland and Labrador's wellness can be seen by looking at individual indicators, holding other weights constant, and analyzing how the province compares. Using this approach we can see that on an international scale, the province ranks above the OECD average in eight out of the eleven dimensions of well-being, signifying that for most measurements, Newfoundlanders and Labordrians are some of happiest in the world.



*Figure 2.0 – Comparison of Wellness Dimensions for NL to OECD Average*

Similarly, this approach can be used to compare dimensions amongst the provinces. In doing so, Newfoundlanders and Labradorians rank within the top three provinces for measurements of Safety, Housing, Life Satisfaction, and Community. While there are many conclusions we can draw from this approach, it is further described in Section 3.0, where we look at each dimension individually to understand not only how the province ranks with respect to each one, but how these dimensions are calculated.

## 2.2 Aggregate Wellness

Alternatively, there is a different approach we can use to have an understanding of Newfoundland and Labrador's aggregate wellness. As indicated in Section 1.3, one interactive feature of the Better Life

Index is allowing users to assign weights to each of the eleven dimensions and calculate their own index. Rather than just look at these indicators individually, we can assign a random sample of 100,000 sets of weights and see how the province compares. The results of this sample can be seen in Figure 2.1

Country or Province	Number of Times Ranked First	Avg Rank	Highest Rank	Lowest Rank
Sweden	24569	6.01	1	27
Australia	18110	6.78	1	30
Alberta	15479	4.59	1	23
Switzerland	13201	9.74	1	35
British Columbia	7076	4.56	1	19
Norway	6761	7.89	1	28
United States	4490	14.24	1	33
PEI	4259	9.35	1	29
Ontario	4193	4.33	1	18
Iceland	631	16.75	1	32
Quebec	588	12.22	1	28
Denmark	203	14.24	1	29
Newfoundland and Labrador	193	20.44	1	37
Netherlands	72	16.22	1	31
Finland	57	19.70	1	29
Luxembourg	33	20.98	1	40
New Brunswick	31	13.72	1	28
Nova Scotia	21	12.40	1	26
Ireland	18	21.96	1	32
United Kingdom	12	17.69	1	31
Saskatchewan	2	10.61	1	27
Japan	1	31.44	1	44
New Zealand	0	18.68	2	29
Canada	0	8.18	3	19
Manitoba	0	14.84	3	27
Belgium	0	24.42	4	35
Germany	0	25.51	6	34
Austria	0	22.28	9	30
Korea	0	37.45	9	46
Spain	0	30.96	10	43
Slovenia	0	30.12	12	35
France	0	28.27	18	37
Poland	0	36.26	18	44
Czech Republic	0	33.56	20	39
Israel	0	35.88	23	46
Estonia	0	41.78	24	47
Italy	0	33.82	24	42
Slovak Republic	0	37.06	26	44
OECD - Total	0	30.26	27	37
Hungary	0	40.68	28	47
Mexico	0	45.77	28	47
Portugal	0	38.99	28	46
Russian Federation	0	42.51	28	47
Greece	0	40.98	31	47
Brazil	0	43.15	32	47
Chile	0	43.89	36	47
Turkey	0	46.80	39	47

*Figure 2.1 – Results of 100,000 Random Sample User-Weights*

From this figure, we see that Newfoundland and Labrador performs well using this approach. The province ranks first 193 times, and has an average rank of 20 out of the 44 provinces and countries measured. The province, however, is out-performed by Alberta, British Columbia, PEI, Ontario and

Quebec in this approach, despite out-ranking them in certain individual dimensions, such as Housing. Canada, as an aggregate, does not rank first unlike Newfoundland and Labrador, though still maintains an average rank of 8, which is higher than the province. Meanwhile, Manitoba is the only Canadian province to not ever rank first using this random sample of weights.

## 2.3 Newfoundland in Motion

As indicated, another prominent feature of the Better Life Index is the ability to use motion charts to illustrate changes in composite index scores for Canadian provinces are related to variables like per capita GDP as time changes.

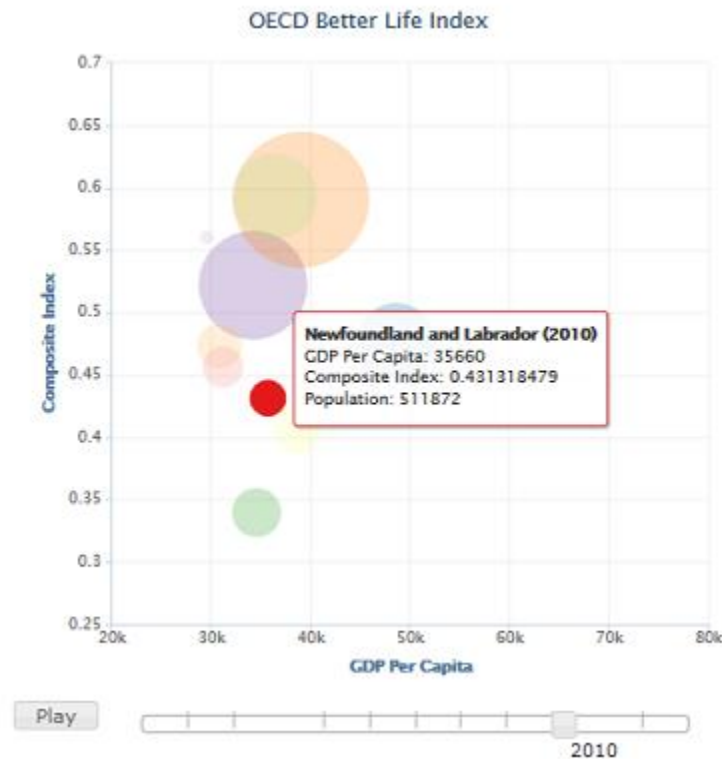
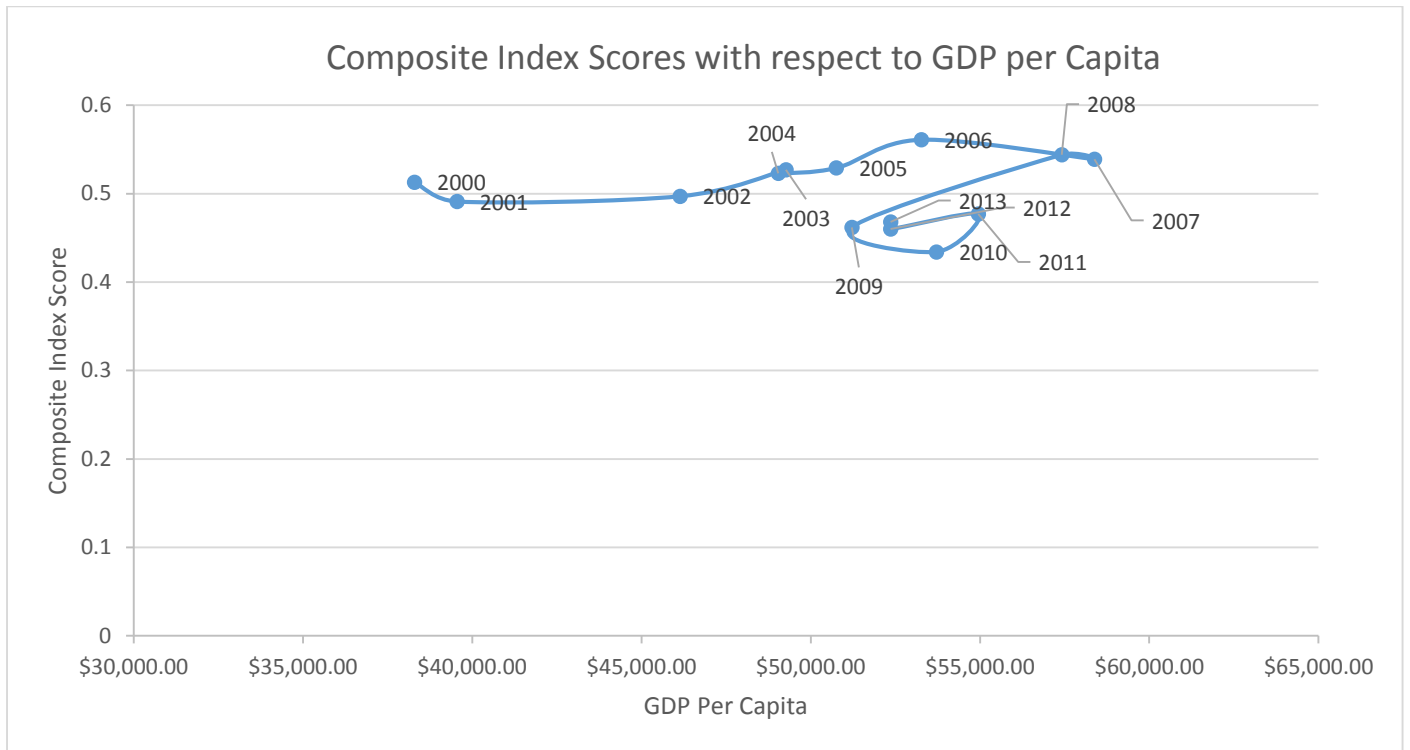


Figure 2.2 – Use of Motion Charts with respect to GDP Per Capita

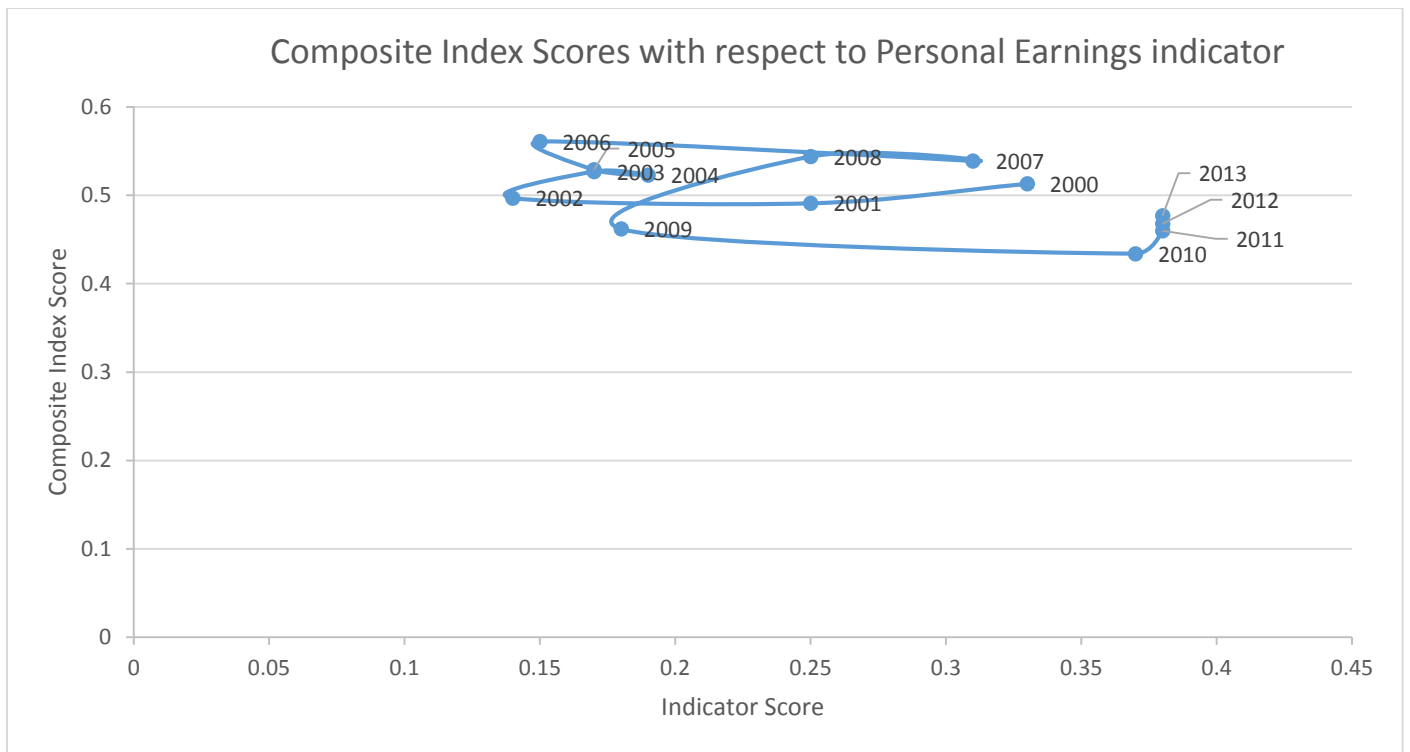
Traditional microeconomic theory has suggested that increases in variables like GDP or personal income should correlate with increases self-measured happiness and personal well-being – a claim that has been challenged in recent years. Using our motion chart feature, we can observe how composite index scores, as calculated by our Better Life Index, changes with changes in these variables. For this analysis, we will focus on two variables in particular: GDP per capita, and household disposable income.



*Figure 2.3 – Changes in Composite Index Scores with respect to GDP*

By tracing changes in GDP per capita with changes in wellness, we do not see a linear relationship between the two variables. Instead, there are times in which an increase in GDP occurs at the same time in which the composite index score decreases, and vice versa.





**Figure 2.4 – Changes in Composite Index Scores with Respect to Personal Earnings**

Similarly, when reviewing personal earnings (as an indicator score), we can see that there is also not a linear relationship between personal earnings and our calculated happiness, as per the Better Life Index. While there are periods in which increases in personal earnings corresponds with increases in the composite index score, there are also periods in which the opposite is true.

In conclusion, the motion chart feature illustrates that Newfoundland and Labrador’s wellness or social progress extends past traditional economic indicators like GDP per capita or household disposable income. Instead, it can be used as a tool for policy-makers and relative stakeholders to understand how changes can affect the happiness of our provincial residents, and provide an area of focus for future decision making.

### 3.0 Our Province in Detail

Now that we have a better understanding of overall well-being and social progress in Newfoundland and Labrador, it is also important to consider individual dimensions and how they are composed. Each of the eleven dimensions of well-being consist of one or more indicators which are calculated and averaged to calculate a single base score for that dimension. This calculated score can be then used to compare a single dimension across province and countries, holding the other dimensions at a weight of zero within the index.

This section will primarily review how Newfoundland and Labrador performs in these indicators as compared to the rest of the country. A full ranking of all countries based purely on aggregate dimension scores can be seen in Figure 5.1 (Appendix).

However, it is important to note that not all data sources used by the OECD to calculate Canada's indicator scores were able to be broken down for individual provinces. In these situations, alternate sources were used, with the results scaled to reflect the original OECD Canadian average for those indicators. This was required to ensure that international comparisons were possible, as seen in Figure 5.0 (Appendix).

### 3.1 Housing

It is undeniable that Housing is a pertinent indicator of both well-being and social progress. Living in satisfactory housing conditions is one of the most important aspects of people's lives, and is essential to being able to meet basic needs. This is more than just four walls, but also a place where people feel safe, have privacy and somewhere to raise a family. All of these elements help make a house a home.

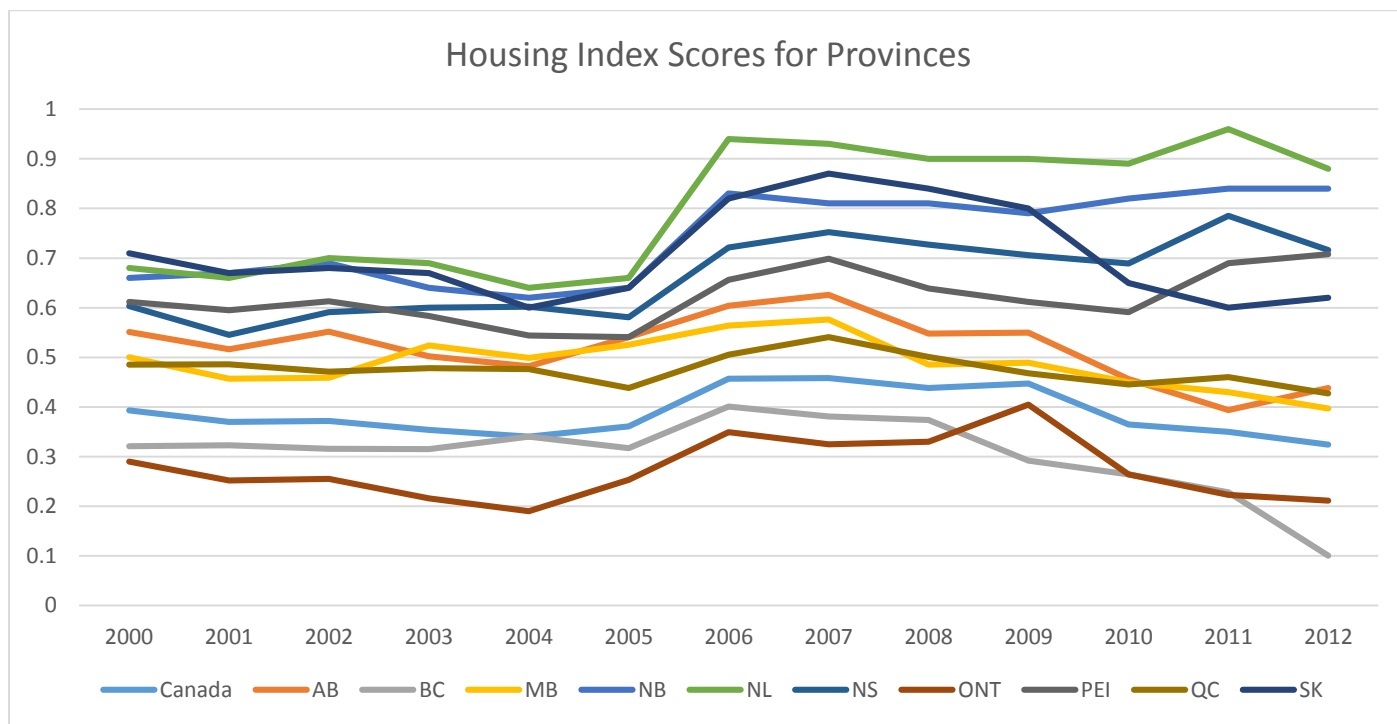
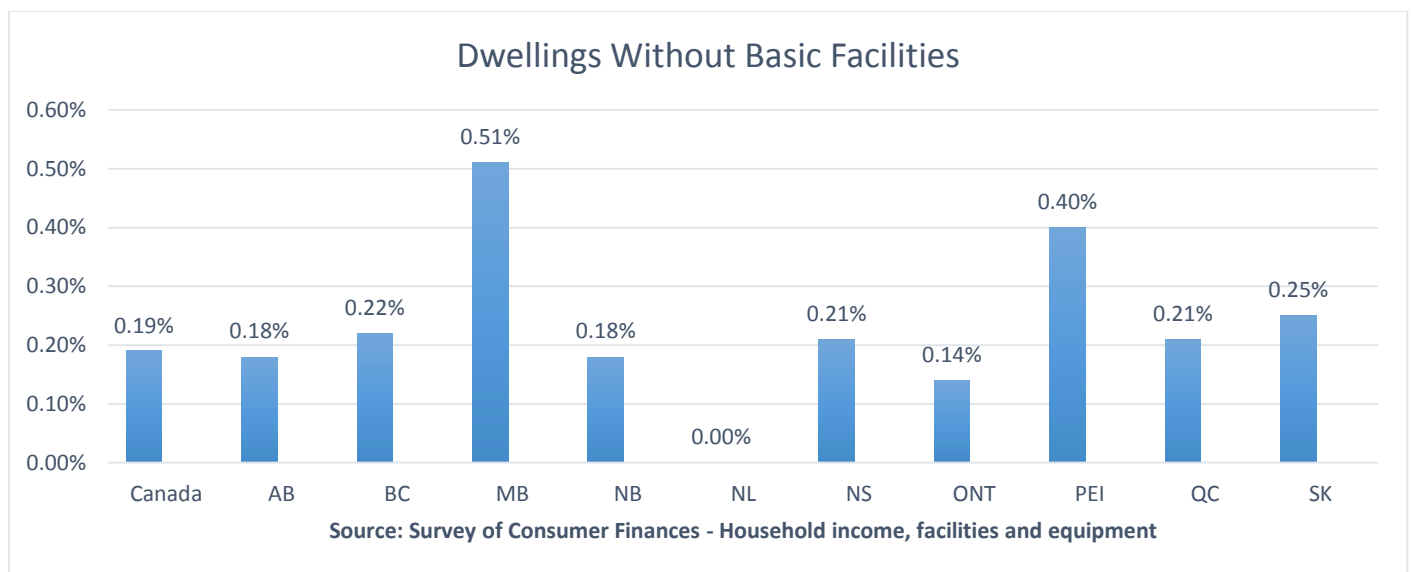


Figure 3.1 – Housing Index Scores for Canadian provinces

The Housing dimension is the highest ranked dimension for Newfoundland and Labrador, recording top scores in all three indicators when compared to other provinces. As seen in Figure 3.1 below, Newfoundland and Labrador has emerged as the front-runner for this dimension since 2002, and has experienced significant growth since 2005. This signifies that for this dimension, provincial residents are some of the most-well off.

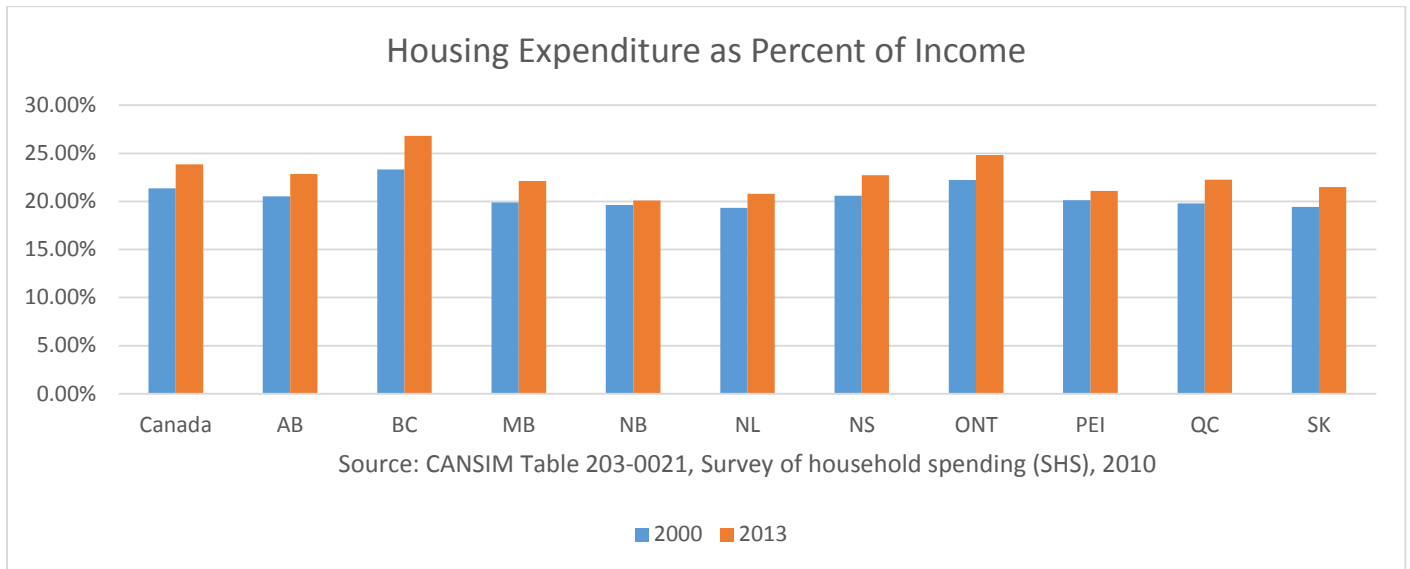
For our Better Life Index, the Housing dimension consists of three indicators: dwelling without basic facilities, housing expenditure, and rooms per person.

In this model, dwelling without basic facilities refers to the percentage of the population living in a dwelling without indoor plumbing for use of their household. Housing expenditures refer to the percentage of income that households pay for utilities such as housing, electricity, furnishings, household equipment and maintenance. The rooms per person measure refers to the average number of rooms per person for each province.



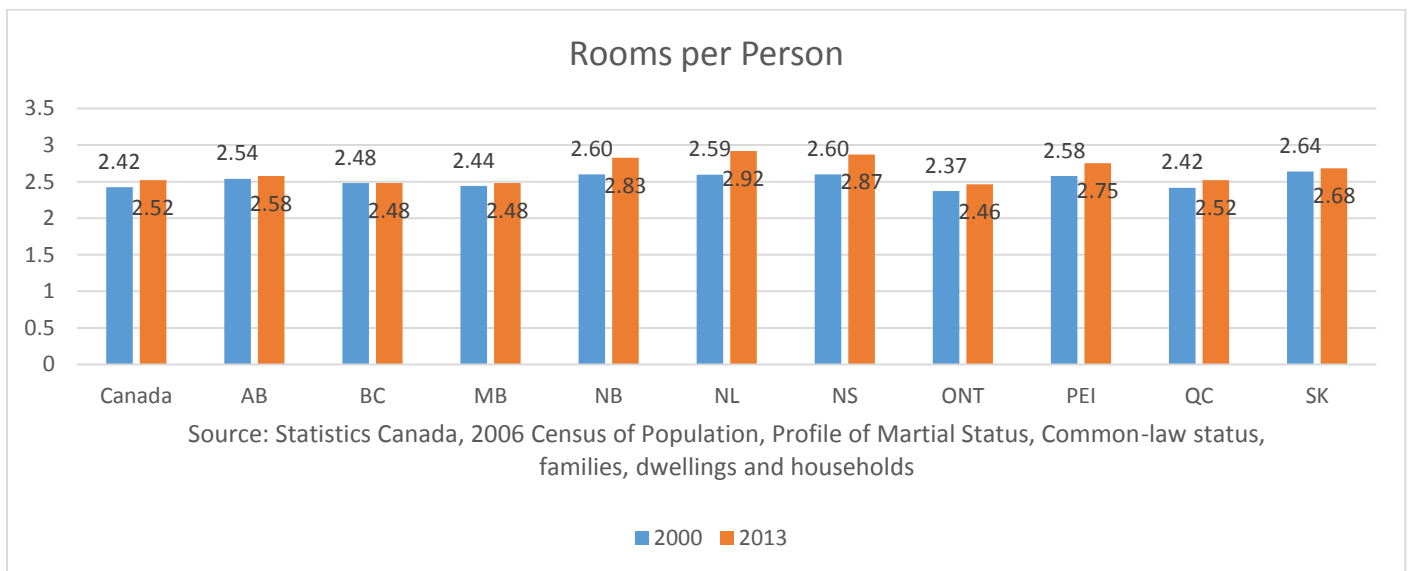
*Figure 3.2 – “Dwelling Without Basic Facilities” indicator for Canadian provinces*

Regarding dwellings without basic facilities, Newfoundland and Labrador is the only Canadian province to have none at all. This represents a large difference between the province and the rest of the country, such as Manitoba, where 0.51% of dwellings are without basic facilities. As this indicator was only surveyed once during the time period of our index, only time series is displayed.



**Figure 3.2 – “Housing Expenditure” indicator for Canadian provinces**

Housing expenditure as percent of income is another indicator in which Newfoundland and Labrador strives, recording a score of 20.8% -- second only to New Brunswick (20.1%). This is lower than the Canadian average (23.8%), and 5.3% lower than British Columbia, where residents have the highest percent average of income devoted to housing expenditures. All provinces have seen a slight increase in this measure since 2000, with BC and Alberta seeing the largest increases.



**Figure 3.3 – “Rooms per Person” indicator for Canadian provinces**

Similarly, Newfoundland and Labrador has a narrow lead in the rooms per person indicator. All of the Canadian provinces have an average of at least 2.5 rooms per person and a national average of 2.6, while Newfoundland and Labrador has an average of 2.9 rooms per person. This is an increase from 2.59 rooms per person in 2000, signifying growth in average house size compared to living population.

### 3.2 Income

While money may not buy happiness, it is an important means to achieving higher living standards and thus greater well-being. Higher economic wealth may also improve access to quality education, health care and housing.

Overall, Newfoundland and Labrador ranks sixth in the country for this dimension, above other Atlantic provinces but behind the rest of the country.

As seen below, Newfoundland and Labrador's income dimension seen significant growth over the last decade and has progressed at a rate faster than other provinces. However, we still place fifth in this dimension and fall beneath the Canadian average.

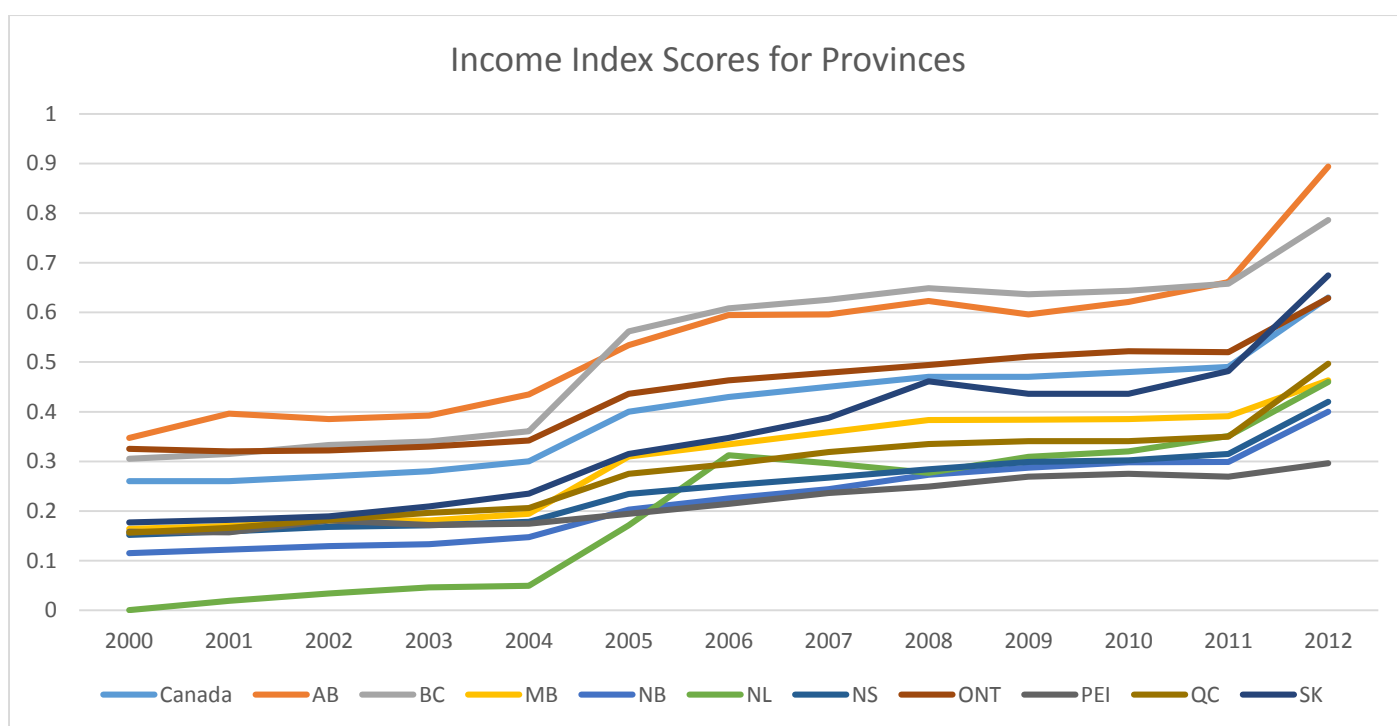
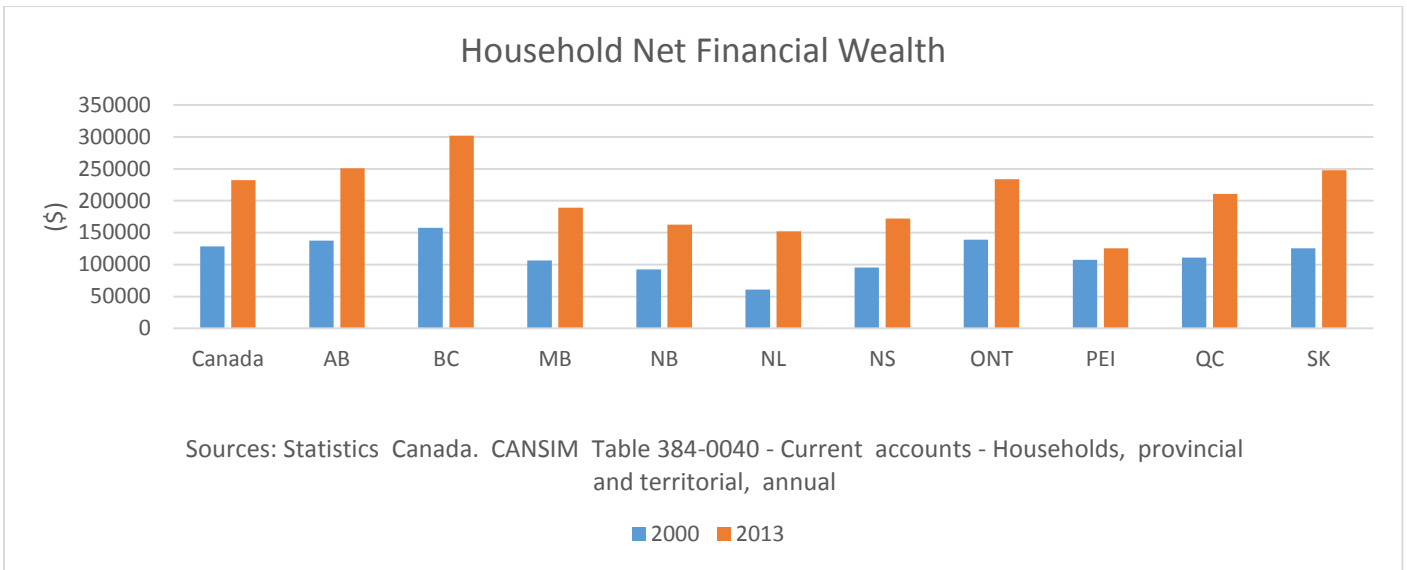


Figure 3.4 – “Income” dimension for Canadian provinces

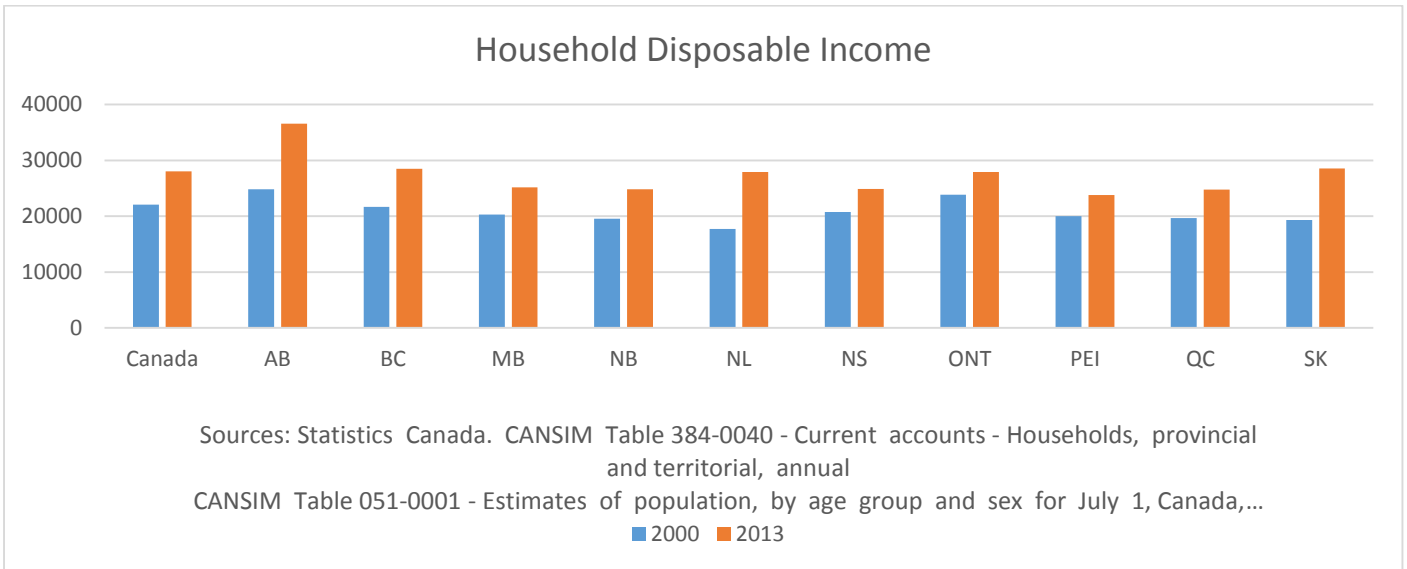
The Income dimension of the well-being index aligns closer to a traditional economic measure. This dimension consists of two indicators: household net adjusted disposable income, and household net financial wealth.

Here, household net adjusted disposable income is calculated by taking household disposable income (that is, total income less transfers such as employers' social insurance contributions and taxes on income or wealth) and adding in social transfers (such as education and health care) that households receive from governments and non-profit institutions. It is given in US dollars at current PPPs per capita. Since we used data from Statistics Canada for this measure, which does not include social transfers, we scaled the result to the OECD Canadian score. Meanwhile, Household net financial wealth is the sum of a household's financial assets minus liabilities.



**Figure 3.5 – “Household Net Financial Wealth” indicator for Canadian provinces**

In Household Financial Wealth, Newfoundland and Labrador is ranked eighth, and significantly lower than the national average. However, it has nearly tripled in thirteen years, a rate of growth larger than many of the other Canadian provinces, shows Newfoundland and Labrador is a front-runner for Household Net Financial Wealth growth in Atlantic Canada.



**Figure 3.6 – “Household Disposable Income” indicator for Canadian provinces**

Regarding Household Disposable Income, we similarly see that we rank beneath the national average, but have also experienced fast growth over the last decade. We are now only 6.53% below the Canadian average, and are ranked fifth overall for this indicator, up from our tenth place ranking just thirteen years prior.

### 3.3 Jobs

Work has obvious economic benefits, but having a job also helps individuals stay connected with society, build self-esteem and develop skills and competencies. Societies with high levels of employment are also richer, more politically stable and healthier.

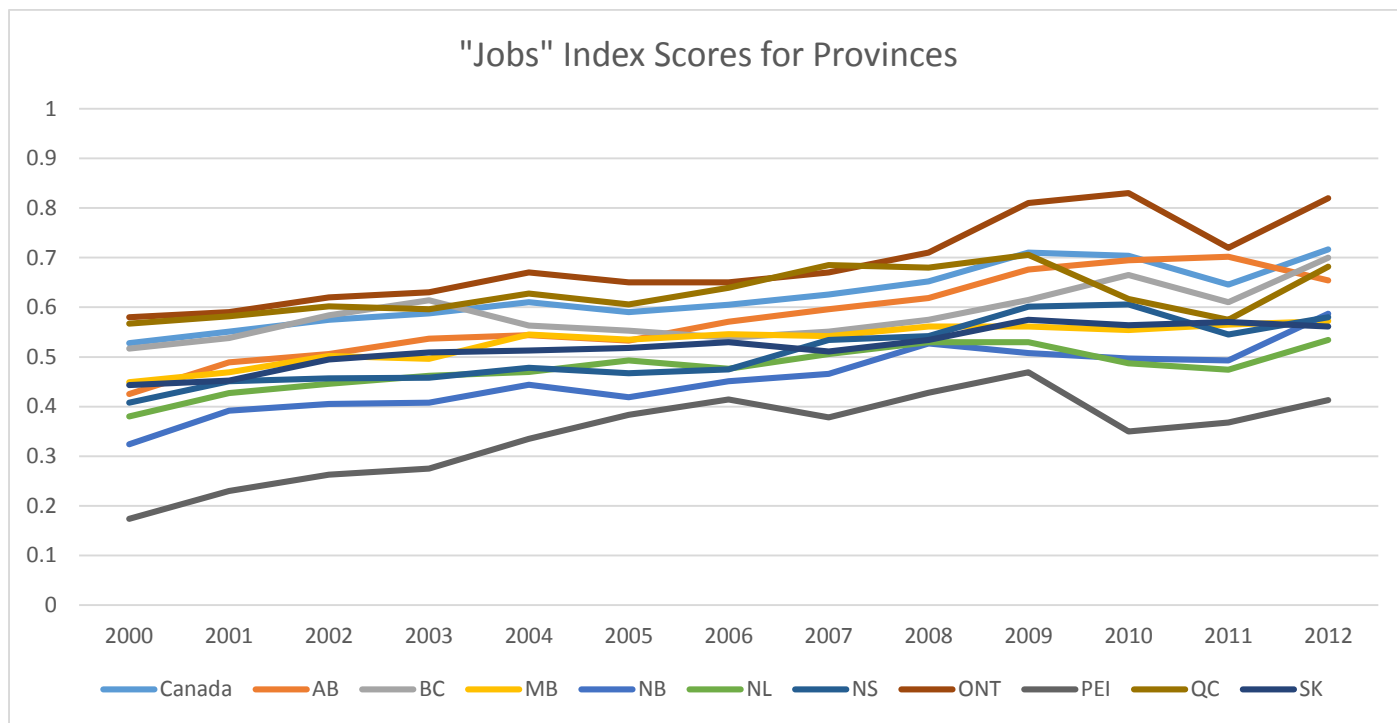


Figure 3.7 – “Jobs” index scores for Canadian provinces

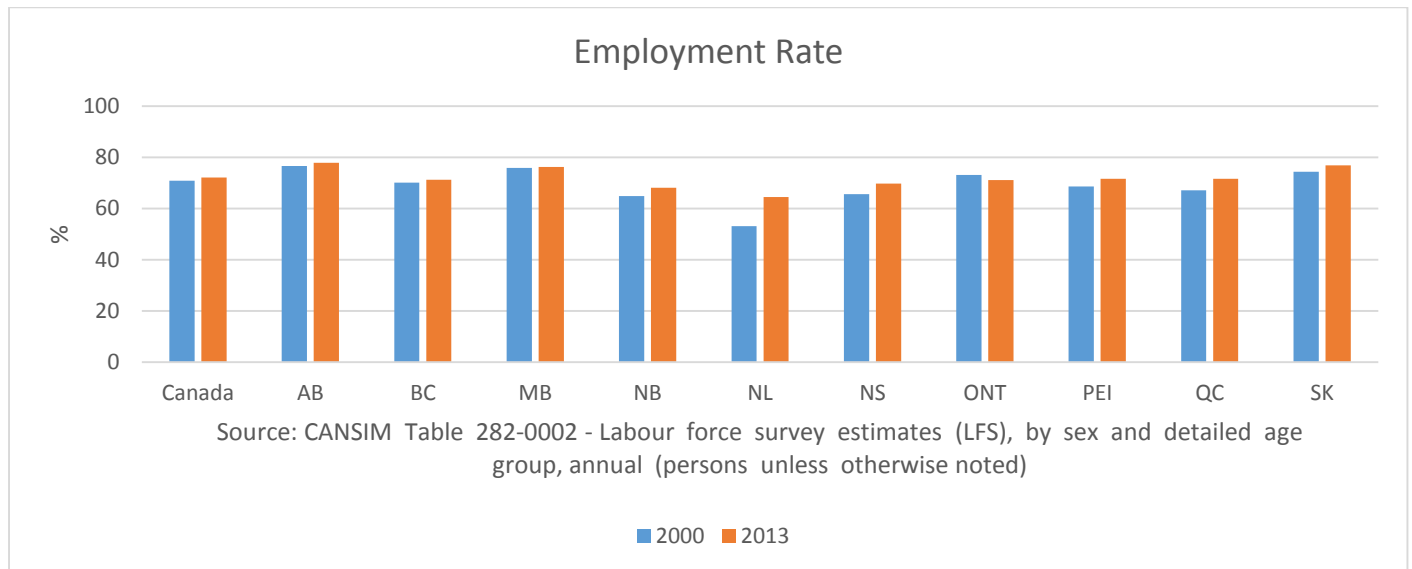
We have seen tremendous growth in this dimension over the last decade, with the constant increases with the exception of a two year lapse in 2010 and 2011 following the Great Recession. This dimension has rebounded and we have reached a new peak level in 2013. Despite this, we are still ranked below the Canadian average and second lowest in the country after Prince Edward Island. Meanwhile, Ontario and Alberta continues to lead the index scores for Jobs throughout the entire time period.

In this model, the Jobs dimension consists of more than just a single variable. Instead, the dimension consists of four indicators: employment rate, job security, long-term unemployment rate, and personal earnings. This allows the index to provide a deep analysis of how well-being is shaped by employment related indicators within a given province or country.

With the exception of long-term unemployment rate, in which the Canadian average is the same as province's average, Newfoundland and Labrador falls beneath the national average for each indicator. As a result, it produces a composite wellness score that is the lowest in the country for this dimension.

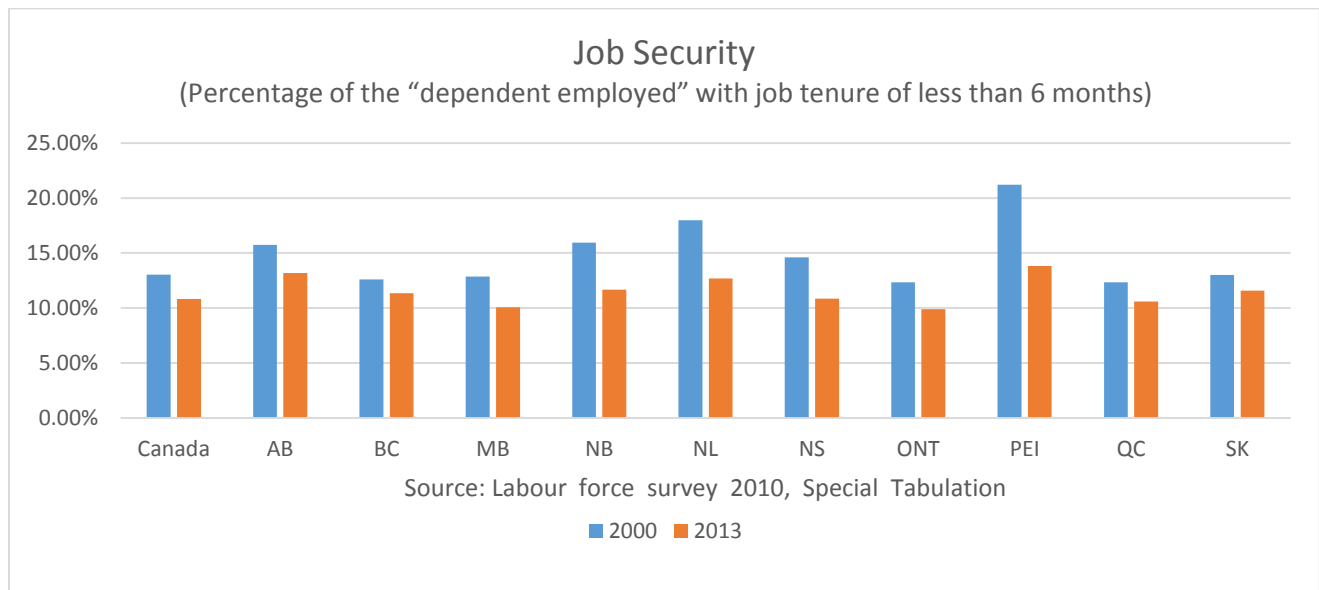
The OECD definition of Employment rate is the one used in this model. That is, the employment rate is "the number of employed persons aged 15 to 64 over the population of the same age", where a person is considered employed if they have worked for at least one hour of gainful employment in the previous week. Job security refers to a percentage measure of "dependent employed" that have a job tenure of less than six months, and was recorded by a special tabulation of the Labour Force survey. The long-term unemployment rate measures the number of persons who have been unemployed for a year or more, while personal earnings is calculated by taking the average annual wages for a full time

employee and multiplying it by the ratio of average usual working hours. As the OECD measure was not available for personal earnings, an alternate data source (Statistics Canada) was used and then scaled to reflect the OECD measure for Canada.



**Figure 3.8 – “Employment Rate” indicator for Canadian provinces**

Newfoundland and Labrador has the lowest employment rate for all of the Canadian provinces at 62.70%. This is nearly 10% below the Canadian average of 72.00% and almost 15% lower than Alberta, the province with the highest employment rate. However, we have seen the most significant increase over the last decade, increasing at a higher rate than other Canadian provinces and the national growth rate.



**Figure 3.9 – “Job Security” indicator for Canadian provinces**

Newfoundland and Labrador also has one of the highest levels of job insecurity within the country, below only Prince Edward Island. 14.90% of the province’s “dependent employed” had a job tenure of a half a year or less, 3.6% higher than the Canadian average. Meanwhile, it was Ontario who recorded



the highest measurement of job security, with only 10.30% of dependent employees facing a job tenure of less than six months. Further, job security has actually decreased over the last decade, a trend representative of most of the country and the national change.

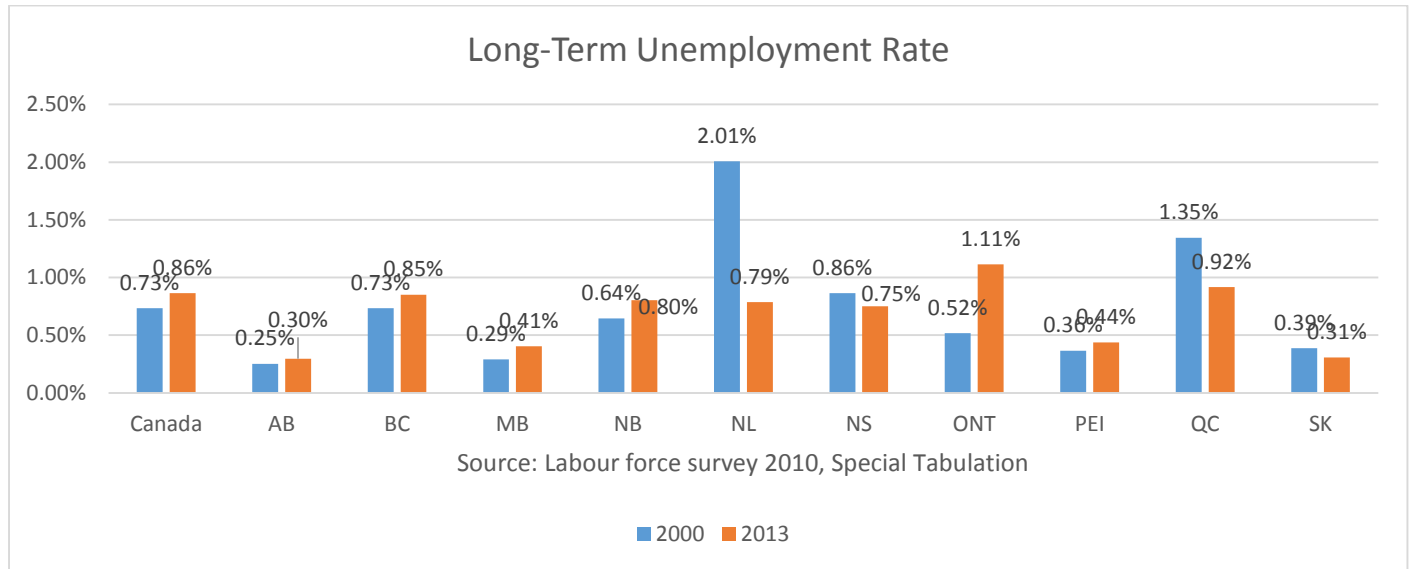


Figure 3.10 – “Long-Term Unemployment Rate” indicator for Canadian provinces

Newfoundland and Labrador tied with the national average in long-term unemployment rate at 0.90%. Ontario recorded the highest long-term unemployment rate with 1.30%, representing a huge range between their residents and the residents of Manitoba, who faced the lowest long-term unemployment rate at 0.30%.

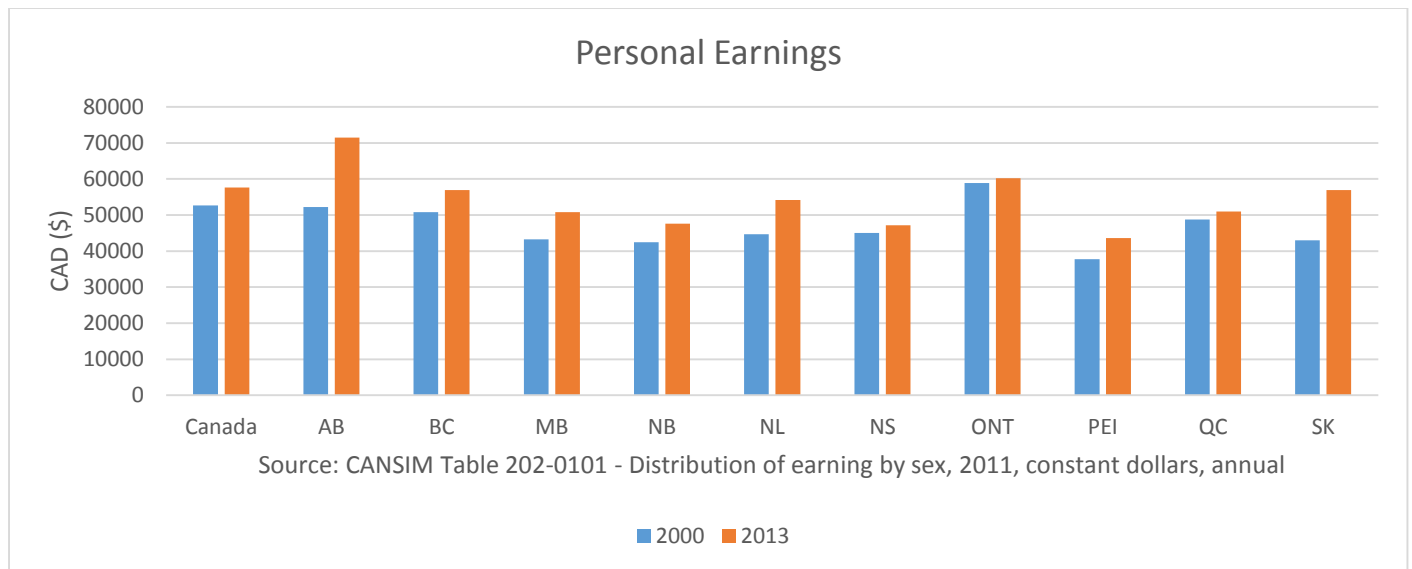
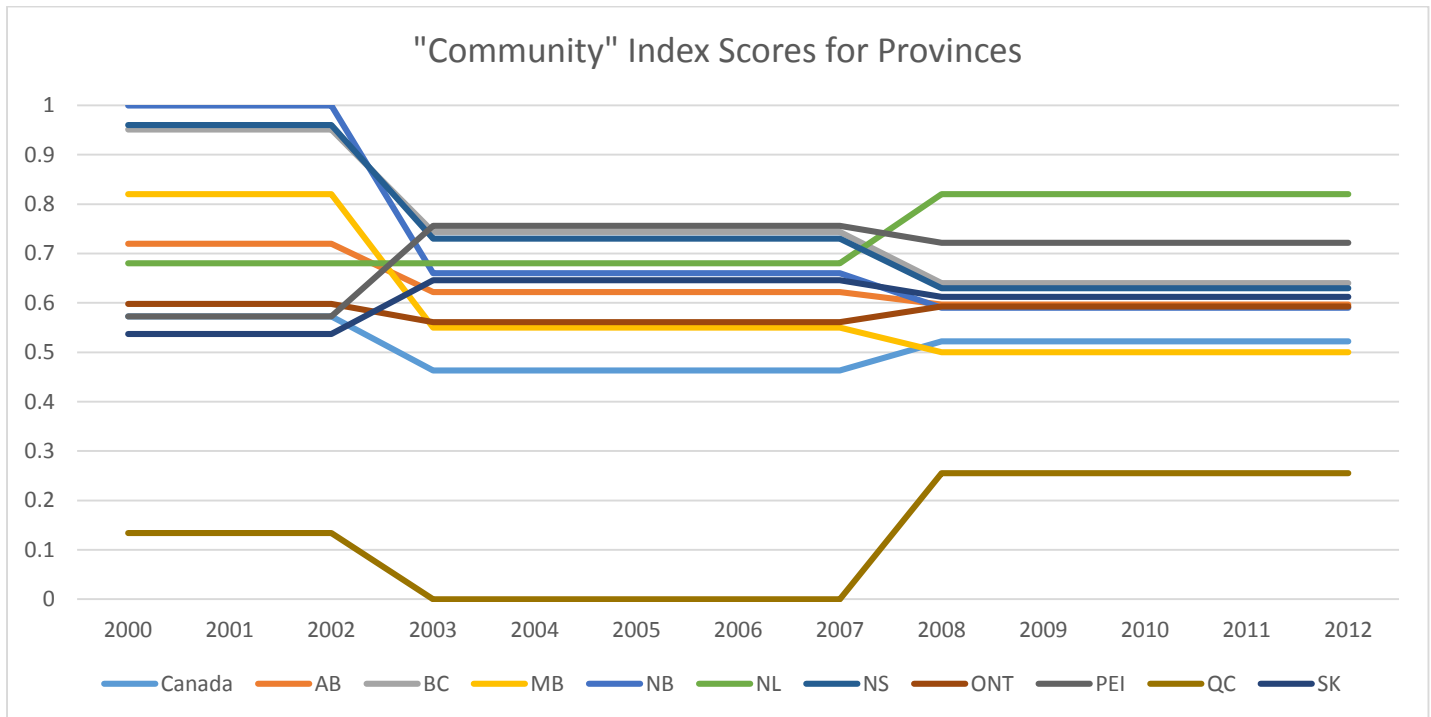


Figure 3.11 – “Personal Earnings” indicator for Canadian provinces

Regarding personal earnings, Newfoundlanders and Labradorians recorded the median level (\$42700), though beneath the national average (\$45400) which was held upwards by Alberta (\$56300). Alberta recorded average personal earnings that were \$19300 higher than the Prince Edward Island (\$34300), the province who recorded the lowest earnings, and \$8900 higher than the Ontario, the province which recorded the next highest earnings.

### 3.4 Community

The Community dimension provides a shining example of how the measurements of the Better Life Index extends past those used in traditional economic indicators. Humans are social creatures. The frequency of contact with others and the quality of our personal relationships are thus crucial determinants of our well-being. Studies show that time with friends is associated with a higher average level of positive feelings and a lower average level of negative feelings than time spent in other ways.



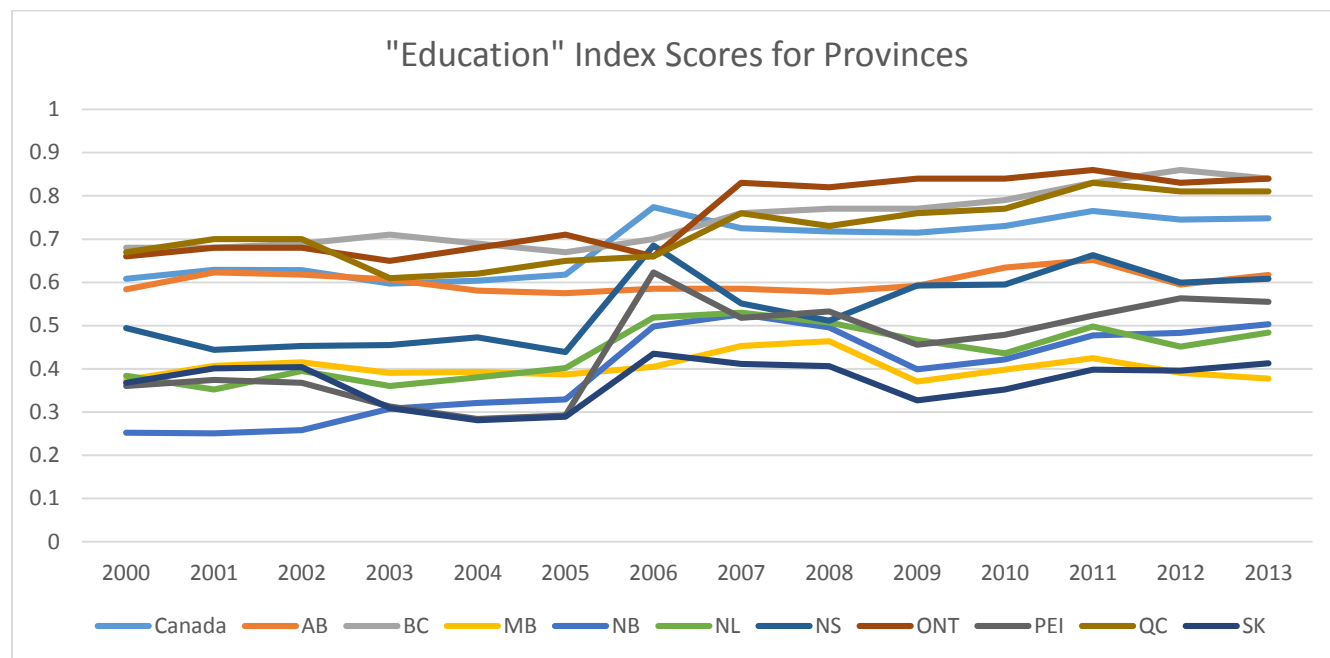
Newfoundland and Labrador currently leads in this top dimension after a surge to the top in 2007. This comes after a decrease in previous leading provinces of New Brunswick, Nova Scotia and British Columbia. This indicates that Newfoundlanders and Labradorians are some of the most social in the country.

This dimension consists of a single indicator: quality of support network. For the Canadian provinces, this is measured as amount of people who responded they to the question "How many close friends do you have (that is, people who are not your relatives, but who you feel at ease with) that you can talk to about what is on your mind, or call on for help)?" from the General Social Survey on social engagement. For OECD countries, they used a survey question from the World Gallup Poll that was not extendable to provinces, and thus the provincial results were scaled to reflect the OECD recorded score for Canada.

In Canada, the quality of support network average was 96%. In this measure, Newfoundland and Labrador ranked highest at 97%, while Quebec was in last place at 92%.

### 3.5 Education

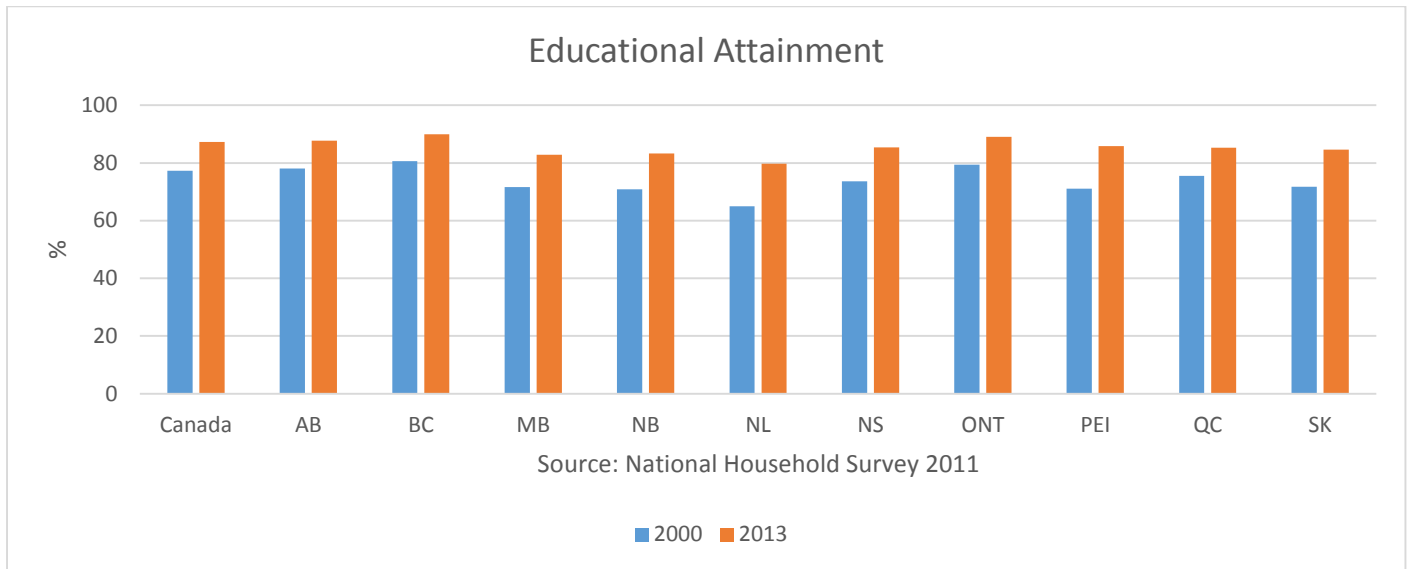
Education plays a key role in providing information with the knowledge, skills and competences needed to participate effectively in society and in the economy. In addition, education may improve people's lives in such areas as health, civic participation, political interest and happiness. Studies show that educated individuals live longer, participate more actively in politics and in the community where they live, commit fewer crimes and rely less on social assistance.



While Newfoundland and Labrador has increased over the last decade in regards to this index score, it has actually peaked in 2006 and experienced a decline since then. Overall, Newfoundland and Labrador is well below the Canadian average for this measurement, and is third last currently, ranked only above Manitoba and Saskatchewan. Meanwhile Ontario has led in this measurement since 2006, with some competition from Quebec and Prince Edward Island.

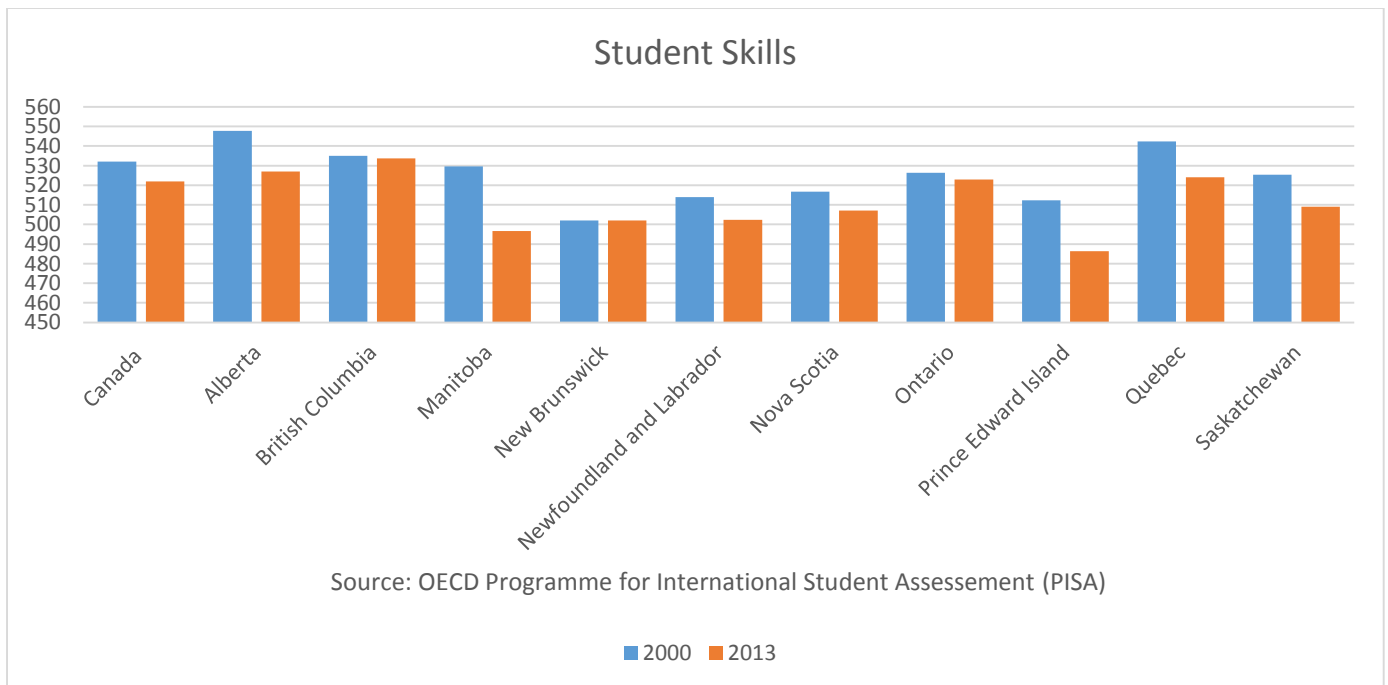
The Education dimension consists of three indicators: educational attainment, student skills and years in education.

Educational attainment is measured by the percentage of adults aged 25 to 64 holding at least an upper secondary degree as recorded by the National Household Survey, and scaled to reflect the data used by the OECD. Student skills is measured by the average score in reading, mathematics and science as assessed by the OECD's Programme for International Student Assessment (PISA), which could easily be extended to the provinces. Years in education refers to the expected number of years of education that a person can hope to achieve from the age of 5 to the age of 39. This is measured by summing the enrollment rates for each age from 5 to 39 as per the Labour Force Survey, and scaling it to reflect data used by the OECD.



**Figure 3.9 – “Educational Attainment” indicator for Canadian provinces**

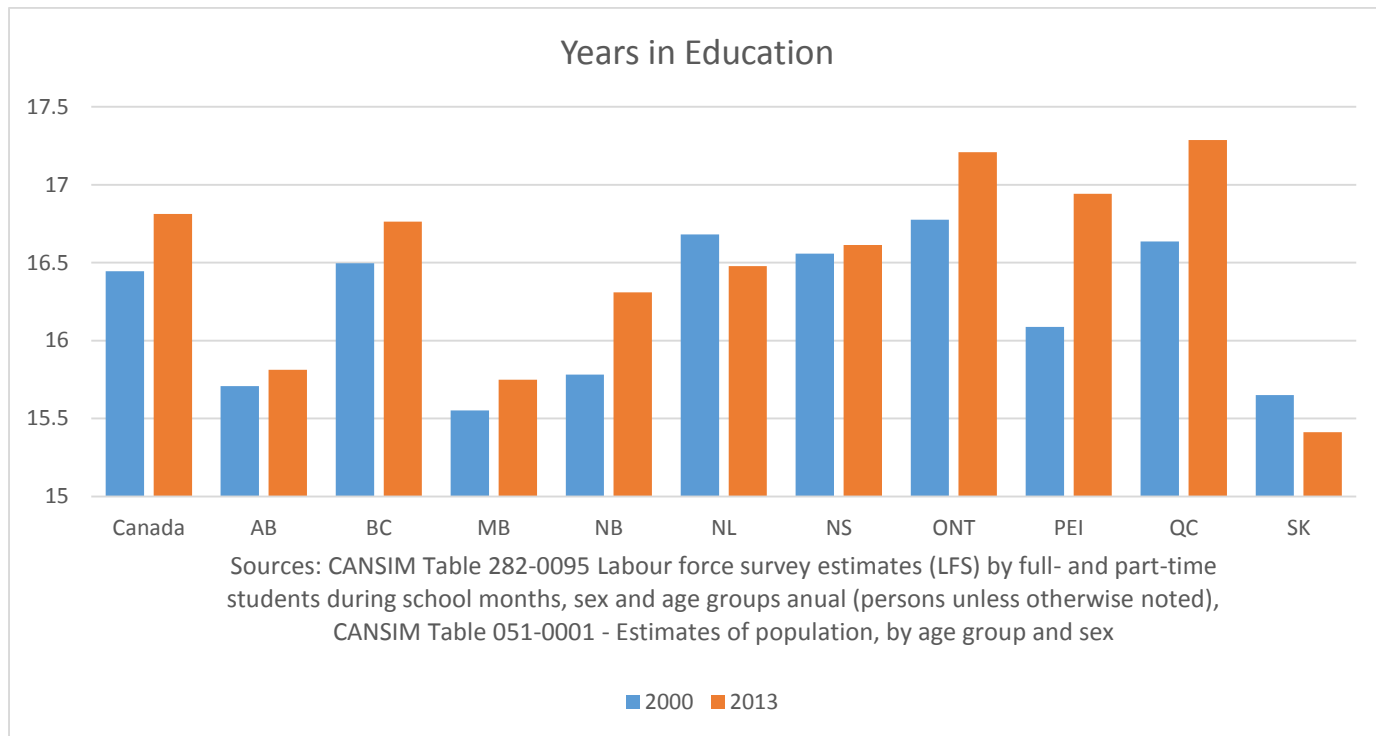
Educational attainment is the indicator with the largest range. British Columbia tops the list, reporting 89.9% of adults holding an upper-secondary degree, above the 87.3% average for the country as a whole. Like all Canadian provinces, Newfoundland and Labrador has seen a steady increase in educational attainment over the last thirteen years, with a near 15% increase. Despite this, Newfoundland and Labrador reports only 79.7% of residents with a upper secondary degree, the lowest in the country and 7.6% under the national average.



**Figure 3.10 – “Student Skills” indicator for Canadian provinces**

Student skills also shows a large range between provinces, and again Newfoundland and Labrador falls beneath the national average, with 509 PISA score compared to 527 for the average Canadian student. However, Newfoundland and Labrador performs better in this indicator than Saskatchewan, New Brunswick, Manitoba and Prince Edward Island, while falling behind the other provinces. Like many

other Canadian provinces, Newfoundland and Labrador’s performance in this measure since 2000.



*Figure 3.11 – “Years in Education” indicator for Canadian provinces*

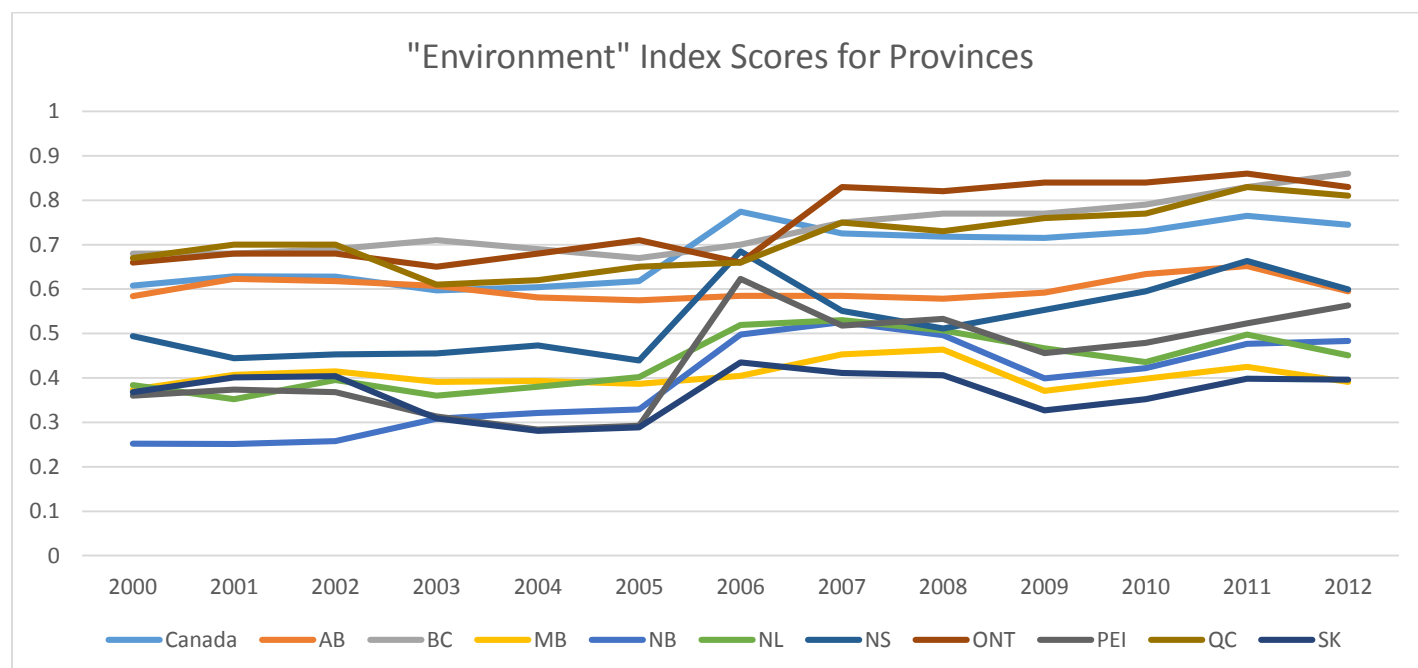
Years in Education is the indicator which has the smallest amount of variability, ranging from 16 in Alberta and Saskatchewan to 17.4 in Quebec. Newfoundland and Labrador (16.6) falls just marginally below the Canadian average (16.7), while ranking above PEI, New Brunswick, Manitoba, Saskatchewan and Alberta. Overtime, Newfoundland and Labrador has seen a decrease in this indicator, unlike any other Canadian province except for Saskatchewan, a concerning trend.

As Newfoundland and Labrador ranks below the national average in each indicator, it logically follows that when averaged to form a composite dimension score, Newfoundland and Labrador again ranks below the national average for the Education dimension. The province does rank above Manitoba, Saskatchewan, PEI and New Brunswick, but below the rest of the provinces, including Ontario, which has the highest ranking.

### 3.6 Environment

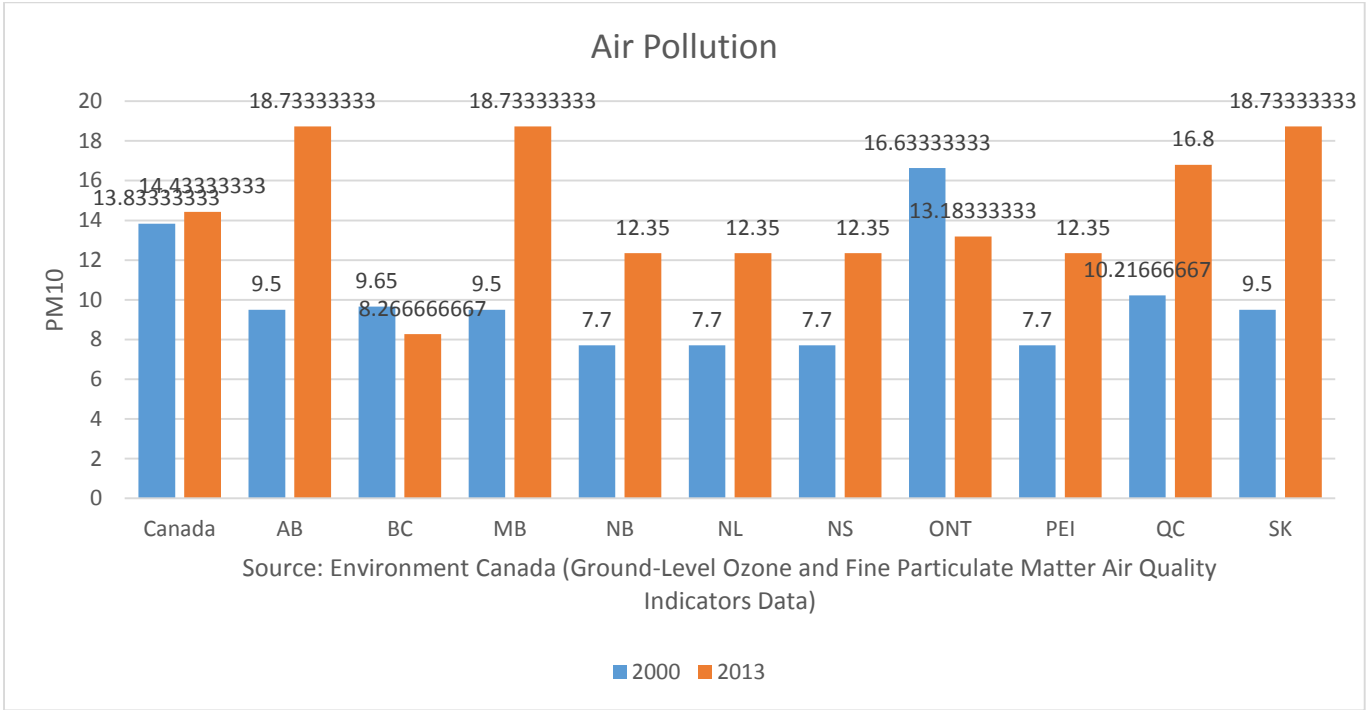
The quality of our local living environment has a direct impact on our well-being and economy. Having an unpolluted environment gives people space for recreation and eases their ability to recover from everyday stress while improving mental well-being. Further, much of Canada's economy depends on environmental quality, including in natural gas, fishery and agricultural related industries.

Newfoundland and Labrador is ranked seventh in this index score for 2012, ranking above only Saskatchewan and Manitoba. While the province's index score was initially improving, following a nation-wide peak in 2006-2007, the province again declined to its current rate. Ontario, PEI and Quebec remain leaders in this dimension for the period surveyed.



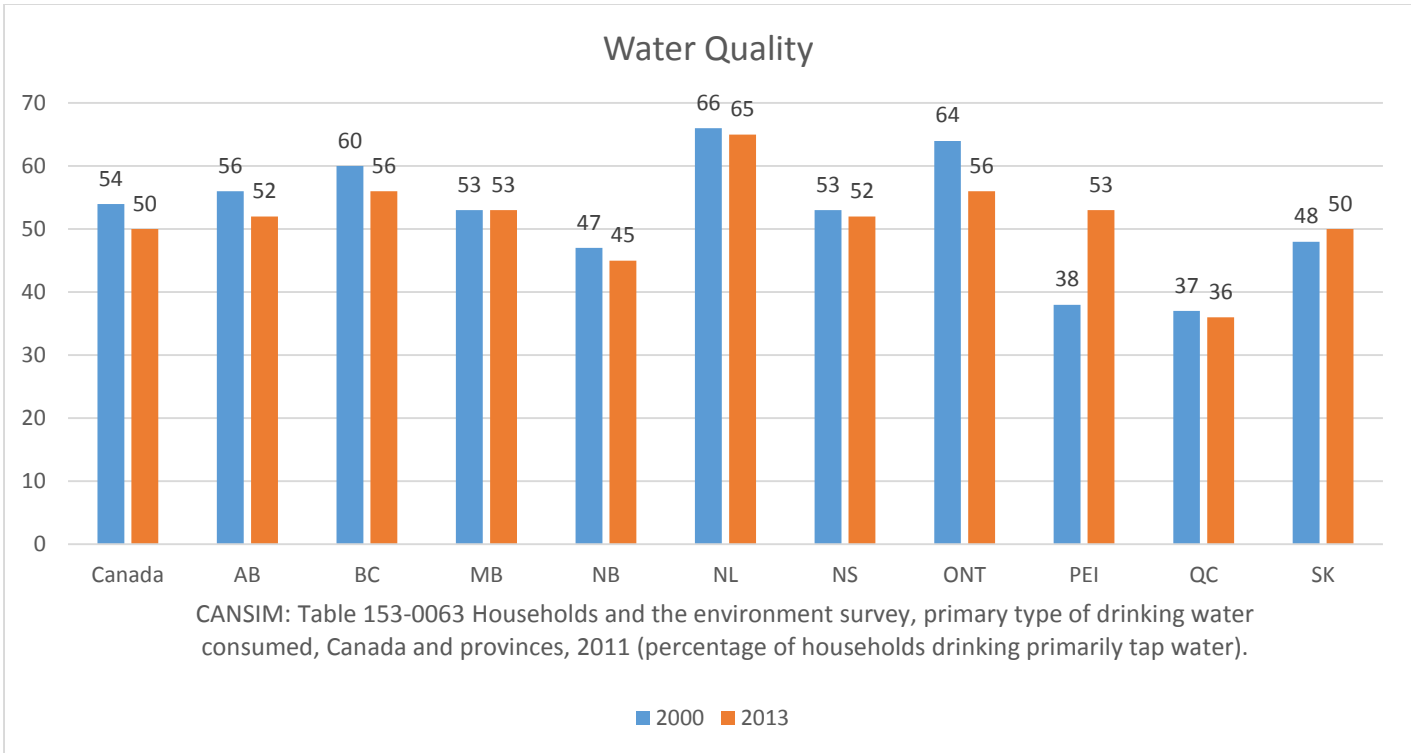
The Environment dimension consist of two indicators: air pollution and water quality.

Air pollution is measured by the population-weighted average of a particulate matter less than 10 microns in diameter (PM10) in the air in cities with more than 100,000 residents. This was recorded by taking the PM2.5 concentrations from Environment Canada and dividing by 0.6, which is the ratio between PM10 and PM2.5 concentrations. Meanwhile, the water quality indicator is measured by the percentage of people who answered that they have been able to and have drank tap water during the past twelve months, and scaled to reflect the score recorded for Canada by the OECD.



**Figure 3.12 – “Air Pollution” indicator for Canadian provinces**

Regarding air pollution, Newfoundland and Labrador is tied with the other Atlantic Provinces for the second highest pollution levels in cities in the country, ranked only beneath Quebec in this measure. Meanwhile, British Columbia receives the lowest measurement for pollution with a population-weighted average of a particulate matter less than 10 microns in diameter (PM10) of 9.45. This is compared to 12.77 for the Atlantic Provinces and 13.92 for Quebec. All provinces have experienced a gradual increase in this measure for the time period surveyed, with the exception of British Columbia and Ontario.



*Figure 3.13 – “Water Quality” indicator for Canadian provinces*

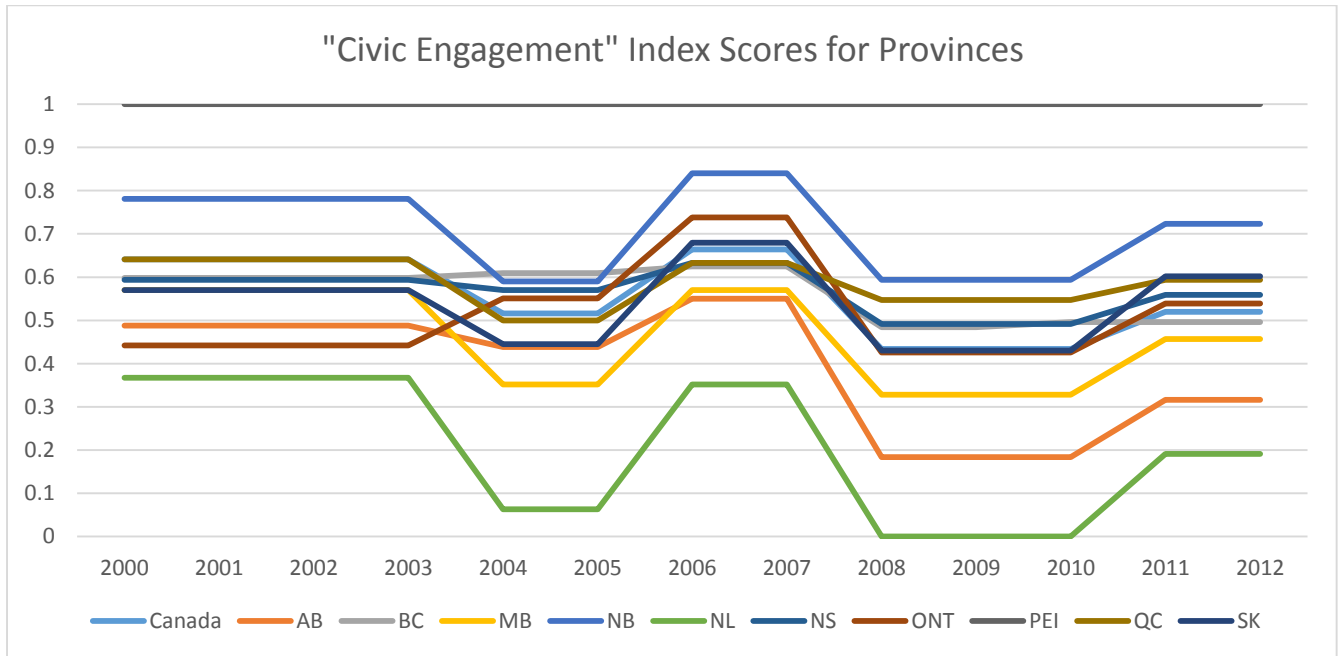
However, for water quality, Newfoundlanders and Labrador reports the highest percent of residents who have drunk tap water in the last twelve months at 65%. While a majority of provinces have seen a decrease in this measurement over the time period surveyed, Newfoundland and Labrador has seen the smallest decrease of 1%. Ontario has saw the largest decrease from 64% to 56%, while still maintain second place. Prince Edward Island has seen the largest increase, from 38% to 53%, leaving Quebec in last place for this measurement (36%).



### 3.7 Civic Engagement

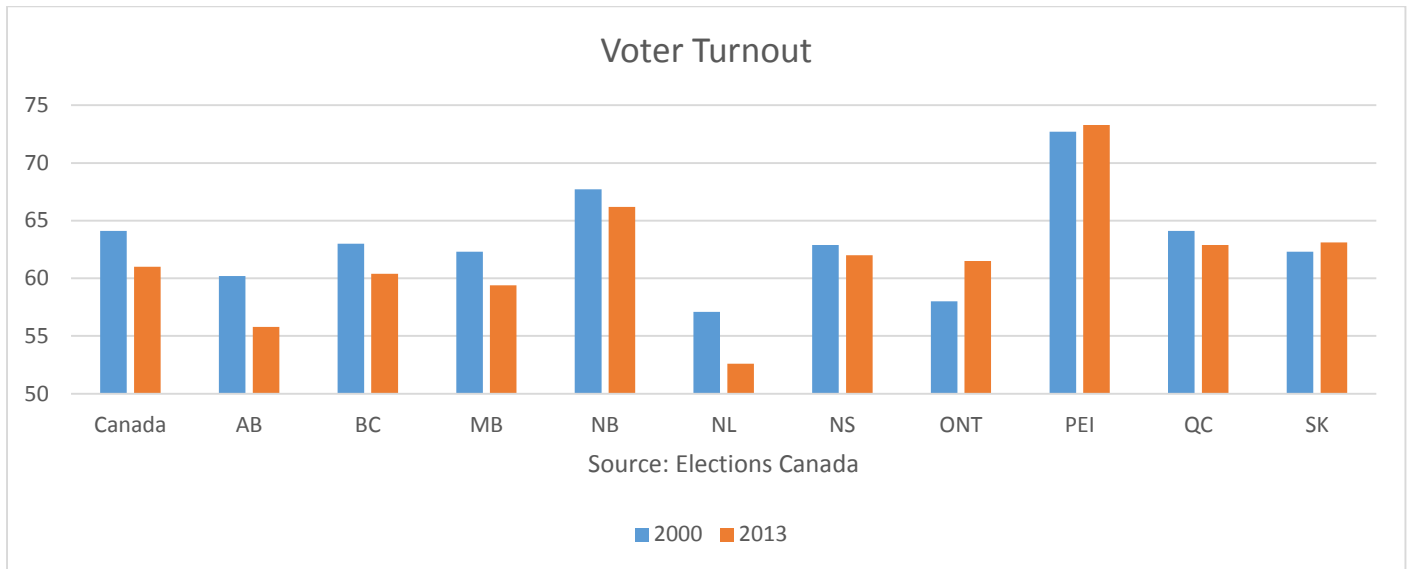
More than ever before, citizens demand transparency and accountability of their government. Without interaction with the democratic system and an ability to invoke change, peoples well-being are directly affected.

Newfoundland and Labrador, according to our index, are the least engaged in the country and thus are the leas well off for this dimension.



The Civic Engagement dimension consists of two indicators: consultation on rule making, and voter turnout.

Data on the consultation on rule-making were unable to be retrieved for all of the provinces, and since no comparable metric could be produced, all Canadian provinces were given the same score. As a result, difference in ranking depends solely on voter turnout, which is measured by the percentage of eligible voters who cast a ballot during the most recent federal election.



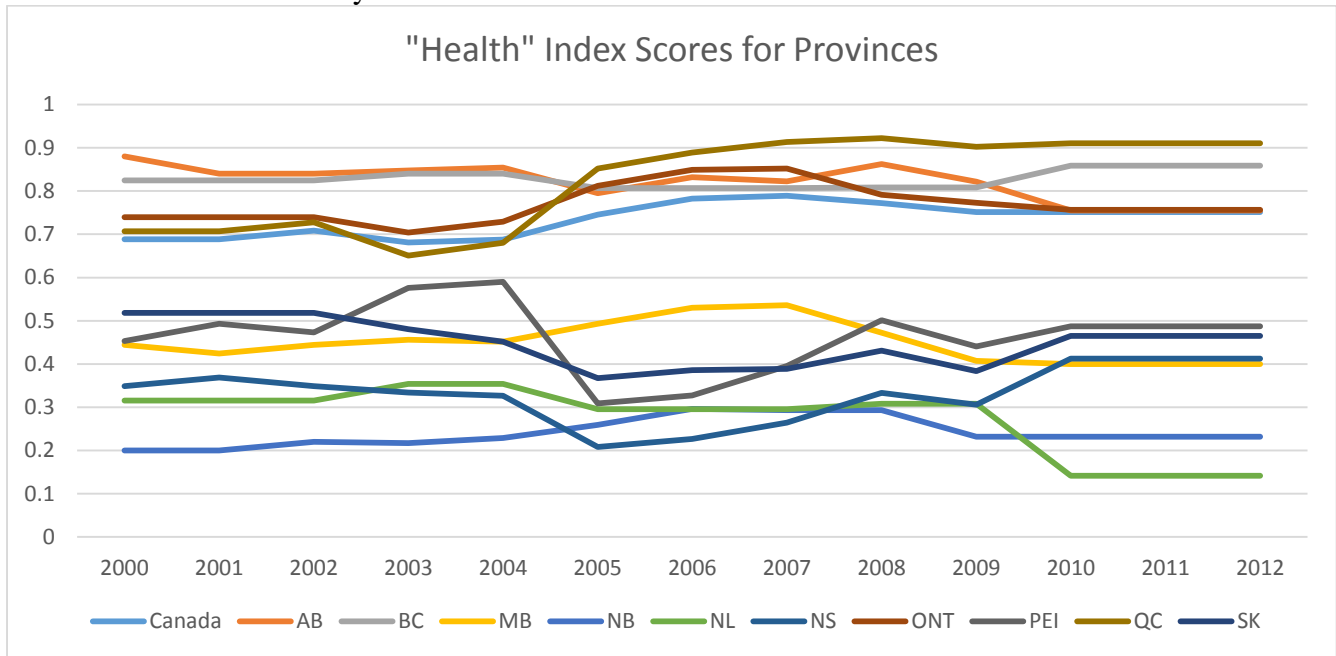
*Figure 3.14 – “Voter Turnout” indicator for Canadian provinces*

In voter turnout, Newfoundland and Labrador was 8.4% beneath the national average (61%), and ranked last. Meanwhile, PEI ranked highest with 73.3%, followed by New Brunswick (66.2%) and Quebec (62.9%). There has been a national trend for voter turnout to decrease overtime, with the exception of Prince Edward Island, Saskatchewan and Ontario, who saw slight increases over the period surveyed.

### 3.8 Health

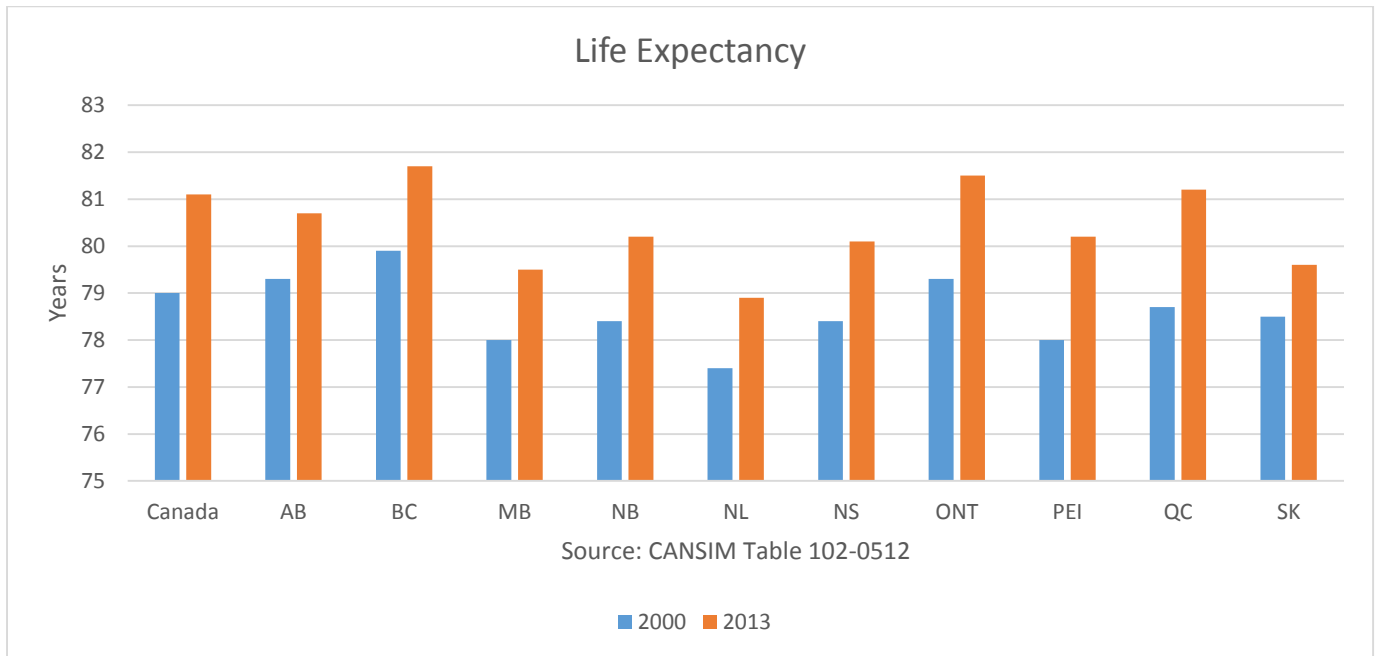
Health is another dimension which is not seen in traditional economic indicators, though plays a key role in one's wellness. Good health and access to health care leads to multiple benefits to one's well-being, from economic benefits (such as a reduction in health care costs and increase in productivity) to social benefits from a longer life.

Newfoundland and Labrador has seen almost consistent decline in this index since 2000, and is currently ranked last in the country for this measurement. Quebec records the highest score for this dimension, and like other well-scoring provinces BC and Ontario, experienced increases in this dimension over the last 13 years.



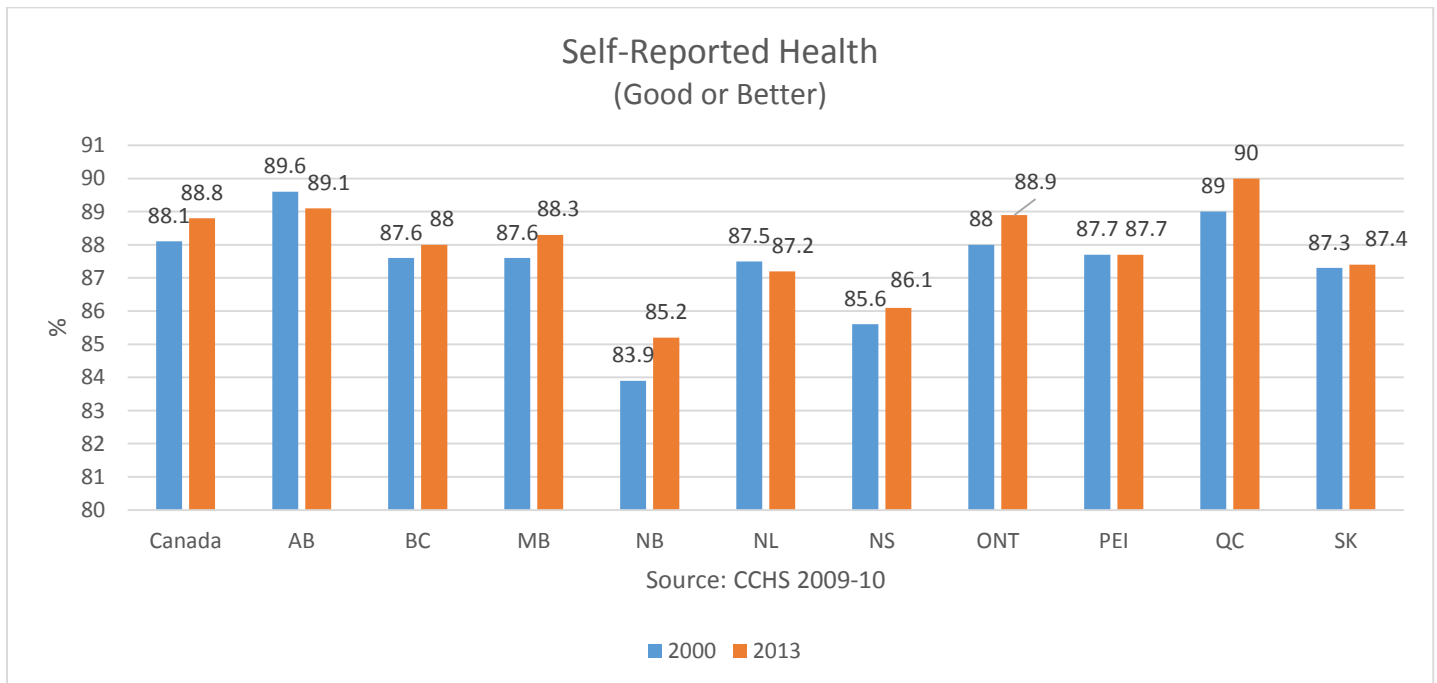
In the Better Life Index model, health is measured using two indicators: life expectancy, and self-reported health.

Life expectancy is a numerical measure of how long an average people could expect to live from birth, as per Statistics Canada. Self reported health refers to the percentage of the population aged 15 years or older who reported good or better health on a survey question which asked them to rank their health, in general, from five options: Poor, Fair, Good, Very Good and Excellent.



**Figure 3.15 – “Life Expectancy” indicator for Canadian provinces**

Newfoundland and Labrador records the lowest life expectancy in the country at 78.9 years. This is the lower than the Canadian average (81) and British Columbia, the province with the longest life expectancy (81.7). However, it is important to consider that this represents only a marginal difference within the Canadian provinces, with all falling in a range of 2.8 years. All provinces have seen an increase in this measurement over the time period surveyed, though the largest increase came from Prince Edward Island.



**Figure 3.16 – “Self-Reported Health” indicator for Canadian provinces**

Over 13% of Newfoundlanders and Labradorians reported that their health was fair or poor, compared to just under one in ten in Quebec (9.8%). In this measure, Newfoundland and Labrador only ranked above New Brunswick, who only reported 84.9% of residents feeling their health was good or better.

Most provinces found an increase in this measure over the time period surveyed, with the exception of Alberta and Newfoundland and Labrador.

### 3.9 Life Satisfaction

How satisfied one feels about their life, while subjective, is a useful component to comparing quality of life across provinces. Thus, Life Satisfaction is another dimension which represents the importance of the Better Life Index as a measurement, rather than traditional economic indicators.

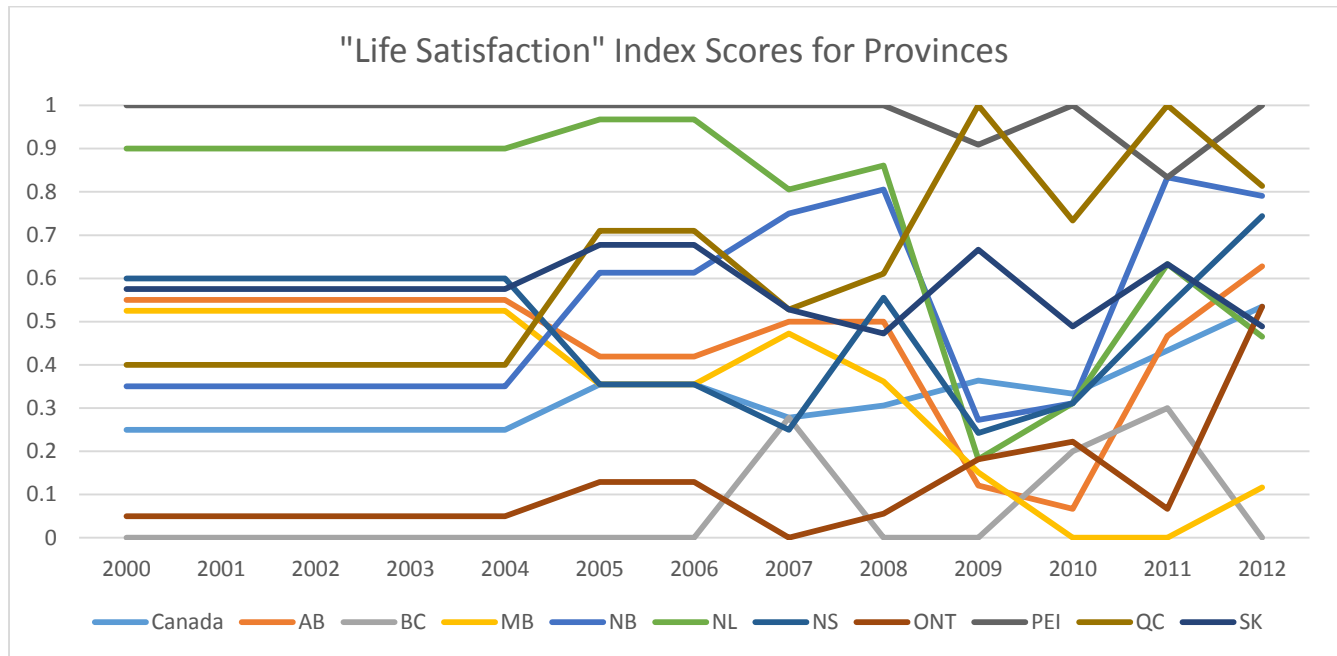


Figure 3.17 – “Life Satisfaction” indicator for Canadian provinces

In this dimension, Newfoundland and Labrador has seen a significant drop in life satisfaction since 2009, where the province went from one of the most satisfied to only ranking above Manitoba and British Columbia. Prince Edward Island has lead in this measure for almost the entire time period surveyed, with the exception of 2009, and 2011, where Quebec emerged as another satisfying place for people to live.

This dimension is measured using responses to a survey question from the Canadian Community Health Survey (for provinces) and World Gallup Poll (for OECD countries), which requires people to evaluate their life as a whole on a scale from 0 to 10. The results from the provinces are scaled based on the ratio given for Canada in the World Gallup Poll to produce comparative results. This is the only indicator that represents the dimension.

### 3.10 Safety

Safety is another dimension which the OECD believes to be an important measure of social progress and community well-being. For this dimension, the Better Life Index looks at two dimensions: homicide rate and assault rate.

In this model, homicide rate is a measure of homicides per populations of 100,000 using a reference year of 2010. Similarly, assault rates are measured using self-reported victimization rates per 100,000, as found in the 2009 General social survey on victimization (for provinces) and the Gallup World Poll (for OECD countries).

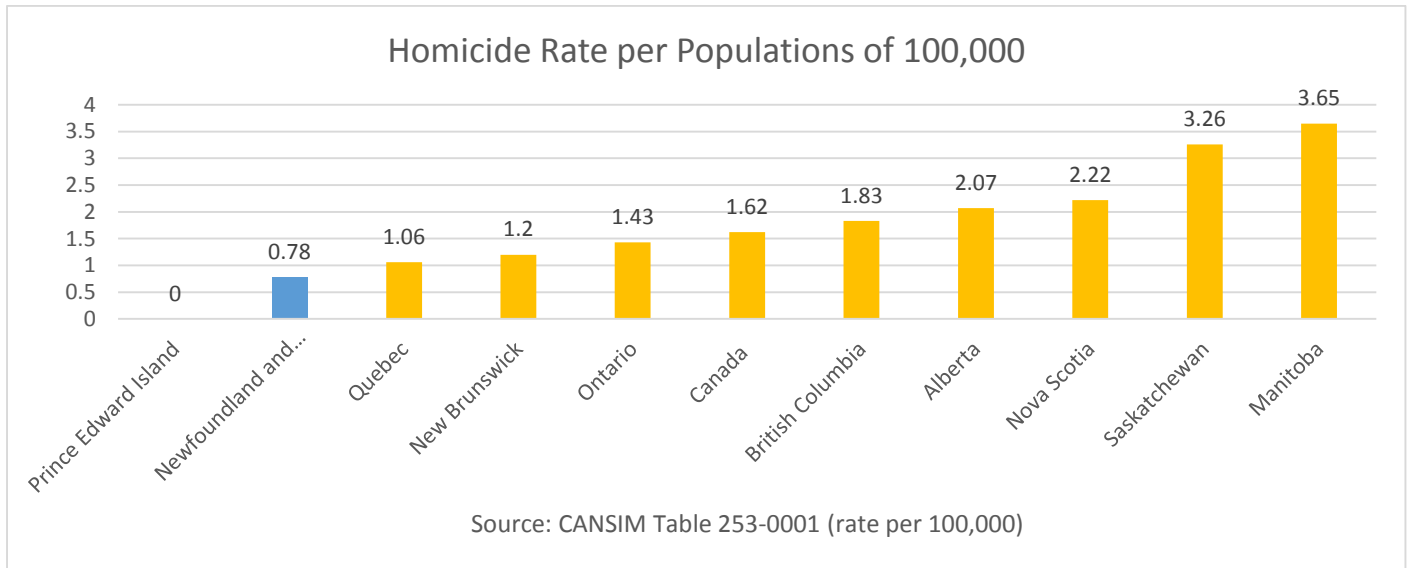


Figure 3.18 – “Homicide Rate” indicator for Canadian provinces

Considering homicide rates, Newfoundland and Labrador is second only to Prince Edward Island with a score of 0.78. Meanwhile, Manitoba faces the highest homicide rate, at 3.65. The Canadian average is 1.62, signifying that Newfoundland and Labrador has a homicide rate that is less than half the national average.

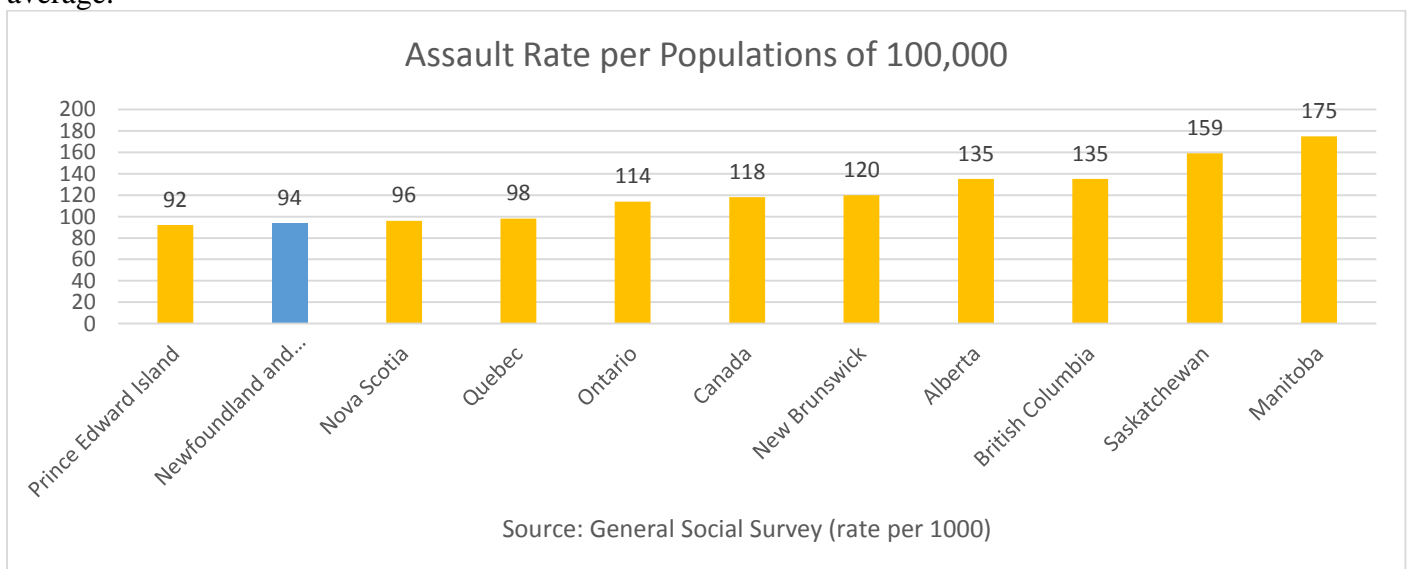


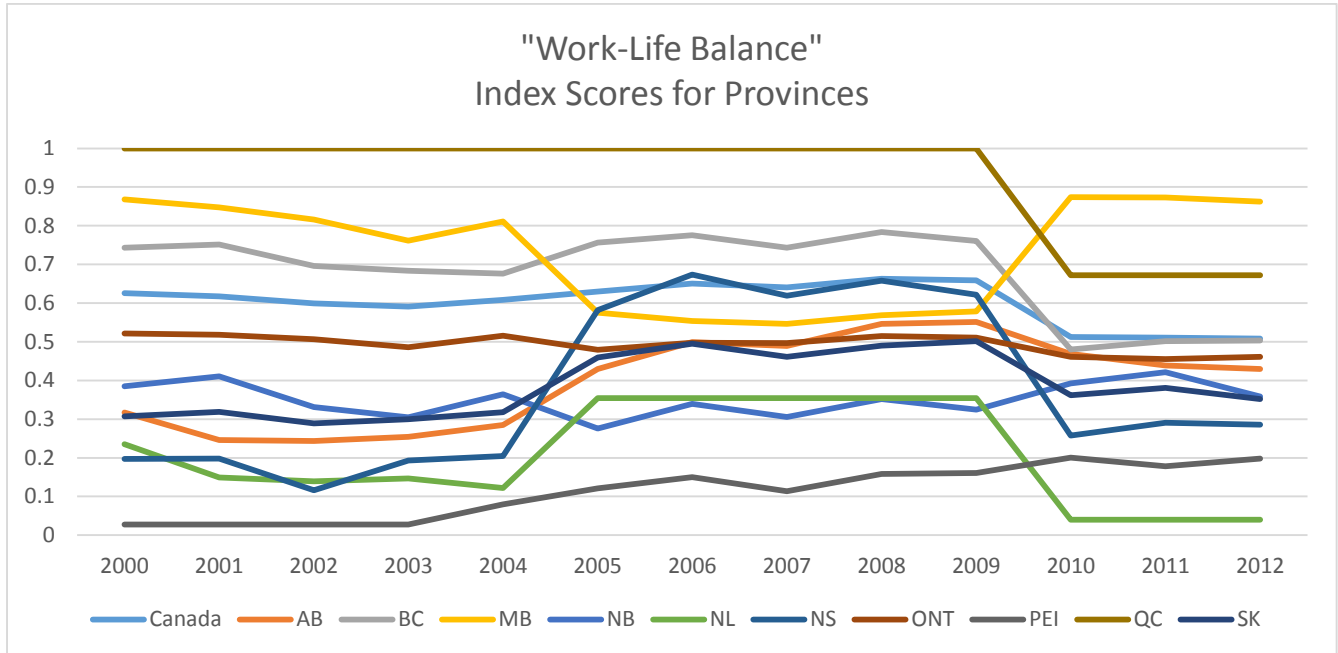
Figure 3.19 – “Assault Rate” indicator for Canadian provinces

Similarly, Newfoundland and Labrador has the lowest assault rates in the country with the exception of PEI. Again, Manitoba has the highest assault rate, though with a lower range than the homicide rate.

In both measurements, the province places substantially lower than the national average and outranked only by Prince Edward Island. Given the relative importance of safety in measuring societal progress, this is a good result. Similarly, when compared on a global scale, Newfoundland and Labrador ranks above all OECD countries, illustrating that the province is one of the safest societies in the world.

### 3.11 Work-Life Balance

While working a job often leads to greater living conditions and happiness, this can only be achieved by finding a suitable balance between work and living. This is measured using our last dimension of the Index, Work-Life Balance.

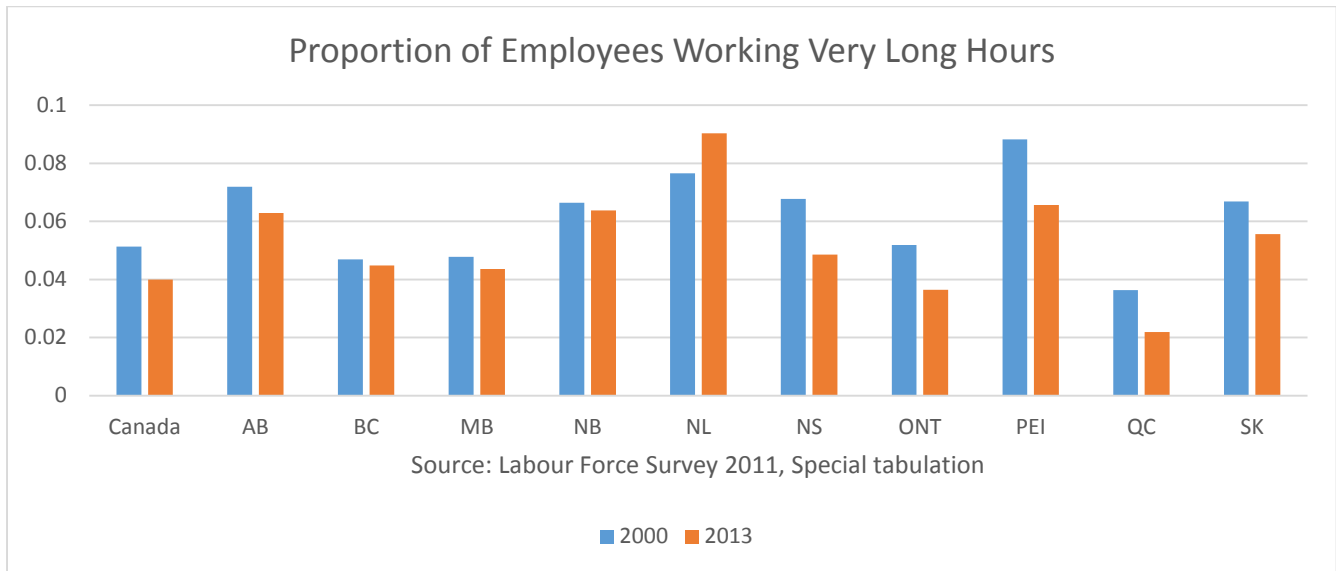


This dimension suggests that Newfoundland and Labrador has seen a decrease in work life balance following the great recession of 2008, like all provinces except for Manitoba. Newfoundland and Labrador now ranks with the lowest score for the dimension, while Manitoba leads, followed by former front-runner Quebec.

This dimension is composed of two indicators: employees working long hours and time devoted to leisure and personal care.

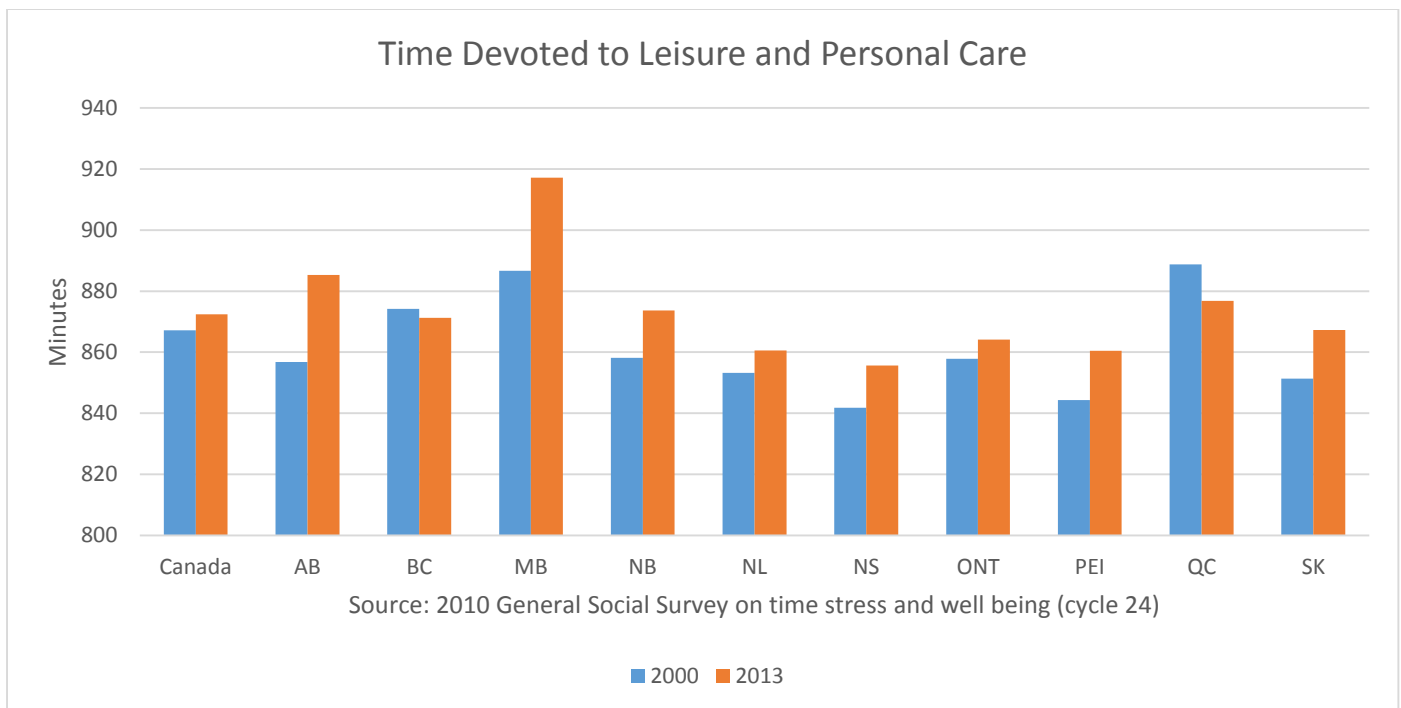
Employees working long hours is measured using the proportion of dependent employees whose usual hours of work per week exceed 50 hours. Meanwhile, time devoted to leisure and personal care is measured using the amount of time per day that full time employed people estimated to spend on leisure and personal care activities. These estimates were found in the 2010 General social survey on time-stress and well-being (for provinces) and OECD Time Use surveys (for OECD countries).





**Figure 3.20 – “Working Long-Hours” indicator for Canadian provinces**

Newfoundland and Labrador has the highest proportion of employees working very long hours per week (0.0914) in the country, with a proportion that is almost four times as more as the lowest province, Quebec (0.0237). Similarly, the province has a proportion that is over double the Canadian average (0.0407), and has a 25% increase over its’ nearest ranked province, Prince Edward Island. Unlike all other provinces, Newfoundland and Labrador has seen an increase in the proportion of employees working long hours throughout the period surveyed – indicating more of us work longer than comparative employees in the entire country.



**Figure 3.21 – “Time Devoted to Leisure and Personal Care” indicator for Canadian provinces**

Newfoundlanders and Labradorians also spend less time on leisure and personal care than other Canadians with the exception of residents of Nova Scotia. There is only a marginal difference of 1.12% between the Newfoundland and Labrador average and the Canadian average, however, and is not a significant difference. Meanwhile, residents of Manitoba spend the most time on personal care and

leisure, including 6.5% more than Newfoundlanders and Labradorians. All provinces have seen an increase in time devoted to personal care and leisure, with the exception of Quebec, over the 13 years surveyed.

## **4.0 Conclusion**

For decades, policy decisions have been focused on encouraging economic growth to ensure citizens are happier and society is better-off. Now, the Better Life Index provides a tool to complement governments and pertinent stakeholders in the decision-making process. By allowing them to recognize and measure changes that occur beyond traditional economic indicators, policy decisions can be made with greater precision and understanding than ever before.

Furthermore, using interactive features of the Index, we are able to paint a picture of Newfoundland and Labrador's social progress and aggregate wellness. This includes being capable of understanding what areas of well-being the province may have to improve, or how individual indicators respond to changes in related variables, such as income or GDP. We can also utilize comparisons between provinces to understand how Newfoundland and Labrador ranks on a national scale. Never before could we so accurately measure how life satisfaction and related dimensions across the country, all in the click of just a few buttons. By focusing on individual dimensions and indicators, we can see what areas the province will need to improve to ensure societal progress on a move-forward basis.

Ultimately, the Better Life Index is a powerful tool that with future development, can change the thinking behind future policy decisions. As a result, we can ensure that Newfoundland and Labrador is a province which is not only economically rich, but rich in both progress and overall well-being.

## Appendix A: Wellness Charts

### World Wellness Rankings

The following is a chart which ranks individual dimensions of well-being for Newfoundland and Labrador, Canada, and fourteen related countries, as recorded by the Better Life Index.

Country	Housing	Income	Jobs	Community	Education	Environment	Civic Engagement	Health	Life Satisfaction	Safety	Work-Life Balance
Australia	4	10	5	7	5	6	1	2	10	5	14
Canada	3	3	6	6	6	10	8	4	8	3	9
Denmark	15	11	7	5	7	5	4	13	6	12	1
Finland	9	13	13	13	1	7	7	12	7	8	6
France	7	7	15	10	16	12	13	11	14	14	7
Germany	11	6	8	12	4	8	14	14	13	11	5
Iceland	13	15	3	1	9	4	10	6	4	7	15
Japan	16	4	12	15	2	14	11	15	15	2	16
New Zealand	12	14	10	9	8	9	3	1	9	6	11
NL	1	9	14	2	13	15	12	9	5	1	12
Norway	5	12	2	8	11	3	6	10	2	9	2
Russian Fed.	6	16	16	16	14	16	16	16	16	16	4
Sweden	8	8	11	11	3	1	2	5	3	15	3
Switzerland	14	2	1	4	10	11	15	3	1	13	8
United Kingdom	10	5	4	3	15	2	5	8	12	4	10
United States	2	1	9	14	12	13	9	7	11	10	13

Figure 5.0 – World Wellness Comparisons

## Canadian Wellness Rankings (Provinces)

The following is a chart which ranks individual dimensions of well-being for Newfoundland and Labrador and the nine other provinces, as recorded by the Better Life Index.

Province	Housing	Income	Jobs	Community	Education	Environment	Civic Engagement	Health	Life Satisfaction	Safety	Work-Life Balance
Alberta	7	1	1	6	5	4	9	4	8	8	3
British Columbia	9	2	5	3	3	5	7	1	10	7	4
Manitoba	10	5	3	9	10	3	8	9	7	10	1
New Brunswick	2	9	8	8	7	8	2	8	3	4	5
NL	1	7	10	1	6	10	10	10	2	2	10
Nova Scotia	3	8	7	4	4	6	5	6	6	6	8
Ontario	8	3	4	7	1	1	6	3	9	5	6
PEI	4	10	9	2	8	2	1	5	1	1	9
Quebec	5	6	6	10	2	9	4	2	4	3	2
Saskatchewan	6	4	2	5	9	7	3	7	5	9	7

Figure 5.1 – Canadian Wellness Rankings

## ***References***

Hoskins, Philip and Douglas May. "OECD's Better Life Index for the Provinces: Challenges and Results", Centre for Applied Research in Economics, Memorial University. Online.  
[http://www.mun.ca/care/topics/BLI\\_paper\\_Final\\_2014.pdf](http://www.mun.ca/care/topics/BLI_paper_Final_2014.pdf)

OECD (2011), How's Life: Measuring well-being, OECD Publishing. Online.  
<http://dx.doi.org/10.1787/9789264121164-en>

OECD Better Life Index Country Reports (2013, OECD Publishing. Online.  
<http://www.oecd.org/newsroom/BLI2013-Country-Notes.pdf>