

Report on trends in First Nations communities, 1981 to 2016

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Executive summary

The Community Well-Being (CWB) index is a means of measuring socio-economic well-being for individual communities across Canada. The index is comprised of 4 components (education, labour force activity, income and housing), which are combined to provide each community with a well-being "score." These scores are used to compare well-being across First Nations communities with the well-being of non-Indigenous communities.

Since CWB methodology is based on community-level data, well-being scores are not calculated for the Métis population. Currently, CWB scores for First Nations, Inuit and non-Indigenous communities are calculated using the Statistics Canada geographic unit of a Census Subdivision. Each First Nations or Inuit community is designated by one or more Census Subdivisions. However, the CWB does not create a score for Métis communities as there are only 8 Métis-designated settlement areas in Alberta, a smaller level of geography than CSDs.

CWB index scores were calculated for 1981, 1991, 1996, 2001, 2006 and 2016 based on [Canada's Census of Population](#). Scores for 2011 have been calculated based on the [2011 National Household Survey](#). Throughout this document, the term 'Censuses of Canada, 1981 to 2016' is meant to include the 1981 to 2006 censuses, the 2011 National Household Survey and the 2016 Census of Canada.

Key findings

The average CWB score for First Nation communities steadily increased over the 35 year span, from 45.0 points to 58.4 points. The 2016 score represents a 2-point increase from 2011, which is the greatest increase in the average CWB scores for First Nations communities since 10 years earlier in 2001.

The 2016 gap in average CWB scores between First Nations and non-Indigenous communities was substantial. In 2016, the average CWB score for First Nations communities was 19.1 points lower than the average score for non-Indigenous communities, which is similar in size to the CWB gap observed in 1981 (19.5 points).

Until 1996, First Nations communities experienced gains in their average CWB scores slightly faster than non-Indigenous communities and the CWB gap narrowed. However, this trend changed after 2001 when non-Indigenous communities improved their average CWB score faster than First Nations communities, which resulted in a widening of the CWB gap between 2001 and 2006. Since then, First Nations and non-Indigenous communities have improved at similar rates and the CWB gap has remained relatively stable.

The average scores for First Nations and non-Indigenous communities vary among the 4 components of the CWB index. Each component has undergone different changes over time. Since 1981 First Nations communities have experienced the largest improvements to their average CWB scores in the areas of education and income, by 26.1 points and 18.3 points respectively.

When examined through a regional lens, between 2011 and 2016, First Nations communities in Manitoba experienced the greatest increase to their average CWB scores, alongside First Nations communities in British Columbia and the territories. In 2016, First Nations communities in the Prairie provinces (Manitoba, Saskatchewan and Alberta) had the lowest average CWB scores.

The range of CWB scores among First Nations communities is the widest among the 3 community types. In 2016, there was a 39-point difference between the highest and lowest scoring First Nations communities. Though First Nations communities were over-represented in the lowest-scoring communities across Canada in 2016, there were fewer First Nations communities in the bottom half of the CWB score range (less than 50 CWB points) than ever before.

Overall, the findings of this report suggest that First Nations communities in Canada continue to make encouraging progress in the socio-economic outcomes represented by their CWB scores, notably in the areas of education and income. However, significant CWB gaps remain to be observed between these communities and their non-Indigenous counterparts in the areas of labour and housing.

Background

Along with Inuit and Métis, First Nations refers to 1 of the 3 Aboriginal groups (referred to as "Indigenous" in this report) identified under *The Constitution Act (1982)*. As the original inhabitants of much of what is now Canada, First Nations have unique relationships with the Crown. These relationships are shaped by a variety of treaties, agreements and legislation, including the Royal Proclamation of 1763, numerous signed treaties and the *Constitution Acts* of 1867 and 1982 (AFN 2014).

Just over 977,000 First Nations individuals were recorded in the 2016 Census of Canada, including 820,120 Registered Indians and 232,380 non-Status Indians. Not all Registered Indians self-identify as First Nations. According to the 2016 census, of those that identified as Registered Indian, 6% identified as Métis and 0.1% as Inuit.

About 40% of Registered Indians live in First Nations communities which are located in all provinces and territories except for Nunavut.

Along with other Indigenous groups, First Nations experience lower socio-economic outcomes compared to non-Indigenous Canadians.

In an effort to increase and contextualize anecdotal information and qualitative research, Aboriginal Affairs and Northern Development Canada, now Crown-Indigenous Relations and Northern Affairs Canada and Indigenous Services Canada (CIRNAC, ISC), began to develop precise quantitative measures of well-being for First Nations and Inuit peoples. The first measure was the Registered Indian Human Development Index (Registered Indian HDI), which was modelled after the United Nations Development Programme's Human Development Index (HDI). The HDI defines well-being in terms of educational attainment, income and life expectancy.

It has been used since 1990 to measure well-being in about 170 countries. Analyses of the Registered Indian HDI from 1981 to 2001 revealed that the well-being of Registered Indians had been increasing but remained lower than that of other Canadians (Cooke and Beavon, 2007). Anecdotal evidence, however, suggested that well-being varied greatly across Indigenous communities and that the Registered Indian HDI, therefore, might provide an incomplete picture of well-being. The CWB index was thus developed as a community-level complement to the national- and regional-level HDI for First Nations and Inuit communities in Canada.

The index was modified from the original HDI to include housing and labour force activity, which were both acknowledged as important indicators of socio-economic well-being in First Nations and Inuit communities. In addition, life expectancy was removed from the index as it is not available.

Robin Armstrong's (2001) ground-breaking work on well-being in First Nations communities provided methodological guidance to the developers of the CWB.

Methodology

Defining the CWB index

A community's CWB index score is a single number that can range from a low of 0 to a high of 100. It includes data on education, labour force activity, income and housing conditions. These components are described below.

1. Education

The education component is composed of the following 2 variables:

- high school plus: the proportion of a community's population, 20 years and over, that has obtained at least a high school certificate. For simplicity's sake, this proportion is often referred to in this document as high school completion rate, even though it includes individuals who did not obtain a high school certificate, but did acquire a credential beyond the high school level;

- university: the proportion of a community's population, 25 years and over, that has obtained a university degree at the bachelor's level or higher.

The high school plus variable accounts for two thirds of the education component, while the university variable accounts for one third.

2. Labour force activity

The labour force activity component is composed of the following 2 equally-weighted variables:

- labour force participation: the proportion of a community's population, aged 20 to 64, that was involved in the labour force during the week preceding census day, that is census reference week.
- employment: the percentage of a community's labour force participants, aged 20 to 64, that were employed during census reference week.

3. Income

The income component of the CWB index is defined in terms of total income per capita, in accordance with the following formula:

$$Income\ Score = \left(\frac{Log(income\ per\ capita) - Log(\$2,650)}{Log(\$75,000) - Log(\$2,650)} \right) \times 100$$

The formula maps each community's income per capita onto a theoretical range. Doing so allows income per capita to be expressed as a percentage, which is the metric in which the other components of the index are naturally expressed. A range of \$2,000 to \$40,000 dollars was originally selected when the index was first calculated in 2004. However, it has since been adjusted based on the 2016 census to be \$2,650 to \$75,000. This range was selected because it coincides with the approximate lowest and highest incomes per capita found in Canadian communities in 2016. In the few cases where a community's income per capita fell outside of this range, it was recoded to either \$2,650 or \$75,000. Additionally, this range will be re-evaluated for each CWB cycle to confirm its continued appropriateness

It should be noted that the formula converts dollars of income per capita into logarithms. This is done to account for the diminishing marginal utility of income. According to this principle, those who occupy lower income strata will benefit more from additional income than those at higher income levels (Cooke, 2007, p. 29).

4. Housing

The housing component comprises equally-weighted indicators of housing quantity and quality:

- housing quantity: the proportion of a community's population living in dwellings that are not crowded as measured by having no more than one person per room;
- housing quality: the proportion of a community's population living in a dwelling that is not in need of major repairs.

Availability of data

CWB scores have been calculated for 1981, 1991, 1996, 2001, 2006, 2011 and 2016. Scores for 1986 were not calculated because information on dwelling conditions was not collected in the 1986 Census. CWB scores calculated from the censuses of 1981, 1991, 1996, 2001, 2006 and 2016 and the 2011 National Household Survey are available for every community in Canada with a population of at least 65 that was not an incompletely enumerated reserve. A reserve is defined as incompletely enumerated if it was not permitted to be enumerated, or if enumeration was incomplete or of insufficient quality.

In addition, CWB component scores (education, labour force activity, income and housing scores) are available for communities containing at least 40 households and 250 individuals.

Defining communities

Communities are defined in terms of census subdivisions (CSDs). CSDs are municipalities or areas such as reserves, that are regarded as the equivalent of municipalities. For purposes of comparison, communities in this analysis are categorized as First Nations communities or non-Indigenous communities.

First Nations communities comprise those CSDs that Crown-Indigenous Relations and Northern Affairs Canada and Indigenous Services Canada (CIRNAC and ISC) and Statistics Canada classify as on-reserve, plus a selection of other CSDs in Northern Saskatchewan, the Northwest Territories and the Yukon territory that are associated with a First Nations group and have a substantial First Nations population.

CSDs that are neither First Nations nor Inuit communities are classified as non-Indigenous communities. It is important to note that some non-Indigenous communities have substantial Indigenous populations.

CWB scores are based on all community residents since all contribute economically, socially and culturally to the communities in which they live. A study based on 2006 data (Penney and O'Sullivan 2014) showed that including non-Indigenous residents in Indigenous communities' CWB scores had little impact on broad CWB patterns. However, some individual communities' scores were influenced by their non-Indigenous populations. We therefore caution against regarding First Nations or Inuit communities' scores as proxies for their First Nations or Inuit residents.

It is also worth noting that others who use the CWB index may choose to classify communities in different ways. For example, one could reclassify non-Indigenous communities with substantial Métis populations as Métis communities.

Comparing Community Well-Being Index scores across time

Five issues complicate the comparison of CWB scores across time. They are outlined below.

1. Inflation

Owing to inflation, the value of a dollar tends to decrease over time. To ensure that the CWB is measuring actual changes in income rather than the effects of inflation, income data from the 1981 to 2006 censuses and the 2011 National Household Survey were adjusted using the Consumer Price Index. Since 2016 is the reference year for the CWB time series, no adjustment was required to those income data.

2. Missing data

Scores for some communities are missing from some or all of the 7 CWB cycles (1981, 1991, 1996, 2001, 2006, 2011 and 2016). As indicated above, scores may be missing for a community in a given year because of non-participation in the census, inadequate data quality or insufficient population size. This variation in the number of communities per census year should be considered when comparing CWB scores over time.

3. Changes in community boundaries

Communities can experience boundary changes between censuses. They can merge with other communities, divide into 2 or more communities, or annex parts of other communities. When this happens, it can be difficult to know what caused a change in a community's CWB index score from one CWB cycle to the next. For example, if a community's score went from 70 in 1981 to 80 in 1991 and that community experienced a boundary change in which it annexed part of another community, the improved CWB score could have been the result of a real change in the well-being of the original community or a result of previously existing higher well-being in the annexed area or a combination of both.

Analyses based on 2016 data revealed that boundary changes had little effect on national or regional average CWB scores. While these national and regional averages may be safely compared across time, boundary changes can seriously impact the comparability of individual communities across time. Likewise, sensitivity analyses were based on only 3 groupings of communities: First Nations, Inuit and other Canadian communities. Researchers may decide to group communities in different ways.

The extent to which boundary changes affect the average scores of different community groupings is unknown. Researchers who wish to compare individual communities or user-defined groups of communities across time are encouraged to consider the possible effects of boundary changes.

4. Sampling error

The CWB Indices of 1981 to 2006 were based on the long form of the census. These censuses were distributed to all households in First Nations, Inuit and remote communities and to a sample of one fifth of households in non-Indigenous communities. The 2011 CWB index was based on the National Household Survey. It was distributed to all households in First Nations, Inuit and remote communities and to a sample of one third of households in non-Indigenous communities but was voluntary in nature. Finally, the 2016 CWB index was based on the 2016 long-form census, which was distributed in all Indigenous households and remote communities, as well as to a sample of 1 in 4 households in non-Indigenous communities. The increase in sampling from previous cycles was introduced to reduce the risk of lower participation resulting from the voluntary nature of the 2011 National Household Survey. For a sampled community, it is possible that a fluctuation (or lack thereof) in its CWB score from one CWB cycle to the next is the result of sampling error. It is difficult to define the impact of sampling error on a given community's score in a given year, though impact generally decreases as the population of a community increases. Researchers are reminded to interpret individual communities' CWB scores with caution and to emphasize general trends rather than cycle-to-cycle fluctuations.

Consult Statistics Canada's [Sampling and Weighting Technical Report](#) for more detailed information on the sampling error.

5. Changes to the education questions

In 2006, Statistics Canada changed the census questions related to education. First, the single question that had been used to capture educational attainment was replaced with a series of questions. Statistics Canada made the change "to address suspected underreporting of high school completions" (Statistics Canada, 2008).

Second, the education questions were reformulated to focus on credentials obtained at the high school level and higher. Educational attainment that did not result in a credential (such as completion of elementary school or partial completion of high school or post-secondary programs) was no longer captured.

Although education is defined in the exact same way in each cycle of the CWB, it is possible that the methodological changes introduced in 2006 impacted the comparability of the education scores. Specifically, these changes may have caused an artificially large jump in the average high school completion rate for non-Indigenous communities between 2001 and 2006. This jump did not occur in First Nations or Inuit communities' average scores. As a result, the education gaps between Indigenous and non-Indigenous communities widened between 2001 and 2006.

Although this widening of the education gap may have been a statistical artifact, it is notable that the narrowing of the gap that had been observed prior to 2001 did not resume after 2006.

Advantages and limitations of the Community Well-Being index

The CWB is a useful research tool. It has been used to examine the effect on well-being of a variety of factors including isolation, maternal health, income inequality and treaties (O'Sullivan 2012a, AANDC 2012, O'Sullivan 2012b, AANDC 2013). It is only one of the many ways of measuring well-being and users should be mindful of both its advantages and its limitations.

The CWB was designed to fulfil 4 research objectives:

- to provide a systematic, reliable summary measure of socio-economic well-being for individual Canadian communities;
- to illustrate variations in well-being across First Nations and Inuit communities and how it compares to that of non-Indigenous communities;
- to enable the tracking of well-being over time;
- to complement other research at the community-level that explores factors associated with well-being.

CWB developers quickly ascertained that the Census of Population was the only data source capable of fulfilling these research needs. However, using the census and the National Household Survey also imposes some limitations on the CWB index.

First, the available indicators of well-being pertain mainly to socio-economic well-being. Other equally important aspects of well-being are not addressed.

The limitations of the CWB index were recently highlighted by the Office of the Auditor General (OAG) which indicated the Index components are important components. However, the OAG also mentioned that a more complete portrait of community well-being would be to place the CWB within a broader dashboard of other important indicators such as health or language. For more information, see the [report on socio-economic gaps on First Nations reserves](#).

Numerous attempts to quantify well-being have been made, and many composite indicators like the CWB have been developed. Although none of these measures can fulfill the research needs for which the CWB was designed, they highlight the variety of factors that may be regarded as establishing well-being. Physical and emotional health, cultural continuity and environmental conservation are 3 commonly employed aspects of well-being that are excluded from the CWB index.

Descriptions and reviews of some recent and ongoing efforts to measure well-being are available from the [United Nations Development Program](#) and the [Canadian Index of Well-Being](#). [Sharpe \(1999\)](#) (PDF) and [Cooke \(2005\)](#) (PDF) may also provide insight into various well-being metrics.

Second, the indicators used in the CWB may not fully capture the economic realities of some First Nations and Inuit communities. For example, many are still heavily involved in traditional economic pursuits. Such pursuits, despite contributing to material well-being, may not be reflected in the monetary income or paid employment captured by the CWB index.

Third, CWB scores represent the experiences of everyone in a given community and there are many Indigenous communities that have non-Indigenous residents. The presence of non-Indigenous residents in First Nations and Inuit communities may influence overall CWB scores at the community and regional levels.

First Nations communities have distinct socio-cultural environments and encounter different circumstances to non-Indigenous communities. While the index identifies the gaps between these 2 community types, it is not intended to suggest that conditions in non-Indigenous communities represent a goal to which First Nations communities should aspire. Readers are cautioned against making such inferences. Comparing the CWB scores for First Nations and non-Indigenous communities is valuable in the sense that it aids in the interpretation of trends in well-being. More in-depth socio-economic research is required to determine the key drivers for these trends, as well as the implications of these gaps, for First Nations communities.

Results

National trends

Community Well-Being index scores

Figure 1 plots the average scores for First Nations and Non-Indigenous communities from 1981 to 2016.

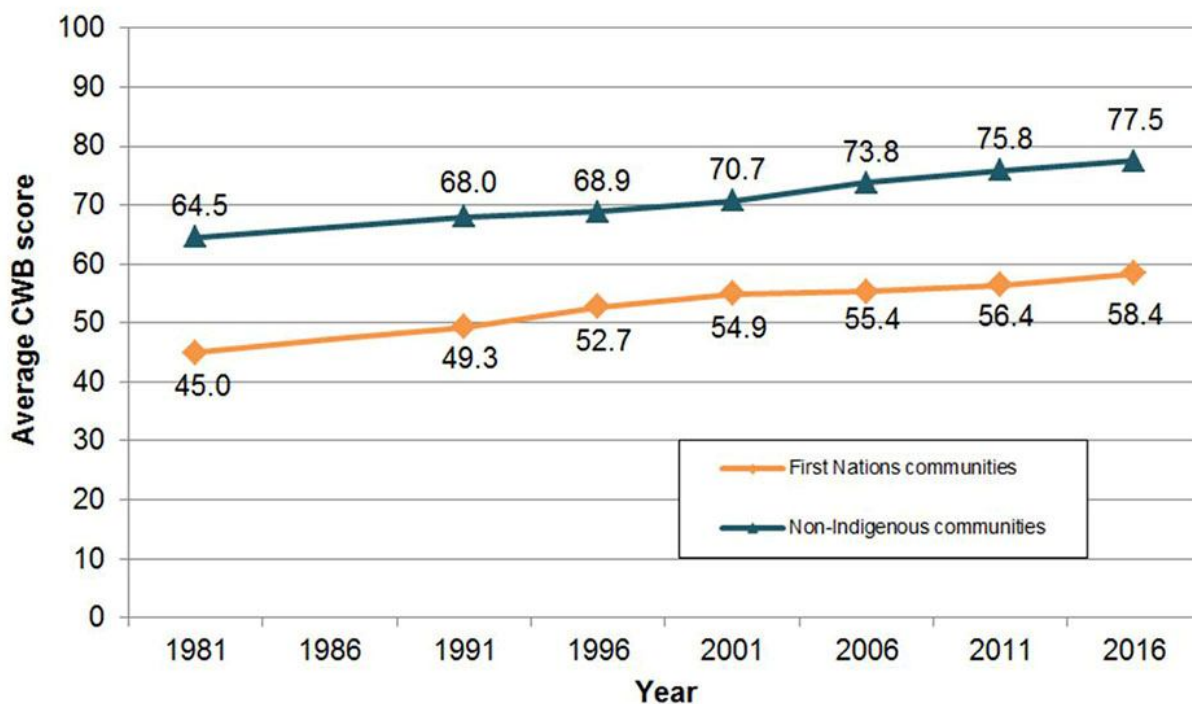
During this time, the average CWB scores for First Nations communities climbed by 13.4 points, from 45 points in 1981 to 58.4 points in 2016. The recent 2016 score represents a 2-point increase from the 56.4 points recorded in 2011, which is the greatest increase in First Nations average CWB scores since 2001.

The 2016 gap in average CWB scores between First Nations and non-Indigenous communities was substantial. In 2016, the average CWB score for First Nations communities was 19.1 points lower than the average score for non-Indigenous communities. This gap is a few points narrower than it was in 1981.

During the 1990s, First Nations communities improved slightly faster than non-Indigenous communities and the CWB gap narrowed. The reductions in the gap were largely reversed when non-Indigenous communities improved more than First Nations communities between 2001 and 2006. See Appendix 1 for a map of the 2016 CWB scores for First Nations communities.

This change may have been partially driven by a jump in non-Indigenous communities' high school completion rates. This jump should be interpreted with caution. The education questions on the census were changed in 2006, reducing the comparability of 2006 education data with data from previous censuses.

Figure 1: Community Well-Being averages over time, First Nations and non-Indigenous communities, 1981 to 2016



Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

In addition to changes in average CWB scores, it is important to examine changes in individual communities' scores over time. This permits us to distinguish between a scenario where all communities experience slow but steady improvement in well-being and a scenario where communities experience erratic periods of boom and bust.

For example, imagine measuring well-being in only 2 communities: Community A and Community B. In 1981, Community A had a score of 0 and Community B had a score of 100. The average score for these 2 communities in 1981 would be 50. In 2016, the average score for these 2 communities was still 50, suggesting that well-being remained stable for these communities between 1981 and 2016. When examining the individual communities' scores, however, in 2016, Community A had a score of 100 while Community B's score had dropped to 0.

The boom and bust pattern of these communities was, therefore, masked by the fact that their average score stayed the same over time.

Table 1 provides the percentages of communities with CWB scores that increased or remained stable in each census period.

Most communities' scores changed very little from cycle to cycle. Consequently, the number of communities whose scores decrease versus those remaining stable or increasing is impacted by how rounding is applied when changes from cycle to cycle are calculated. The numbers in table 1 were calculated using the following formula, where the change from 2011 to 2016 is used as an example:

- if the 2016 CWB index score is greater than or equal to the 2011 CWB index score then the change from 2011 to 2016 of the CWB index score is considered stable or increased;
- if the 2016 CWB index score is lower than the 2011 CWB index score then the change from 2011 to 2016 of the CWB index score has decreased.

Across all community types, only a minority of communities experienced a decline to their CWB scores for all of the census periods examined. Notably, the CWB scores for more First Nations than non-Indigenous communities increased or remained stable between 1991 and 1996, while the opposite was true in all the other census periods.

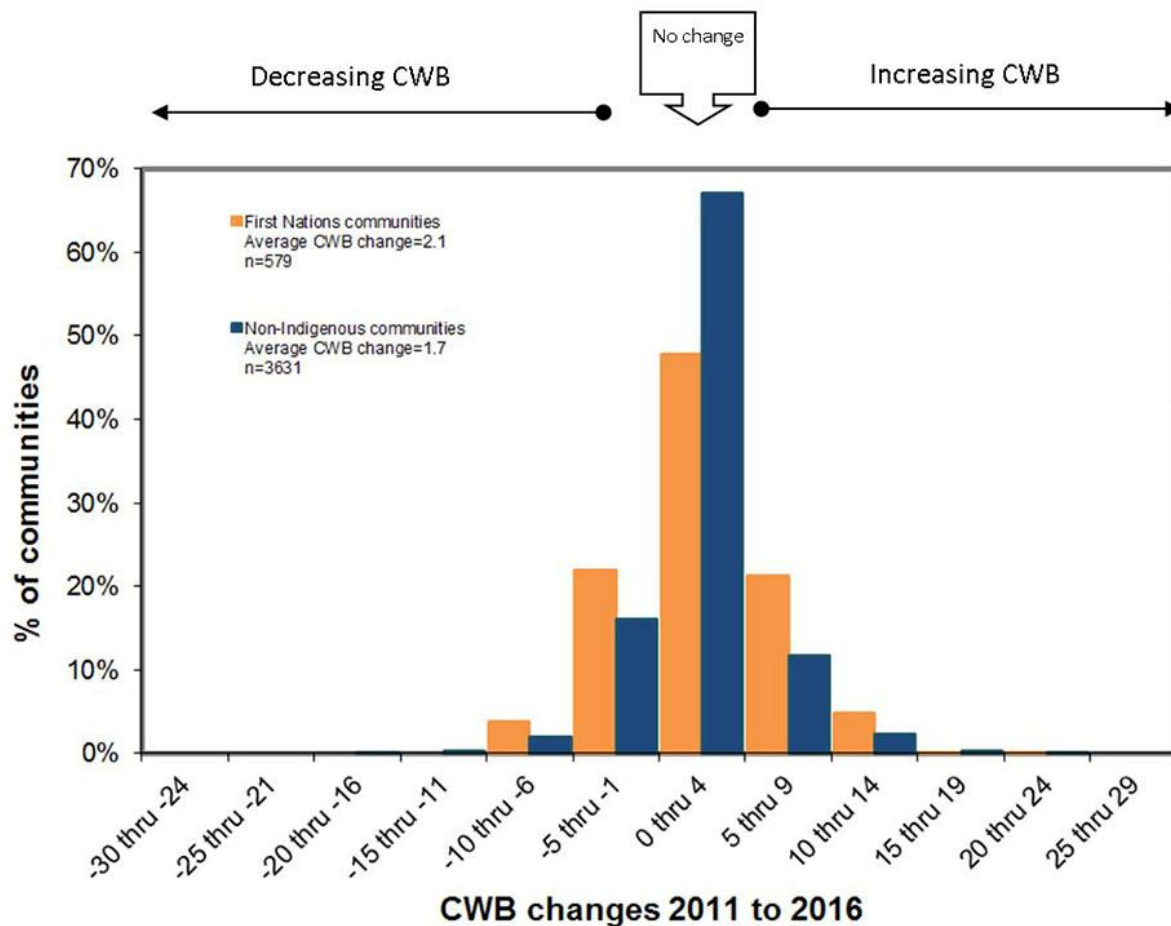
Table 1: Percentages of First Nations and non-Indigenous communities with CWB Scores that remained stable or increased, by census period

Period	Communities where CWB scores increased or were stable	
	First Nations communities	Non-Indigenous communities
1981 to 1991	76% (280 of 370)	90% (3,980 of 4,431)
1991 to 1996	82% (388 of 476)	71% (3,129 of 4,399)
1996 to 2001	71% (368 of 518)	82% (3,000 of 3,647)
2001 to 2006	62% (350 of 566)	90% (3,415 of 3,786)
2006 to 2011	63% (345 of 550)	81% (3,040 of 3,745)
2011 to 2016	74% (430 of 579)	82% (2,964 of 3,631)

Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

These results suggest that between 1981 and 2016 slow but steady improvement was typical for the majority of both First Nations and non-Indigenous communities. Figure 2 provides additional evidence to this effect and demonstrates that very few communities fluctuated more than 10 points from 2011 to 2016.

Figure 2: Change in individual First Nations and non-Indigenous communities' CWB Scores, 2011 to 2016

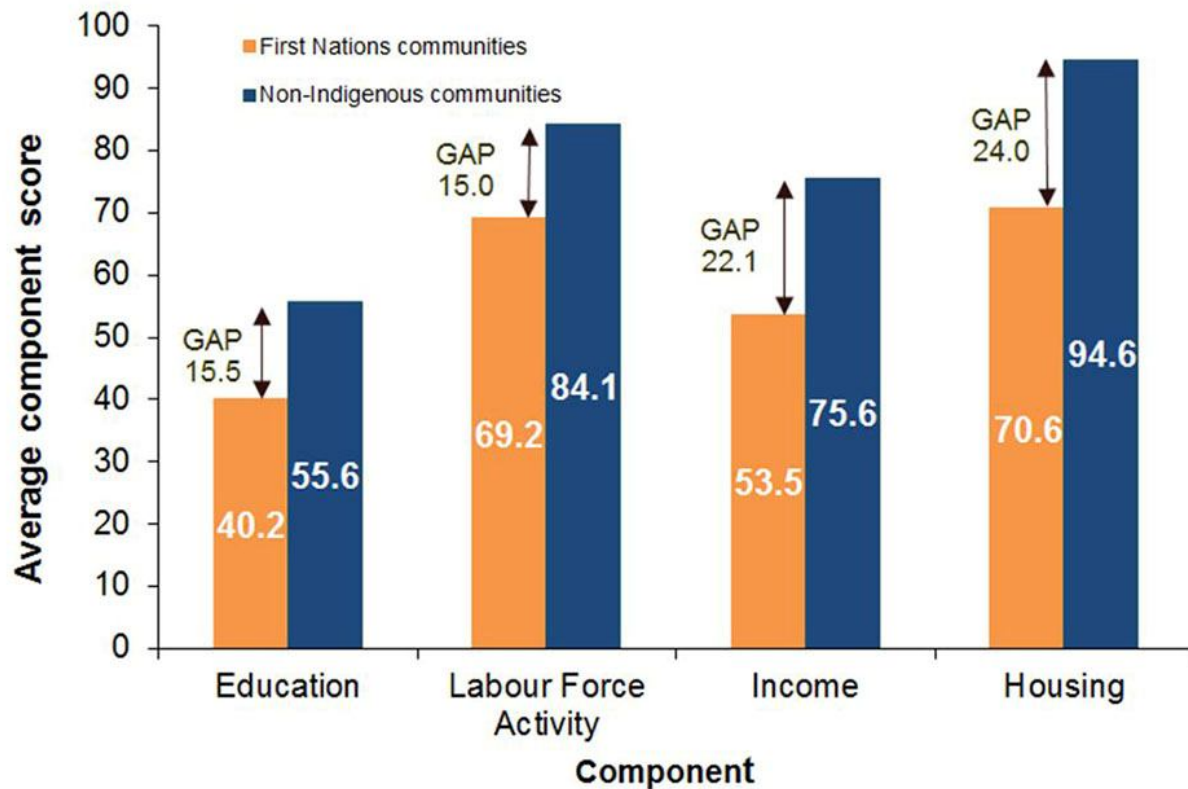


Source: Statistics Canada, National Household Survey, 2011 and Census of Population, 2016.

Community Well-Being component scores, 1981 to 2016

The CWB is made up of 4 components: education, labour force activity, income and housing. Each can range from a low of 0 to a high of 100. Between 1981 and 2016, all communities observed increases to their education, labour force activity, income and housing scores. For both First Nations and non-Indigenous communities, the CWB component scores for the education and income components showed the greatest change over this 35-year time period, while the labour force activity and housing components fluctuated slightly and experienced only marginal gains over time.

Figure 3 shows that gaps remain to varying degrees between First Nations and non-Indigenous communities in each of these components in 2016. The gaps were narrower for the education and labour force activity components compared with those for housing and income. The gaps were calculated using unrounded numbers rather than those rounded to one tenth in the figure.

Figure 3: CWB component scores and gaps, First Nations and non-Indigenous communities, 2016

Source: Statistics Canada, Census of Canada, 2016.

Each CWB component has undergone different changes over time.

Education

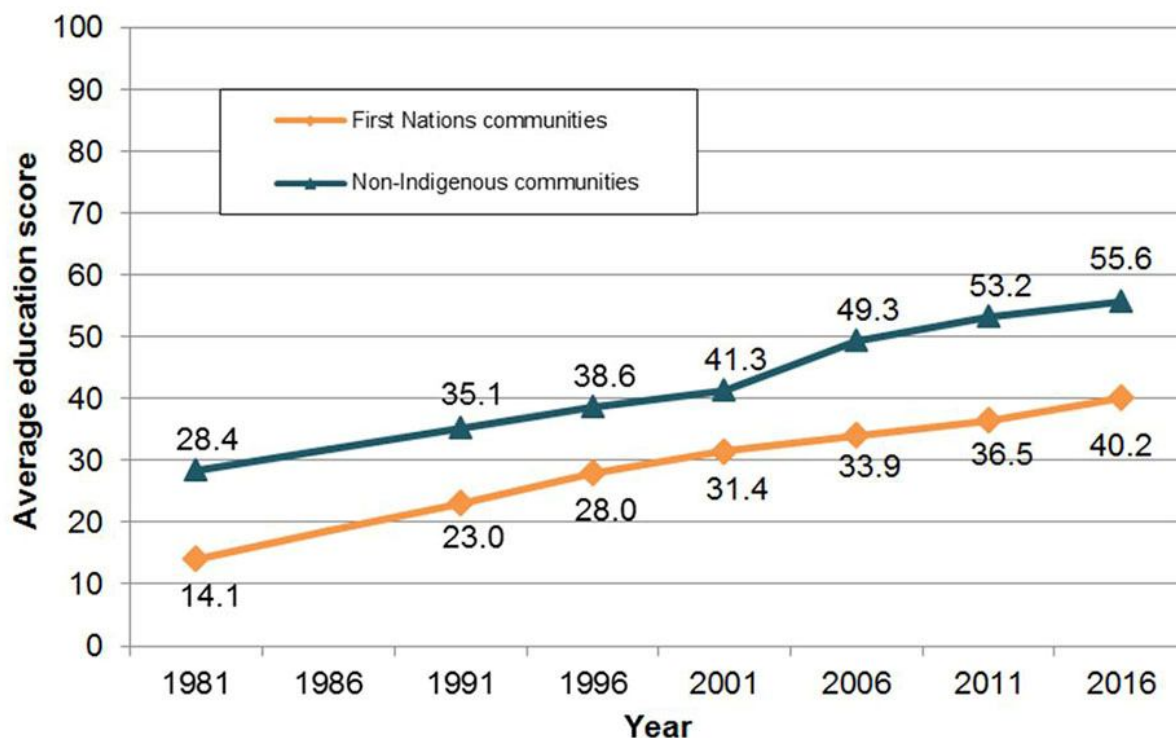
The education component represented the greatest shift in average CWB scores for First Nations communities between 1981 and 2016. Over this 35-year period, the average education score rose by 26.1 points, increasing from 14.1 points in 1981 to 40.2 points in 2016 (Figure 4). This growth was substantial and also comparable to the 27.2-point increase experienced by non-Indigenous communities. An examination of the most recent census periods offers evidence that this growth continued. Between 2011 and 2016, the average education score for First Nations communities increased by 3.7 points, compared to a 2.4-point increase among non-Indigenous communities.

With this in mind, the education gap has remained relatively stable between First Nations communities and non-Indigenous communities in recent years. In 2016, the education gap between these 2 community types was 15.5 points, which is slightly narrower than the gap reported in 2011.

Historical data point to a narrowing of the gap between 1981 and 2001. During this time, the education gap between First Nations and non-Indigenous communities narrowed slowly, approximately 1 point every 5 years.

Afterwards, between 2001 and 2006, the gap widened as a result of a large increase in the average education score for non-Indigenous communities. As mentioned above, this increase should be interpreted with caution due to the change in the census education questions.

Figure 4: Average education scores, First Nations and non-Indigenous communities, 1981 to 2016



Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

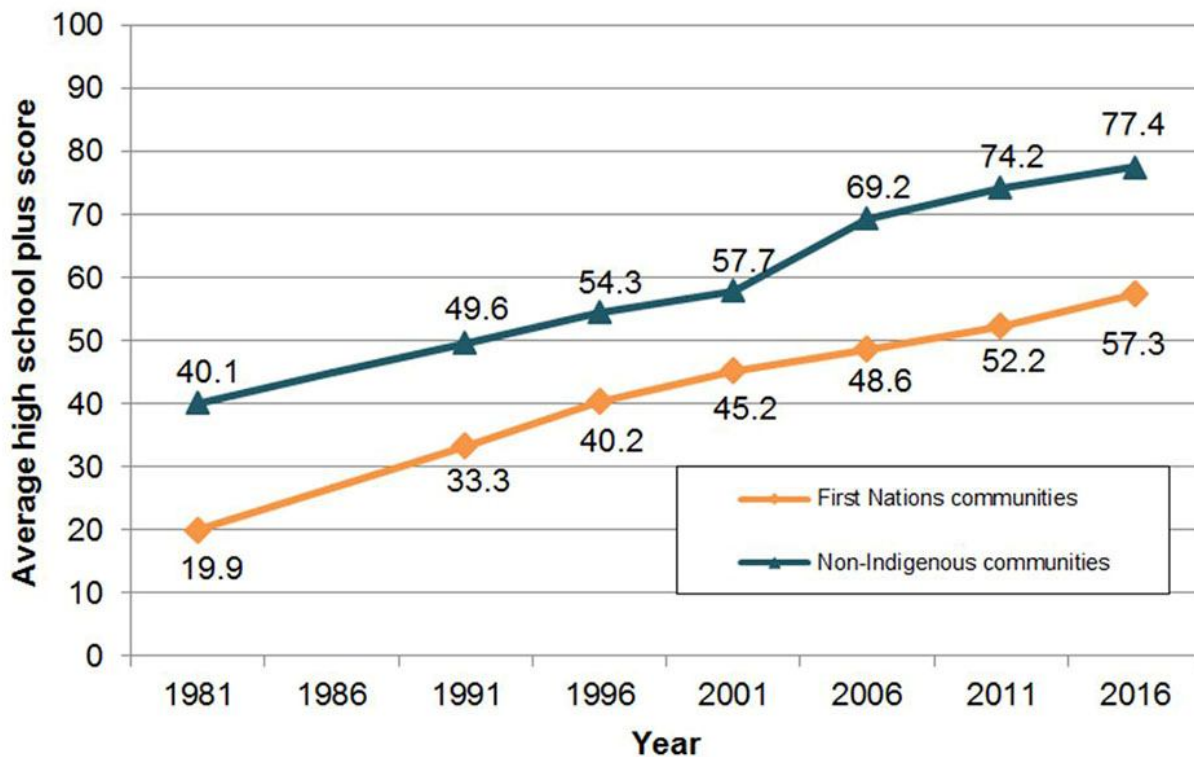
Education subcomponents: High school plus and university

Figures 5 and 6, respectively, illustrate changes in the 2 subcomponents of the education score: High school plus and university.

From 1981 to 2016, the average high school plus score for First Nations communities increased by 37.4 points (Figure 5). This growth was almost identical to the growth experienced by non-Indigenous communities (37.3 points). Average high school plus scores from the most recent census periods are also notable. Between 2011 and 2016, First Nations communities experienced a 5.1-point increase to their score on this subcomponent, while non-Indigenous communities' average score rose by a more modest 3.2 points.

While these recent high school plus scores may be indicative of a narrowing of the gap, it nevertheless remains significant in size. In 2016, 20.1 points stood between the high school plus scores of First Nations and non-Indigenous communities, representing a gap almost identical in size to what was observed in 1981 (20.2 points).

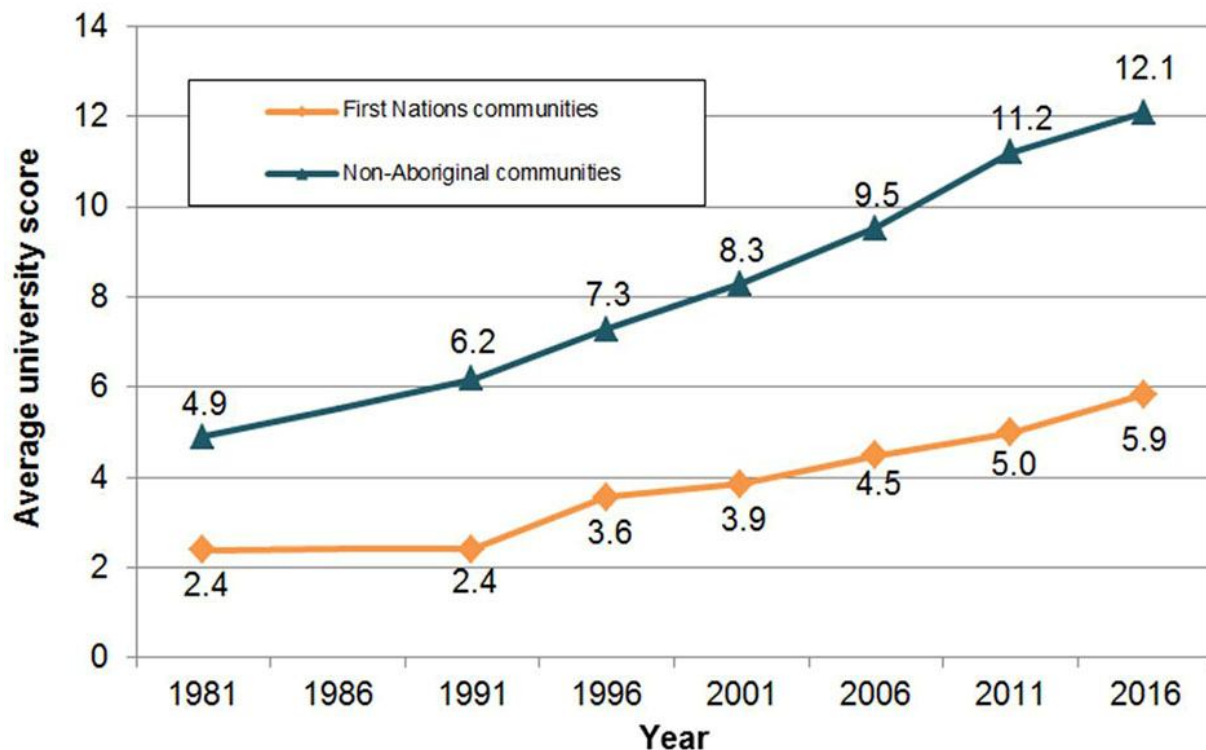
Figure 5: Average high school plus scores, First Nations and non-Indigenous communities, 1981 to 2016



Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

As illustrated by Figure 6, average university scores for both First Nations and non-Indigenous communities grew by only 0.9 points from 2011 to 2016. For First Nations communities, this growth represents the greatest increase to average university scores since the 1990s. Comparatively, for non-Indigenous communities, this slight increase represents the least growth between any 2 census periods examined.

The largest CWB gap in average university scores between First Nations and non-Indigenous communities was 6.2 points, which was observed in 2011 and more recently in 2016. This gap represents the largest gap between these 2 community types observed over the 35 years studied. The 2016 CWB university gap was more than double the gap recorded for 1981 (2.5 points).

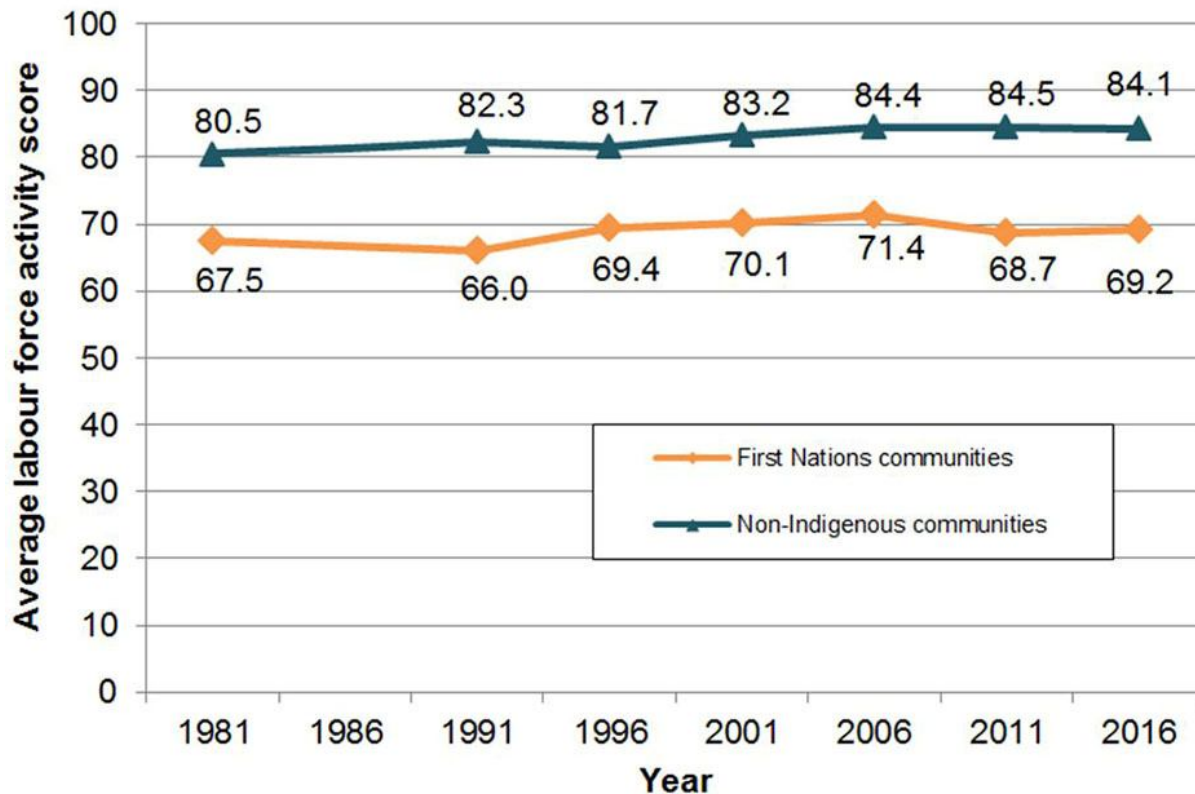
Figure 6: Average university scores, First Nations and non-Indigenous communities, 1981 to 2016

Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Labour force activity

Between 1981 and 2016, First Nations communities' average labour force activity score remained fairly stable. As illustrated by Figure 7, the average score increased by a few points during the 1990s and early 2000s, but between 2006 and 2016 this slight growth curtailed.

This decline in First Nations communities' average labour force activity score in 2006 and in 2011 warrants further consideration. Previous research indicates that Indigenous people in Canada were more affected by the economic downturn in 2008 (Usalcas, 2011, Statistics Canada, 2009). This research was conducted off reserve only, but it is reasonable to suspect that at minimum First Nations people living on reserve were similarly affected. The decline in the average labour force activity score in 2006 and in 2011 for First Nations communities could therefore reflect the impact of the 2008 downturn. Further, it is interesting to note that between 2011 and 2016, the labour force activity score of First Nations communities showed signs of recovery similar to the level in 1996, but still lower than the high achieved in 2006. Bearing this context, the labour force activity gap between First Nations and non-Indigenous communities has not experienced much change recently, although it is noteworthy that the gap in 2016 was 1.9 points greater than it was in 1981.

Figure 7: Average labour force activity scores, First Nations and non-Indigenous communities, 1981 to 2016

Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Labour force activity subcomponents: Labour force participation and employment

Figures 8 and 9, respectively, illustrate changes in the 2 subcomponents of the labour force activity score: Labour Force Participation and Employment.

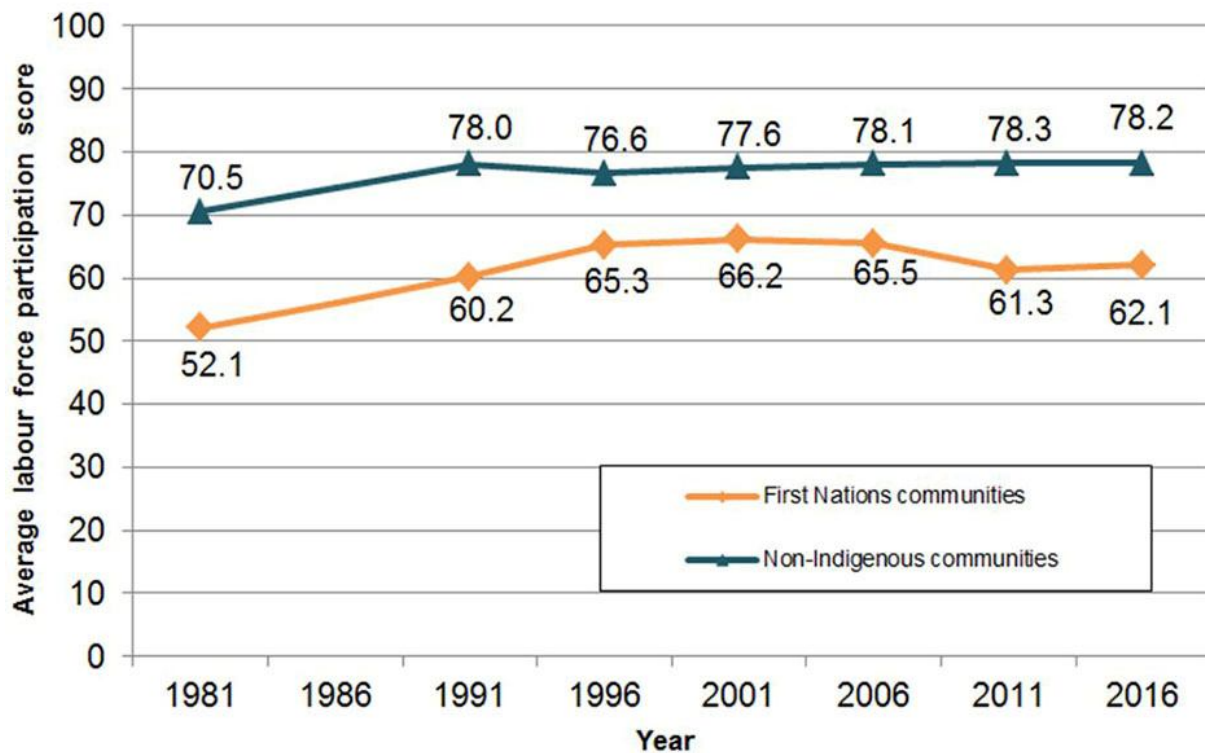
The average labour force participation score for First Nations communities fluctuated slightly over the 35 years studied and the 2016 score was 10 points higher than the score that was observed in 1981.

This rise in the labour force participation score is owed primarily to growth observed early on, between 1981 and 1991. This growth was followed by a period of stability that ended in 2006 when the average labour force participation score for First Nations' communities began to decline. The average score did not return to its 2006 levels.

The labour force participation gap has also experienced some marginal change. The 2016 average score represents a slight narrowing of the gap that corresponds with the recent labour force participation gains observed for First Nations communities.

Meanwhile, the labour force participation gap relative to non-Indigenous communities was 16.1 points wide in 2016.

Figure 8: Average labour force participation score, First Nations and non-Indigenous communities, 1981 to 2016

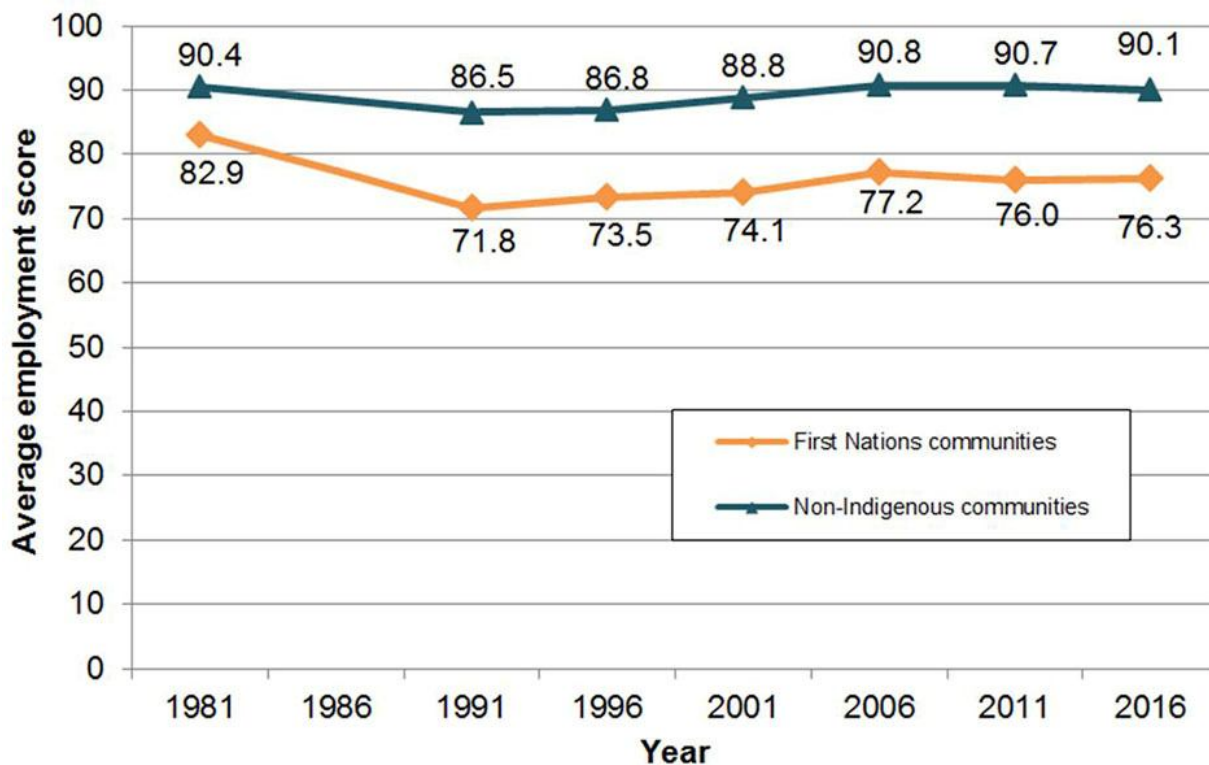


Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Both First Nations and non-Indigenous communities experienced a decline to their average employment scores between 1981 and 1991 (Figure 9). While the average employment score for First Nations communities improved steadily between 1991 and 2006, by 2016 it still had not returned a level comparable to what was observed in 1981. In 2016, the average labour force participation score for First Nations communities was 76.3 points, compared to 82.9 points in 1981.

As Figure 9 illustrates, the CWB employment gap between First Nations and non-Indigenous communities widened in 1991 and has remained relatively stable since, fluctuating between 13 and 14 points across the subsequent CWB cycles.

Figure 9: Average employment score, First Nations and non-Indigenous communities, 1981 to 2016

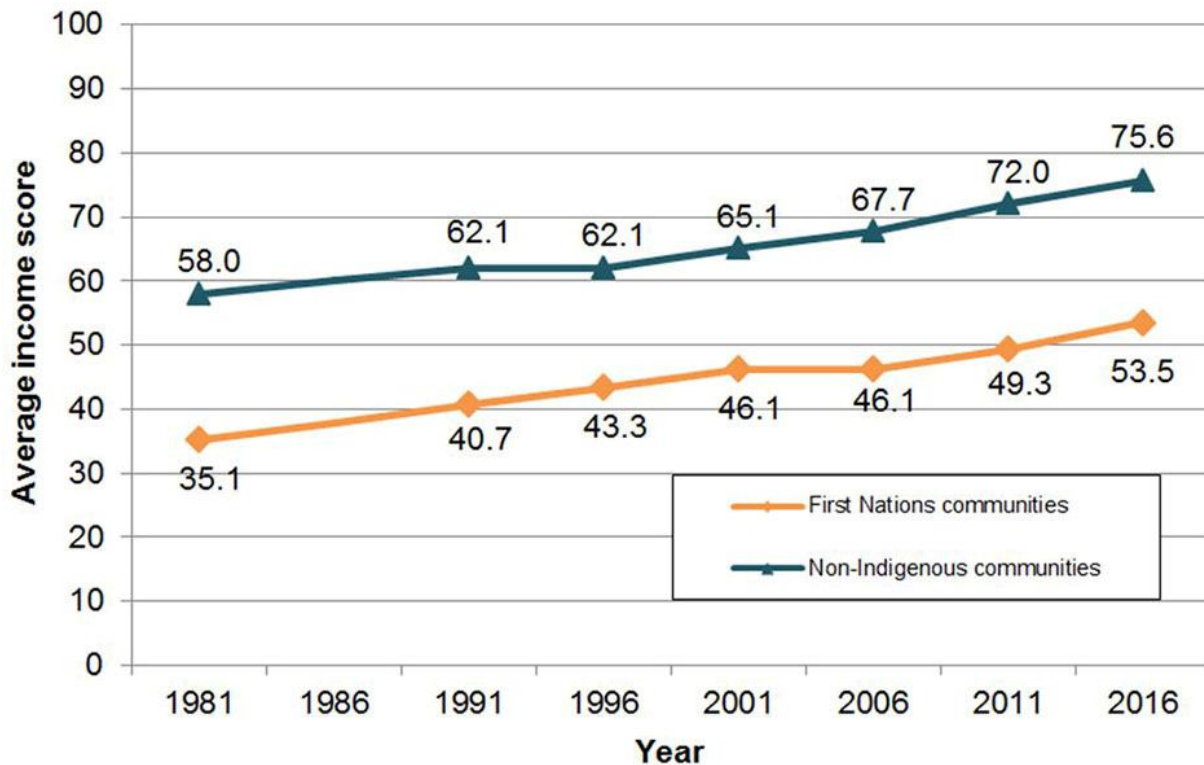


Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Income

Between 1981 and 2016, the income component witnessed the second to largest growth recorded among the 4 CWB index components. The average income score for First Nations communities increased by 18.3 points over this 35-year time frame (Figure 10). Growth ran parallel to the 17.6 point increase in the average income score for non-Indigenous communities. This long-term trend remains consistent following the most recent cycle of the CWB. Between 2011 and 2016, the average income score for First Nations communities increased by 4.1 points, while the corresponding score for non-Indigenous communities increased by 3.6 points.

This steady growth in income score for both First Nations and non-Indigenous communities ensured that the income gap remained virtually unchanged over the years. In 2016, 22.1 points separated the average income scores of First Nations and non-Indigenous communities. This gap is similar in size to both the 1981 and 2011 income gaps observed.

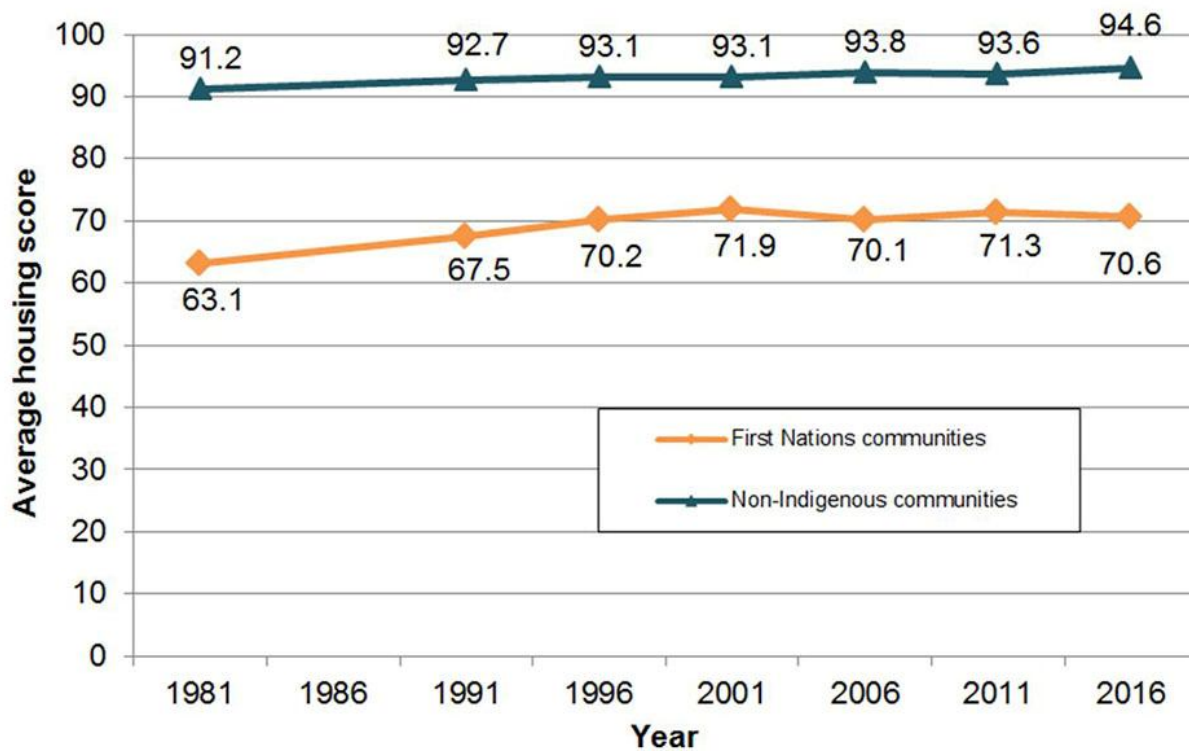
Figure 10: Average income scores, First Nations and non-Indigenous communities, 1981 to 2016

Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Housing

With the exception of some moderate growth during the 1980s and early 1990s, the housing scores for First Nations communities have remained fairly constant since 1996. As Figure 11 illustrates, the average housing score for First Nations communities was 70.6 points in 2016, which is an increase of 7.5 points from the 63.1 point average reported in 1981. Much of this growth is attributable to modest improvements to the average housing score achieved during the 1980s and 1990s. Between 2001 and 2016, the average housing score for First Nations communities changed very little.

The stable scores observed after 2001 resulted in a CWB housing gap of close to 20 points over the last 4 cycles of the index (2001 to 2016). In 2016, there was a 24-point housing gap between First Nations communities and non-Indigenous communities, which represented a slight 1.6 point increase from the gap observed in 2011.

Figure 11: Average housing scores, First Nations and non-Indigenous communities, 1981 to 2016

Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

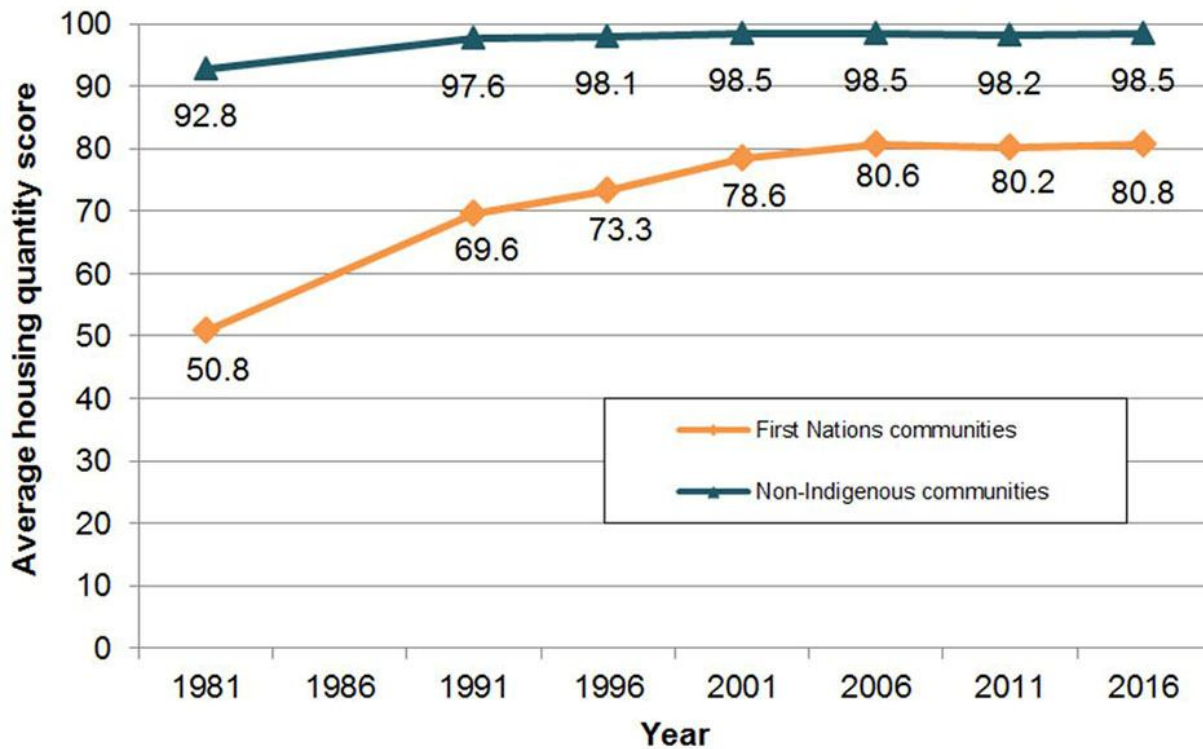
Housing subcomponents: Housing quantity and quality

Figures 12 and 13, respectively, illustrate the impact of the 2 subcomponents that compose the housing score: Housing quantity (not crowded) and housing quality (not in need of major repair).

Between 1981 and 2016, First Nations communities experienced a substantial 29.9-point increase to their average housing quantity score. In 2016, there was a 17.8-point gap between the average housing quantity score for First Nations and non-Indigenous communities, representing a 24.3-point reduction from the 42.1-point housing quantity gap observed in 1981.

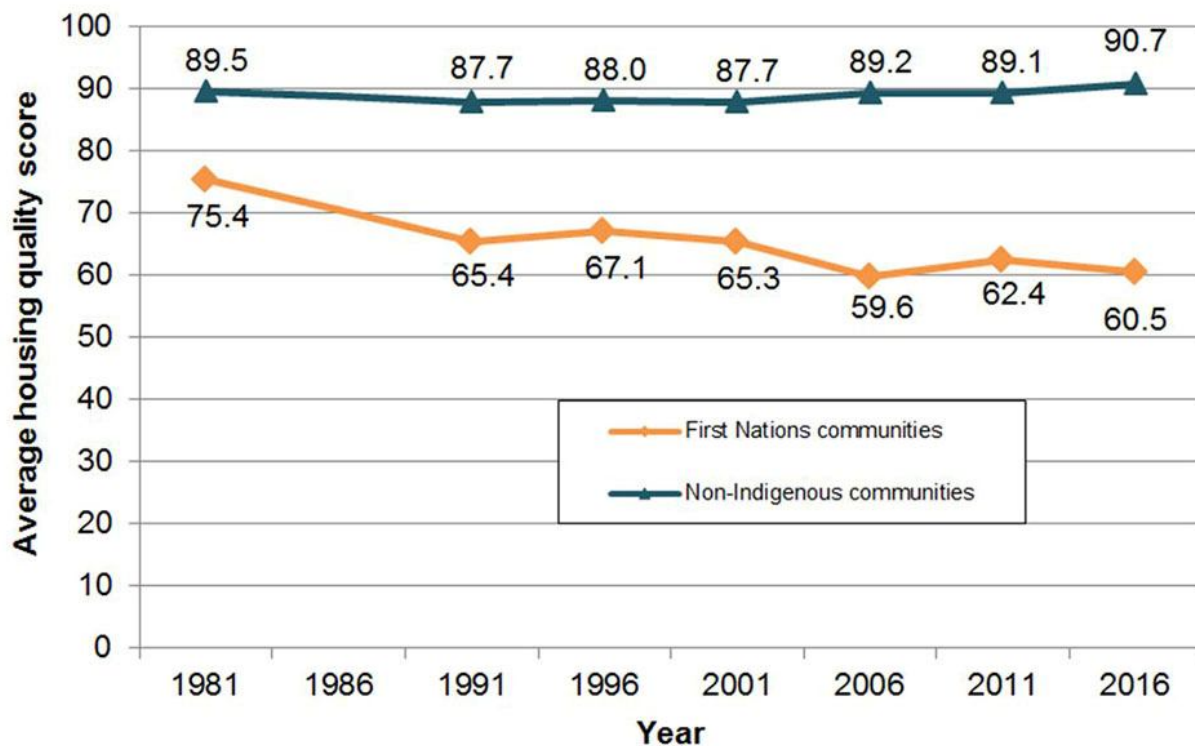
In contrast, during the same time period, their average housing quality score declined by 14.9 points. Since these subcomponents are equally weighted, these trend lines had opposite impacts on the overall housing score, which may explain why it has remained so stable. In 2016, a gap of 30.2 points separated the average housing quality scores for First Nations and non-Indigenous communities, representing a 16.1-point increase to the gap in housing quality since 1981.

Figure 12: Average housing quantity (not crowded), First Nations and non-Indigenous communities, 1981 to 2016



Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Figure 13: Average housing quality (not in need of major repair), First Nations and non-Indigenous communities, 1981 to 2016



Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Changes to Community Well-Being component scores and gaps

Table 2 below presents a review of the trends in CWB components across community types and highlights the time required for changes in CWB average scores to impact corresponding gaps. Furthermore, the table provides a summary of the CWB components, including changes in average scores and gaps. The "score changes" column refers to changes over time to the CWB scores of First Nations communities. The "gap changes" column presents the changes over time in the gaps between the CWB scores of First Nations communities compared with non-Indigenous ones.

The gaps in Table 2 are based on unrounded numbers.

Table 2: Changes to CWB component scores and gaps of First Nations, 1981 to 2016 and 2011 to 2016.

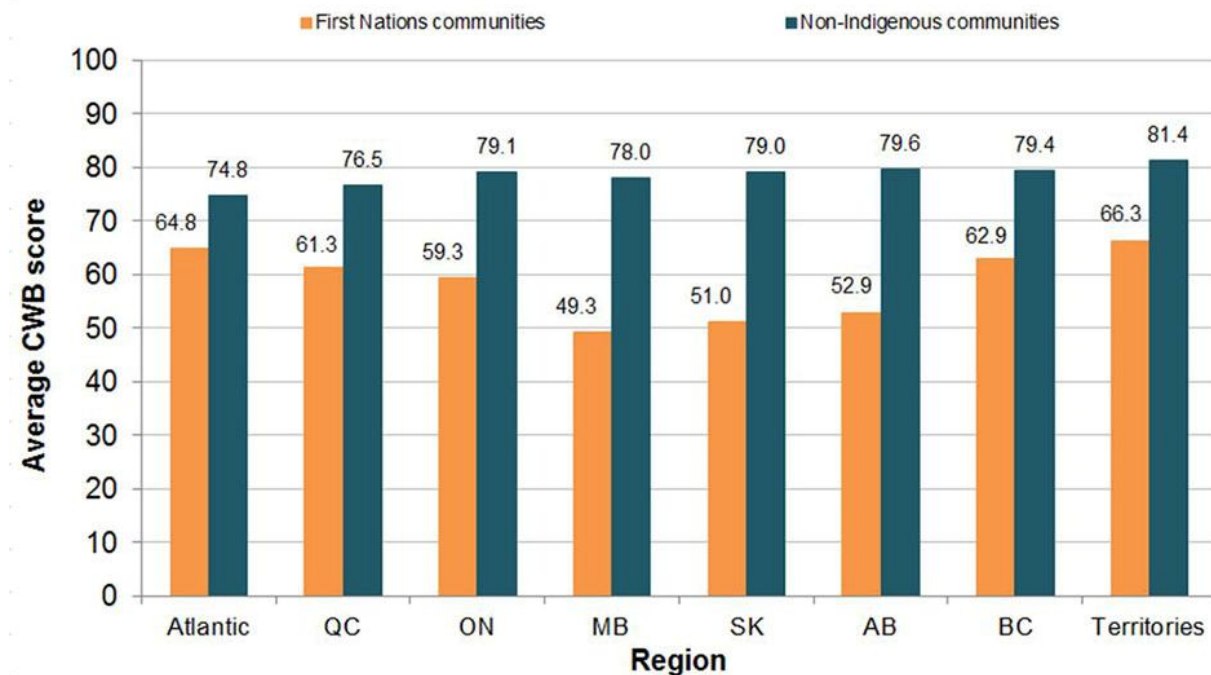
CWB components	2016 gap	Score changes		Gap changes	
		1981 to 2016	2011 to 2016	1981 to 2016	2011 to 2016
Education	15.5	Increased 26.1	Increased 3.7	Widened 1.2	Narrowed 1.2
High school plus	20.1	Increased 37.4	Increased 5.1	Narrowed 0.1	Narrowed 1.9
University	6.2	Increased 3.5	Increased 0.9	Widened 3.7	No change
Labour force	15.0	Increased 1.6	Increased 0.5	Widened 2.0	Narrowed 0.9
Participation	16.1	Increased 10.0	Increased 0.8	Narrowed 2.3	Narrowed 0.8
Employment	13.8	Decreased 6.7	Increased 0.2	Widened 6.3	Narrowed 0.9
Income	22.1	Increased 18.3	Increased 4.1	Narrowed 0.7	Narrowed 0.6
Housing	24.0	Increased 7.5	Decreased 0.7	Narrowed 4.1	Widened 1.6
Quantity	17.8	Increased 29.9	Increased 0.6	Narrowed 24.3	Widened 0.2
Quality	30.2	Decreased 14.9	Decreased 1.9	Widened 16.1	Widened 3.5

Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011

Regional trends

The Community Well-Being index by region

Average CWB scores for First Nations communities vary according to region (Figure 14). In 2016, First Nations communities in the territories had the highest average CWB score, while First Nations communities located in the Prairie provinces (Manitoba, Saskatchewan and Alberta) had the lowest average CWB score. First Nations communities in the Prairie provinces also experienced the largest gap in average CWB score when compared to their non-Indigenous counterparts. In 2016, the CWB gap was smallest in the Atlantic region.

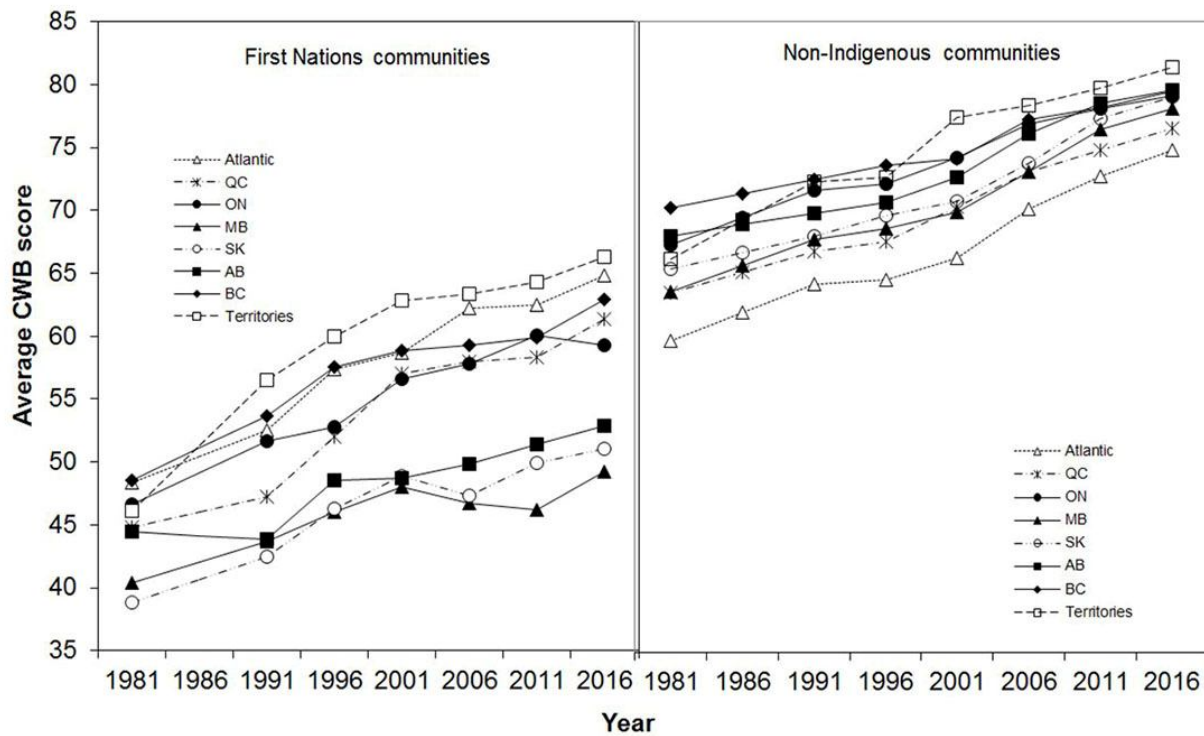
Figure 14: Average CWB scores by region, First Nations and non-Indigenous communities, 2016

Source: Statistics Canada, Census of Canada, 2016.

As demonstrated in Figure 15, further examination of these regional CWB scores over time reveals several key points. The key changes can be summarized as follows:

- by 2011, First Nations communities in some regions had attained an average CWB score comparable to scores observed for some non-Indigenous communities as recently as 1996;
- regional variability continues to be greater in First Nations communities than in non-Indigenous communities;
- the relative disadvantage of First Nations communities in the Prairies has grown over time, particularly during the 2001 to 2006 period; both First Nations communities in Manitoba and Saskatchewan experienced a decline to their average CWB scores;
- First Nations communities in Saskatchewan improved slightly more than First Nations communities in other regions between 2006 and 2011, comparable growth was not observed for First Nations communities in Manitoba;
- all First Nations communities, with the exception of Ontario, experienced small increases in their average CWB scores from 2011 to 2016; the slight decrease is explained by the incomplete enumeration of 21 Ontario First Nations communities in 2011;
- First Nations communities in Manitoba and British Columbia experienced the largest increases.

Figure 15: Average CWB scores by region, First Nations and non-Indigenous communities, 1981 to 2016



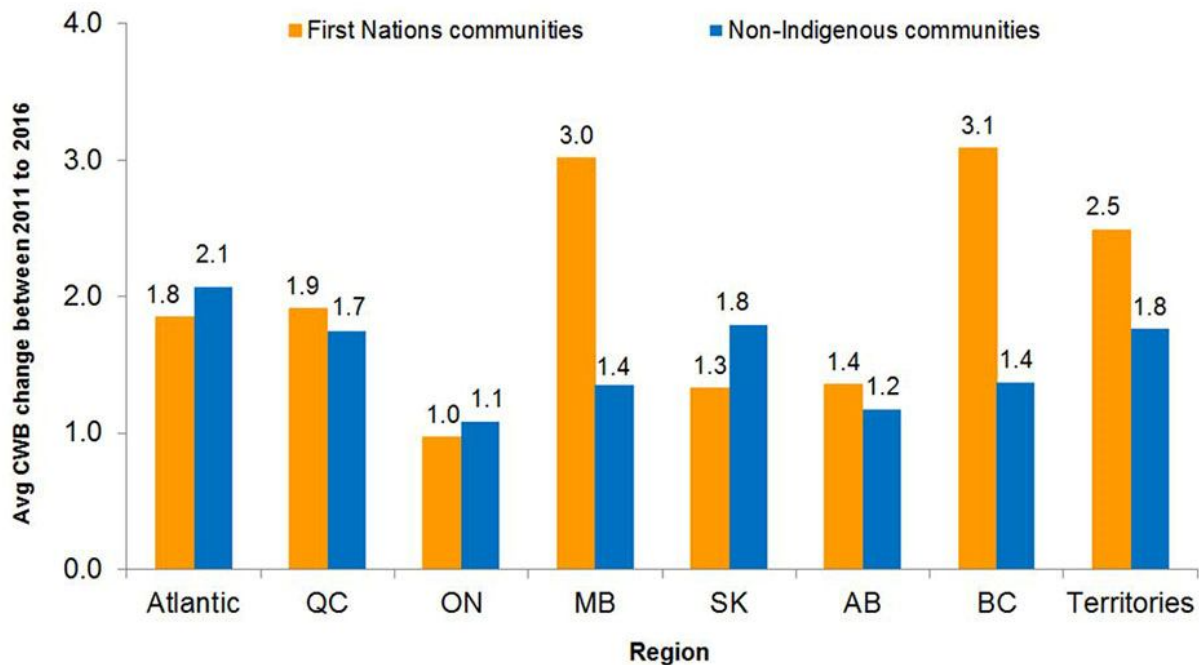
Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011.

Recent regional changes, 2011 to 2016

To explore recent changes within the regions, average CWB scores were compared for the 2011 and 2016 iterations of the CWB index.

First Nations communities in all of the regions experienced an increase in average CWB scores between 2011 and 2016. The British Columbia and Manitoba regions increased the most, with the Ontario region experiencing the least change.

Figure 16: Regional average CWB score changes by First Nations and non-Indigenous communities, 2011 to 2016



Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011

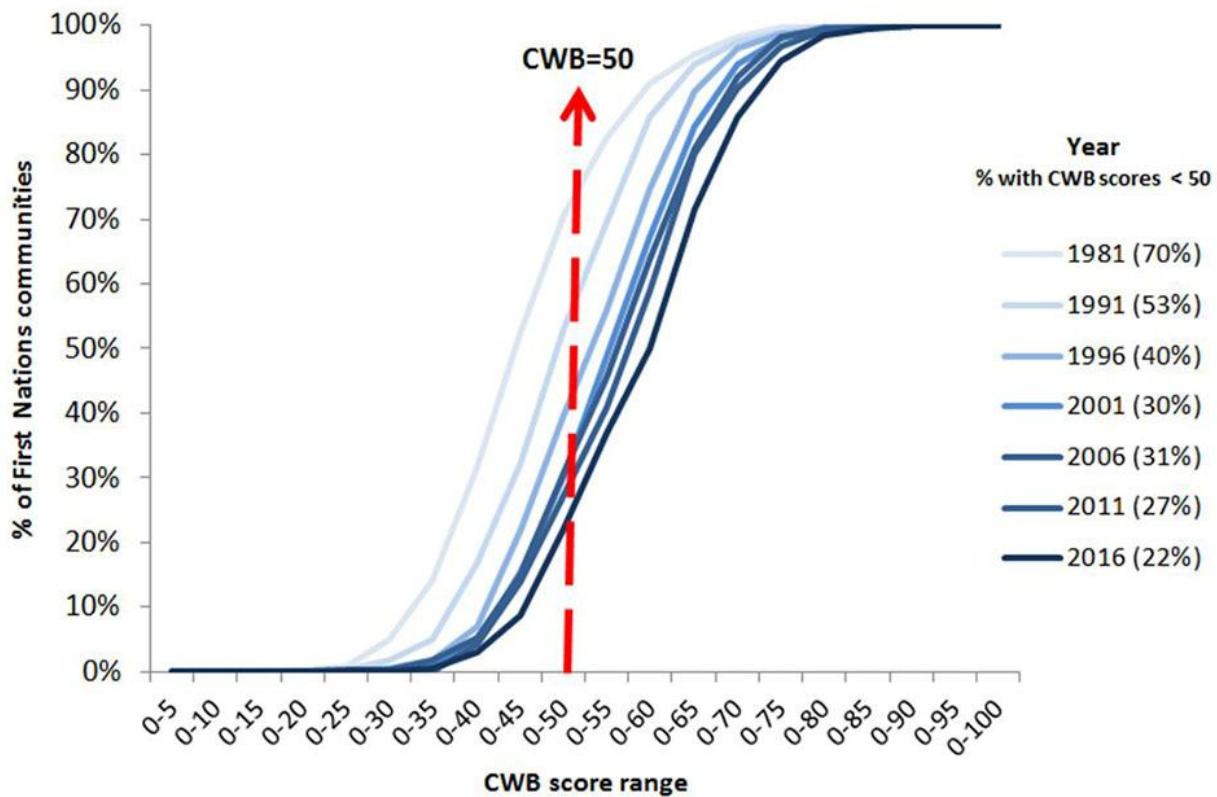
Community CWB distribution

CWB scores vary considerably among individual First Nations communities. Although 98 of the 100 lowest-scoring communities in 2016 were First Nations communities, 22 other First Nations communities scored at or above the non-Indigenous average (77 points). In 2016, 2 First Nations communities were identified on the list of the CWB's 100 top-scoring communities.

Progress for low-scoring communities

Further examination of community-level progress indicates that an increasing number of First Nations communities have experienced a dramatic increase in their overall CWB scores. Figure 17 illustrates, between 1981 and 2016, the proportion of First Nations communities with low (less than 50 points) CWB scores declined from 70% to 22%, or by 48 percentage points.

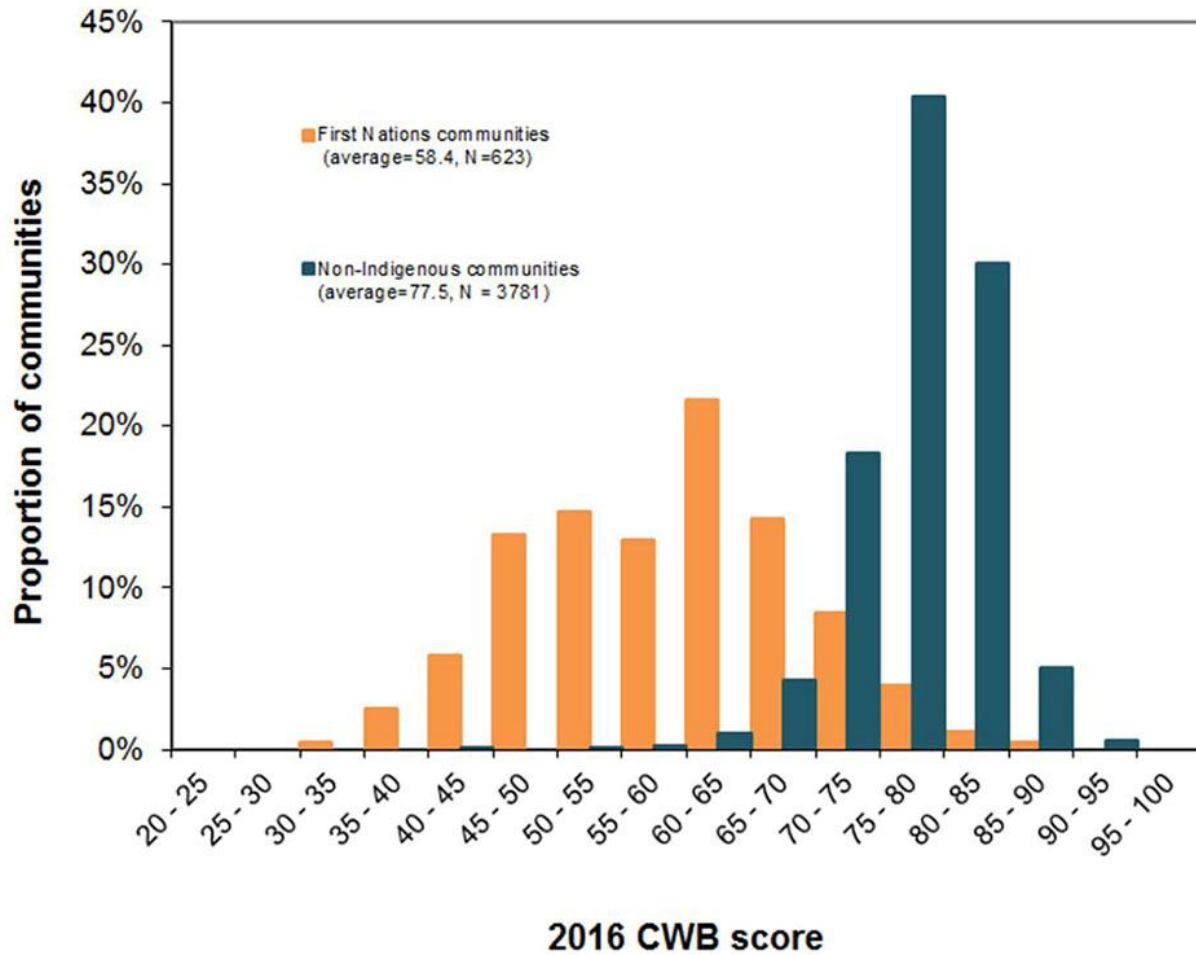
Figure 17: Cumulative Distribution of First Nations communities' CWB scores, 1981 to 2016



Source: Statistics Canada, Censuses of Population, 1981 to 2006, 2016 and National Household Survey, 2011

Figure 18 illustrates how First Nations and non-Indigenous communities are distributed by CWB score. The distribution of scores for First Nations communities is flatter and wider than that of non-Indigenous communities, indicating that well-being varies more among First Nations communities. Specifically, the standard deviation of First Nations communities' CWB scores (10.3 points) is more than double that of non-Indigenous communities' scores (5 points).

Figure 18: CWB Distributions, First Nations and non-Indigenous communities, 2016

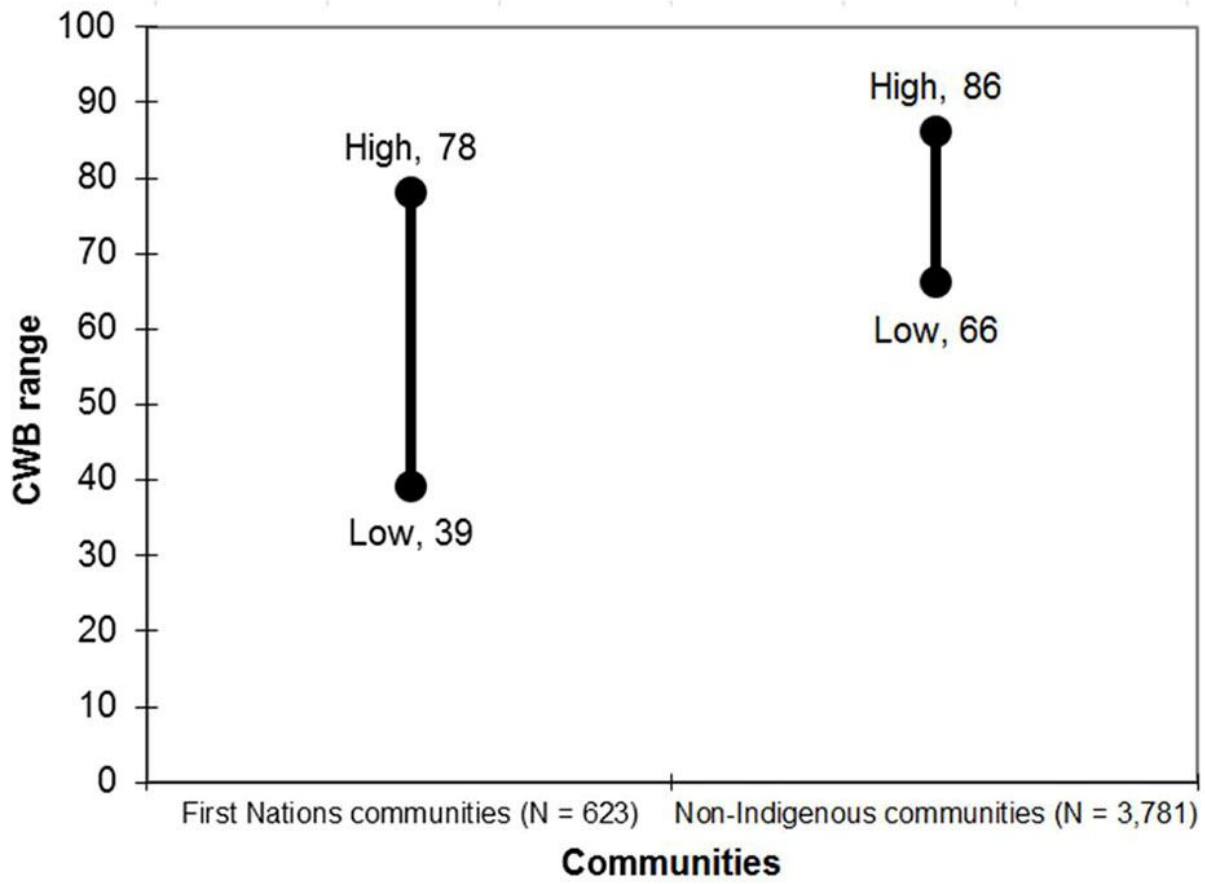


Source: Statistics Canada, Census of Canada, 2016.

Figure 19 also highlights the greater variability in well-being among First Nations communities. In 2016, 95% of First Nations communities are dispersed over a 39-point range (from a low of 39 points to a high of 78 points), while the same percentage of non-Indigenous communities scored within a CWB range of 20 points (from a low of 66 points to a high of 86 points).

Outliers, defined as the 2.5% of communities with the lowest scores and the 2.5% of communities with the highest scores, are excluded. Excluding these extreme tails is standard practice when comparing relatively normal distributions.

Figure 19: Range of CWB Score, Canada, 2016 (excluding outliers)



Source: Statistics Canada, Census of Canada, 2016.

Summary and conclusion

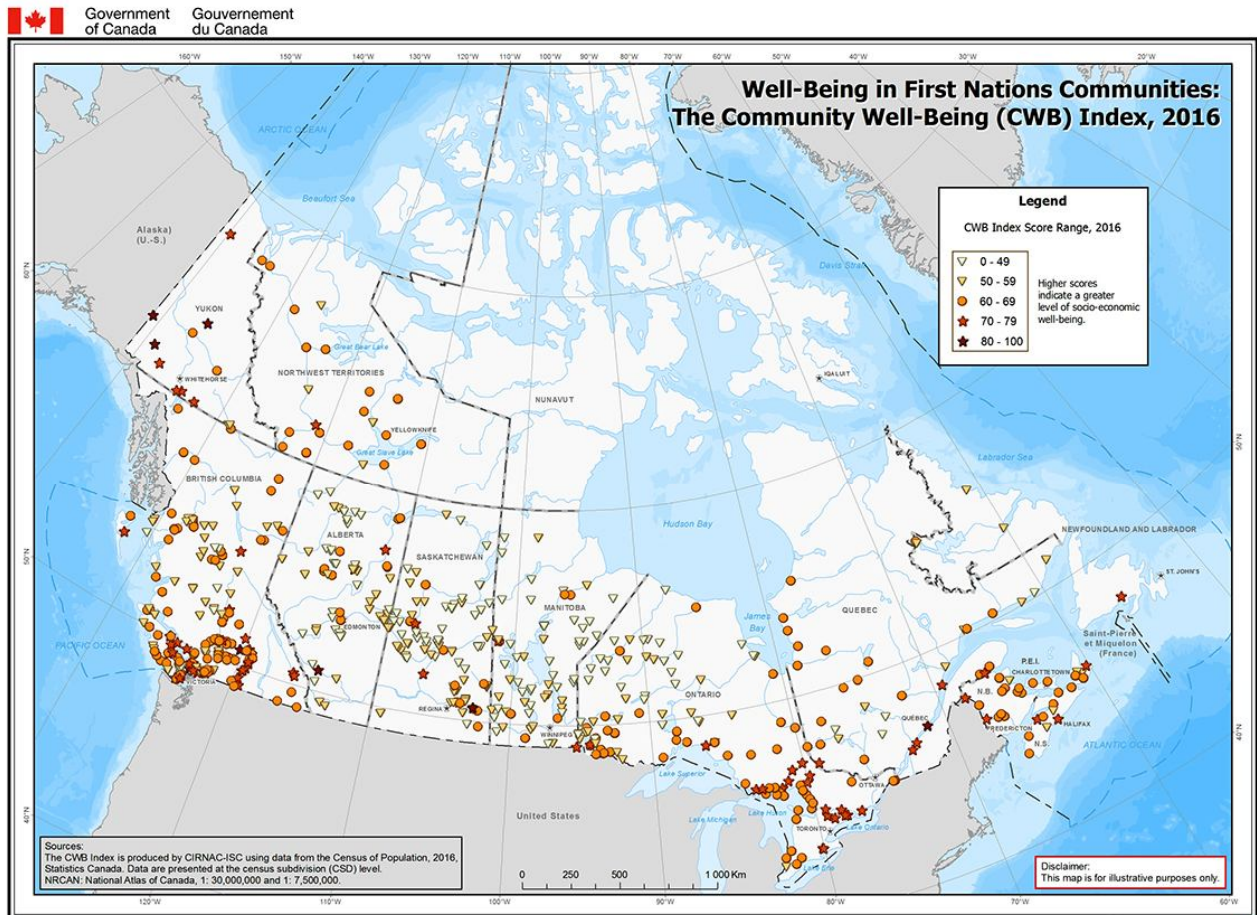
The CWB index is a useful method of assessing socio-economic well-being at the community level. The information it provides can help inform policies and programs that are aimed at improving the well-being of Indigenous peoples. The CWB index helps show where improvements in well-being have been achieved and where significant gaps still exist. However, it is important to remember that the CWB was designed to fulfill specific research purposes and that it is not necessarily the only or best way to measure well-being in all circumstances.

This report outlines trends in CWB scores over a 35-year period and highlights their impact on shaping the socio-economic gap observed between First Nations and non-Indigenous communities. The findings suggest that on average First Nations communities in Canada have experienced improvements to their CWB scores and that, with the exception of housing quality, this progress has run parallel to the growth experienced by non-Indigenous communities. However, despite these encouraging trends, 2016 results also indicate that socio-economic gaps between First Nations and non-Indigenous communities remain, that these gaps are significant in size, and that they were similar to those observed in previous cycles of the CWB index.

Regional analyses offer additional insights, and demonstrate how geographic location can introduce variation in the average CWB scores for First Nations communities. First Nations communities in the Atlantic region and the territories experienced the highest average CWB scores in 2016. While the Prairie provinces experienced the lowest average CWB scores, some also demonstrated the greatest improvements since 2011.

Exploring the distribution of the average CWB scores among individual First Nations communities further illustrates the impact of these trends. Among the 3 community types studied, First Nations communities demonstrated the broadest range of community-level CWB scores in 2016. Although they were over-represented at the lower end of the spectrum for the CWB index, the number of First Nations communities with a low CWB score (less than 50 points) has declined dramatically since 1981. This decline represents a substantial shift in the range of CWB scores and indicates that socio-economic well-being has improved for the majority of First Nations communities.

Appendix 1: Map of CWB scores in First Nations communities, 2016



CIRNAC-ISC, Geomatics Services, April 2019.



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