



# The Community Well-Being Index (CWB): Measuring Well-Being in First Nations and Non-Aboriginal Communities, 1981-2006

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## **The Community Well-Being Index (CWB): Measuring Well-Being in First Nations and Non-Aboriginal Communities, 1981-2006**

### **Executive Summary**

The Community Well-Being (CWB) Index is a means of measuring socio-economic well-being in First Nations, Inuit and non-Aboriginal communities in Canada. CWB Index scores are derived from Canadian Census of Population data and are composed of the following four indicators: income (based on income per capita), education (based on high school and university completion rates), housing (based on housing quantity and quality) and labour force activity (based on employment and labour force participation rates). CWB Indices have been calculated for 1981, 1991, 1996, 2001 and 2006.

This paper examines First Nations and non-Aboriginal communities only. An analysis of Inuit communities is currently underway.

Average CWB scores for First Nations and non-Aboriginal communities increased between 1981 and 2006, though the average First Nations score did not improve appreciably in the most recent intercensal period (2001-2006). Non-Aboriginal communities' average CWB score did increase between 2001 and 2006.

Between 1981 and 2006 (though not necessarily in every intercensal period), both community types saw increases in their average scores on most subcomponents of the CWB index. Average scores on housing quality and employment, however, declined in First Nations and remained the same in non-Aboriginal communities. In both types of community, the largest improvements were seen in high school completion rates, followed by income. The relative stability of the average First Nations' housing score resulted from an increase in housing quantity coupled with a decrease in housing quality.

First Nations communities had lower average CWB and component scores than non-Aboriginal communities in all years measured. The overall CWB gap narrowed between 1981 and 2001. It widened between 2001 and 2006, however. High school completion rates and income followed a similar pattern. A small increase in the university completion gap was observed, as was a larger increase in the housing quality gap. The employment gap widened between 1981 and 1991, but remained stable thereafter.

First Nations' community well-being varied by region. Prairie First Nations tended to have lower CWB and component scores than First Nations in other regions. The disparities in well-being between First Nations and non-Aboriginal communities were also larger in the Prairies than in other regions. Finally, Prairie First Nations improved less over time, both relative to First Nations in other regions and to non-Aboriginal communities in the Prairie Provinces.

The gaps between First Nations and non-Aboriginal communities and the regional disparities in First Nations community well-being are important. As important, however, is the large amount of variability in well-being across all First Nations communities. While some have very low CWB scores, other First Nations score as high as or higher than the non-Aboriginal average.

Readers of this document must keep in mind an important caveat. The large jump in non-Aboriginal communities' average high school completion rate that was observed between 2001 and 2006 may be an artifact of changes to the education module of the 2006 census. This jump was the primary driver behind the increase in the non-Aboriginal average CWB score between 2001 and 2006 and, accordingly, the widening of the CWB gap between First Nations and non-Aboriginal communities. To the extent that the jump was a statistical artifact, therefore, these trends may be misleading and should be interpreted with caution.

## Background

In 1999, in an effort to augment and contextualize anecdotal information and qualitative research, Aboriginal Affairs and Northern Development Canada (AANDC) began to develop systematic quantitative measures of well-being for First Nations and Inuit peoples. First, they produced a Registered Indian Human Development Index (Registered Indian HDI), modeling it after the United Nations Development Programme's Human Development Index (HDI). The latter defines well-being in terms of educational attainment, Gross Domestic Product (GDP) and life expectancy, and has been used since 1990 to measure well-being in some 170 countries. Analyses of the Registered Indian HDI, 1981-2001, 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 First Nations communities and that the Registered Indian HDI (and subsequent Inuit HDI), therefore, might be providing an incomplete picture of well-being in Aboriginal populations. The Community Well-Being (CWB) Index was developed in 2001 as a community-level complement to the national- and regional-level Registered Indian HDI.

The methodology of the Registered Indian HDI could not be replicated exactly for the CWB, since life expectancy estimates for small populations are inherently unreliable. Moreover, the relevance of labour market activities to well-being in Canada and the housing concerns known to exist in Aboriginal communities encouraged the inclusion of labour and housing indicators in the community-level measure<sup>1</sup>.

Other key research needs also shaped the development of the CWB index. First, the CWB needed to be based on quality data collected from as many communities as possible across the country. Second, communities needed to be classifiable as First Nations, Inuit or non-Aboriginal communities. This classification would allow for assessment of variability in well-being within the three types of communities, as well as comparisons between them. Third, to understand how community well-being has evolved, CWB Index scores needed to be comparable over time. Consequently, the index required data that had been, and were likely to continue to be, collected in the same way at numerous points in time. Fourth, CWB index scores needed to be usable in conjunction with other data sets to facilitate research on the determinants of well-being. That is, there had to be a way of associating CWB index scores with the variety of information that is collected on Aboriginal peoples in Canada.

CWB developers quickly ascertained that the Canadian Census of Population was the only data source capable of fulfilling these research needs. Collected in a consistent manner every five years, census data include key information on socio-economic well-being. As importantly, census data are well-suited to community-level analyses. Sampling methods attempt to capture all Canadian census subdivisions. These correspond to municipalities and other geographical areas that can reasonably be regarded as "communities." Using Statistics Canada's widely-used definition of community also ensured a link between the CWB Index and other community-level data.

Analyses of the Registered Indian HDI and the CWB for the 1981-2001 period were published between 2002 and 2006<sup>2</sup>. Echoing analyses of the HDI, The First Nations average CWB score increased over time, but remained well below the non-Aboriginal CWB average in 2001.

In 2006, census questions pertaining to education changed. Information on functional literacy<sup>3</sup> that was available between 1981 and 2001 and that had been included in the education

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<sup>1</sup> Robin Armstrong's (2001) groundbreaking work on well-being in First Nations communities provided methodological guidance to the developers of the CWB.

<sup>2</sup> See White, J, Beavon, D. and Spence, N (Eds.) 2007. *Aboriginal well-being: Canada's continuing Challenge*. Toronto: Thompson Educational Publishing.

<sup>3</sup> Defined as attainment of at least a grade nine education.

component of the CWB would not be available for 2006<sup>4</sup>. Since tracking CWB scores across time requires a constant CWB methodology, CWB developers were compelled to reformulate the index to include only data that were available for 1981 through 2006 and that could be expected to be available in future censuses.

Fortunately, the need to reformulate the CWB was more of an opportunity than an obstacle. As indicated above, the CWB was based on the Registered Indian HDI, which was based on the United Nations Development Programme's HDI. The latter was designed to examine well-being at an international level, and is therefore not optimal for the study of the internal dynamics of such highly developed countries as Canada. Specifically, functional literacy is fast becoming ubiquitous in Canada, and is consequently losing its relevance as a means of tracking progress and distinguishing groups. The revised CWB methodology, in which functional literacy is replaced with the attainment of a university degree, promises to remain relevant to the Canadian context for the foreseeable future.

This report may be regarded as the first publication and “core text” of the revised CWB. Owing to the differences in methodology described above, readers are strongly encouraged to avoid comparing scores from the original 1981-2001 CWB series (published prior to 2008) to the revised 1981-2006 series (published after 2009).

## **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 is composed of data on income, education, housing conditions and labour force activity. These components are described below. Additional technical details are provided in *The Community Well-Being (CWB) Index: Methodological Details*, available at <http://www.ainc-inac.gc.ca/ai/rs/pubs/cwb/cwbcmd-eng.asp>.

#### *1) Income*

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

$$\text{Income Score} = \left( \frac{\text{Log}(\text{income per capita}) - \text{Log}(\$2,000)}{\text{Log}(\$40,000) - \text{Log}(\$2,000)} \right) \times 100$$

The formula maps each community's income per capita onto a theoretical range of income per capita. 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 used because it coincides, approximately, with the lowest and highest incomes per capita found in Canadian communities.

Note 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).

#### *2) Education*

The Education component is composed of the following two variables:

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<sup>4</sup> Details on changes to the Education module of the Census of Canada are provided in *Education Reference Guide, 2006 Census*. This publication is available from Statistics Canada at <http://www12.statcan.gc.ca/census-recensement/2006/ref/rp-guides/education-eng.cfm>.

1. "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.
2. "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.

Having at least a high school education has a particularly profound impact on one's options in contemporary Canada. Accordingly, a community's "high school plus" score has more impact than its "university" score on its overall education score. Specifically, the high school plus variable accounts for two-thirds of the education component.

### *3) Housing*

The housing component comprises indicators of housing quantity and quality. Housing quantity is defined as the proportion of the population living in dwellings that contain no more than one person per room. Housing quality is defined as the proportion of the population living in dwellings that are not in need of major repairs.

### *4) Labour Force Activity*

The labour force activity component is composed of the following two variables:

1. Labour force participation: the proportion of the population, aged 20-65, that was involved in the labour force in the week prior to Census Day.
2. Employment: the percentage of labour force participants, aged 20-65, that was employed in the week prior to Census Day.

### Availability of Data

CWB scores have been calculated for 1981, 1991, 1996, 2001 and 2006. Scores for 1986 were not calculated as information on dwelling condition was not collected in the 1986 Census. CWB scores from a given census are available for every community in Canada with a population of at least 65, that was not an incompletely enumerated reserve<sup>5</sup>, and whose global non-response rate<sup>6</sup> did not exceed 25%<sup>7</sup>. In addition, CWB component scores (i.e. income, education, housing and labour force activity 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 Indian reserves) that are regarded as the equivalent of municipalities. For purposes of comparison, communities are categorized as First Nations, Inuit communities or Non-Aboriginal communities.

First Nations comprise those communities that Aboriginal Affairs and Northern Development Canada (AANDC) and Statistics Canada classify as "on-reserve." They include all CSDs that are legally affiliated with Indian Bands plus a selection of other CSDs in Northern Saskatchewan, the Northwest Territories and the Yukon Territory. First Nations communities that are not legally affiliated with Indian bands were first identified as "on-reserve" in 1996. For consistency, in analyses of 1981 and 1991 CWB scores, those communities are classified as First Nations.

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<sup>5</sup> A reserve is deemed incompletely enumerated if it was not permitted to be enumerated or if enumeration was incomplete or of insufficient quality.

<sup>6</sup> Global non-response rate is the percentage of required responses left unanswered by respondents.

<sup>7</sup> Information on population coverage in the 2006 census is available from Statistics Canada's website at [http://www12.statcan.gc.ca/census-recensement/2006/ref/rp-guides/rp/coverage-couverture/cov-couv\\_index-eng.cfm](http://www12.statcan.gc.ca/census-recensement/2006/ref/rp-guides/rp/coverage-couverture/cov-couv_index-eng.cfm)

Inuit have completed land claims in four regions across Canada's north: Nunatsiavut, Nunavik, Nunavut and the Inuvialuit region. For purposes of the CWB, communities are classified as Inuit communities if they fall within any of these regions and had a population of at least 65 in 2001<sup>8,9</sup>.

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

### Comparing CWB Index Scores across Time

Four issues complicate the comparison of CWB scores across time. They are outlined below. Additional technical details are provided in *The Community Well-Being (CWB) Index: Methodological Details*, available at <http://www.ainc-inac.gc.ca/ai/rs/pubs/cwb/cwbmd-eng.asp>.

#### 1) *Inflation*

Owing to inflation, the value of a dollar tends to decrease over time. Income data in the 2006 Census pertain to income earned in 2005, and are thus measured in 2005 dollars. To ensure that the CWB is measuring actual changes in income rather than the effects of inflation, income data from the 1981-2001 censuses were transformed into 2005 dollars using the Consumer Price Index.

#### 2) *Missing Data*

CWB scores are not available for all communities in all census years. 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.

#### 3) *Changes in Community Boundaries*

Communities can experience "boundary changes" between censuses. They can merge with other communities, divide into two or more communities, annex parts of other communities, etc. When this happens, it can be difficult to know what caused a change in a community's CWB Index score from one census to the next. Imagine, for example, that a community's score went from 70 in 1981 to 80 in 1991. If the community experienced a boundary change whereby 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 consequence of higher well-being in the annexed area, or a combination of both.

Sensitivity analyses revealed that boundary changes had little effect on national or regional average CWB scores. While these averages may be safely compared across time, however, boundary changes can seriously impact the comparability of individual communities across time<sup>10</sup>.

#### 4) *Sampling Error*

The CWB is based on data from the 20% sample of households that received the "long form" of the Census. Consequently, it is possible that fluctuation (or lack thereof) in an individual community's CWB score from one census to the next is actually the result of sampling error. It is difficult to ascertain the impact of sampling error on a given community in a given census, though

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<sup>8</sup> 2001 census subdivision information was used to construct the list of Inuit communities.

<sup>9</sup> Prior to 2006, Aboriginal Affairs and Northern Development Canada (AANDC) identified Inuvik and Aklavik as First Nations. For purposes of the CWB, however, these communities are classified as Inuit communities in all Census years.

<sup>10</sup> Likewise, sensitivity analyses were based on only three groupings of communities: First Nations, Inuit and other Canadian communities. As indicated above, 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, therefore, are encouraged to consider the possible effects of boundary changes.

impact generally decreases as the population of a community increases. Researchers are reminded to interpret individual CWB scores with caution, and to emphasize general trends rather than census-to-census fluctuations. Since 100% of households in reserves and remote communities receive the long form of the Census, sampling error is primarily an issue for non-Aboriginal communities.

### **Advantages and Limitations of the CWB Index**

The CWB is a useful research tool. It is only one of many means of measuring well-being, however, and users should be mindful of both its advantages and its limitations. The two are actually closely related.

As discussed above, the CWB was designed to meet specific research needs. It is unique among measures of well-being in Canada in that it is available for most communities in Canada; it permits the distinction and comparison of First Nations, Inuit and non-Aboriginal communities; it allows trends in well-being to be tracked over time; and it can be used in conjunction with numerous other sources of data. The CWB has these advantages because it is based on the Canadian Census of Population, which, importantly, is also an unusually high quality data source.

Using the Census also imposes some limitations on the CWB Index, however. First, the indicators of well-being included in the Census pertain mainly to socioeconomic well-being. Other equally important aspects of well-being are not addressed. As indicated above, numerous attempts to quantify well-being have been made, and many composite indicators like the CWB have been developed. Although none can fulfill the research needs for which the CWB was designed, these measures highlight the variety of factors that may be regarded as constituting well-being. Physical and emotional health, cultural continuity and environmental conservation are three commonly employed indicators of well-being that are excluded from the CWB Index<sup>11</sup>.

In addition, the indicators used in the CWB may not capture fully 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 involve the monetary income or paid employment captured by the CWB Index.

## **Results**

### **CWB Index Scores, 1981-2006**

Figure 1 displays the distributions of 2006 CWB scores for First Nations and non-Aboriginal communities. It demonstrates that the former tend to have lower CWB scores than the latter. Accordingly, the average CWB score for First Nations communities is about 20 points lower than the average CWB score for non-Aboriginal communities.

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<sup>11</sup> Descriptions and reviews of some recent and ongoing efforts to measure well-being are available from the UNDP (<http://hdr.undp.org/en/statistics/>) and the Canadian Index of Well-Being (<http://www.ciwb.ca/en/Home.aspx>). Sharpe (1999), and Cooke (2005) may also provide insight into various well-being metrics.

Figure 1: Distribution of First Nations and Non-Aboriginal Communities' CWB Scores, Canada, 2006

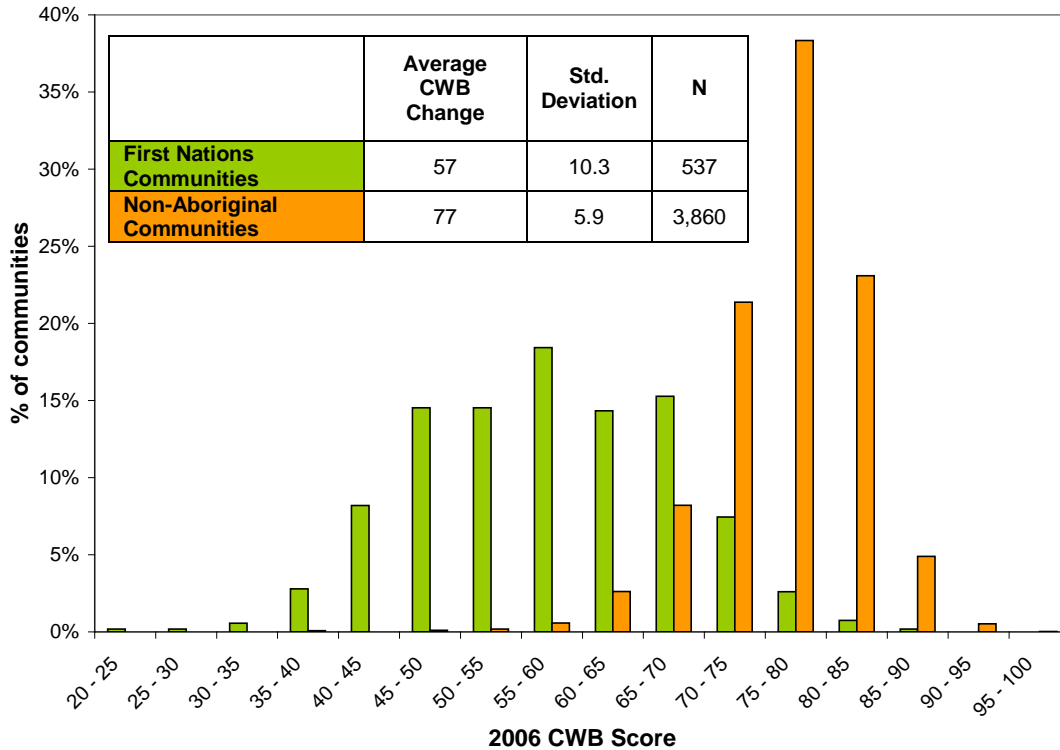
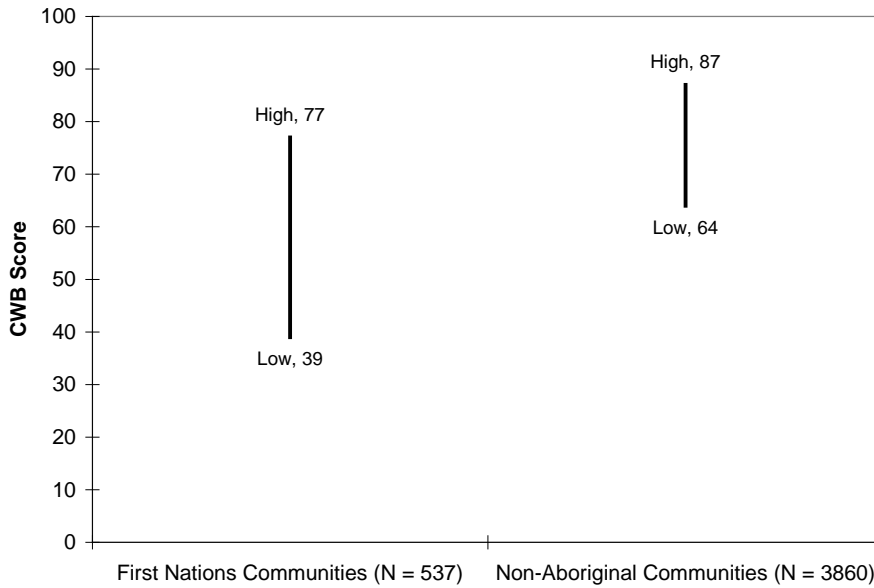


Figure 1 also demonstrates the greater variability in CWB scores in First Nations communities; the relative flatness of the First Nations distribution indicates that First Nations CWB scores are less concentrated around the First Nations community average. Accordingly, the standard deviation of CWB scores in First Nations (10.3 points) is nearly double that of non-Aboriginal communities (5.9 points).

Figure 2 also highlights the greater variability in First Nations communities. It illustrates that, in 2006, 95% of non-Aboriginal communities score within a CWB range of 23 points (from 64 to 87), while the same percentage of First Nations are spread over a range of 38 points (from 39 to 77).



Figure 2: Range of Community Well-Being (CWB) Score, Canada, 2006 (Excluding outliers\*)

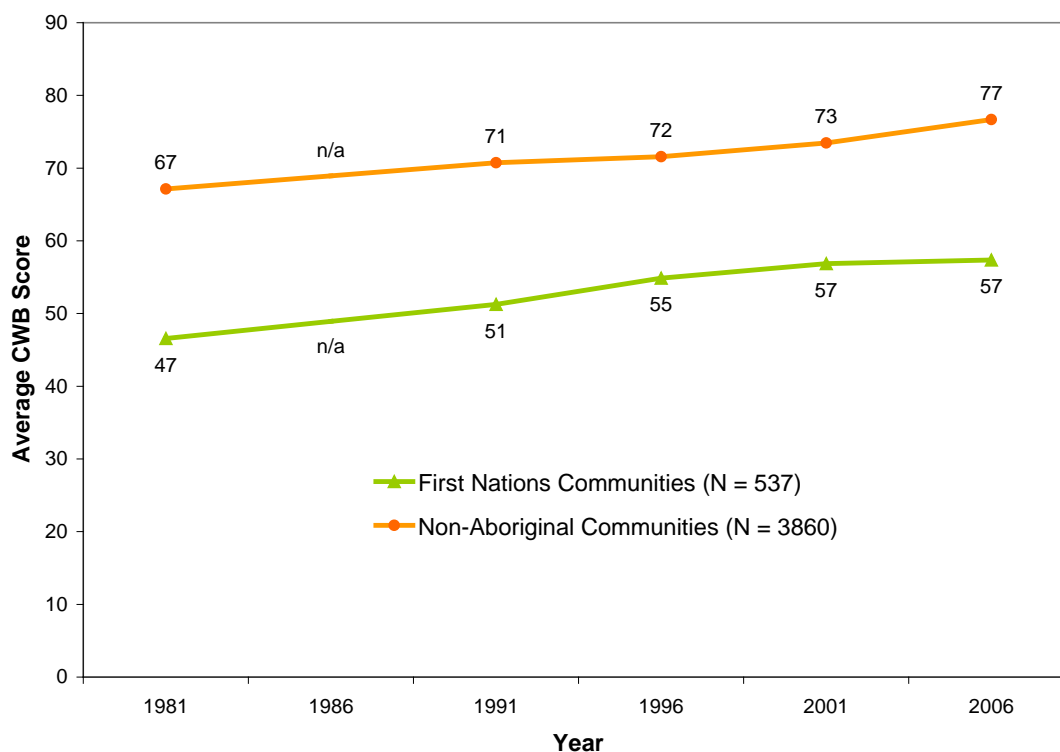


\*Outliers, defined as the 2.5% of communities with the lowest scores and the 2.5% of communities with the highest scores, are excluded. Excluding these extreme "tails" is standard practice when comparing relatively normal distributions.

Figure 3 plots the average CWB scores for First Nations and non-Aboriginal communities from 1981-2006. It illustrates that the average CWB score of each community type increased between 1981 and 2001. It also illustrates that the disparities between First Nations communities and non-Aboriginal communities decreased between 1981 and 1996. Little movement was seen between 1996 and 2001, while disparities increased slightly in the most recent intercensal period. By 2006, the disparities between First Nations communities and Non-Aboriginal communities had essentially returned to 1991 levels.

Importantly, changes to the education questions in the 2006 census may be responsible for the large increase in the non-Aboriginal average CWB score between 2001 and 2006. Accordingly, those changes may also be responsible for the increase in the well-being gap between First Nations and non-Aboriginal communities during that period. This issue will be discussed in greater detail later.

Figure 3: Average CWB Scores, First Nations and Non-Aboriginal Communities, 1981-2006



In addition to changes in average CWB scores, it is important to examine changes in individual communities' scores across time. This permits us to distinguish between a scenario wherein all communities experience "slow but steady" improvement in well-being and a scenario wherein communities experience erratic periods of "boom and bust"<sup>12</sup>. Table 1 provides the percentages of communities whose CWB scores have increased or remained stable in each intercensal period. It indicates that, across community types in all intercensal periods, decline affects a minority of communities only. Table 1 also indicates that, while more First Nations than non-Aboriginal communities increased or remained stable between 1991 and 1996, the opposite was true in the 1996-2001 and 2001-2006 periods. First Nations also improved less in the 1981-1991 period.

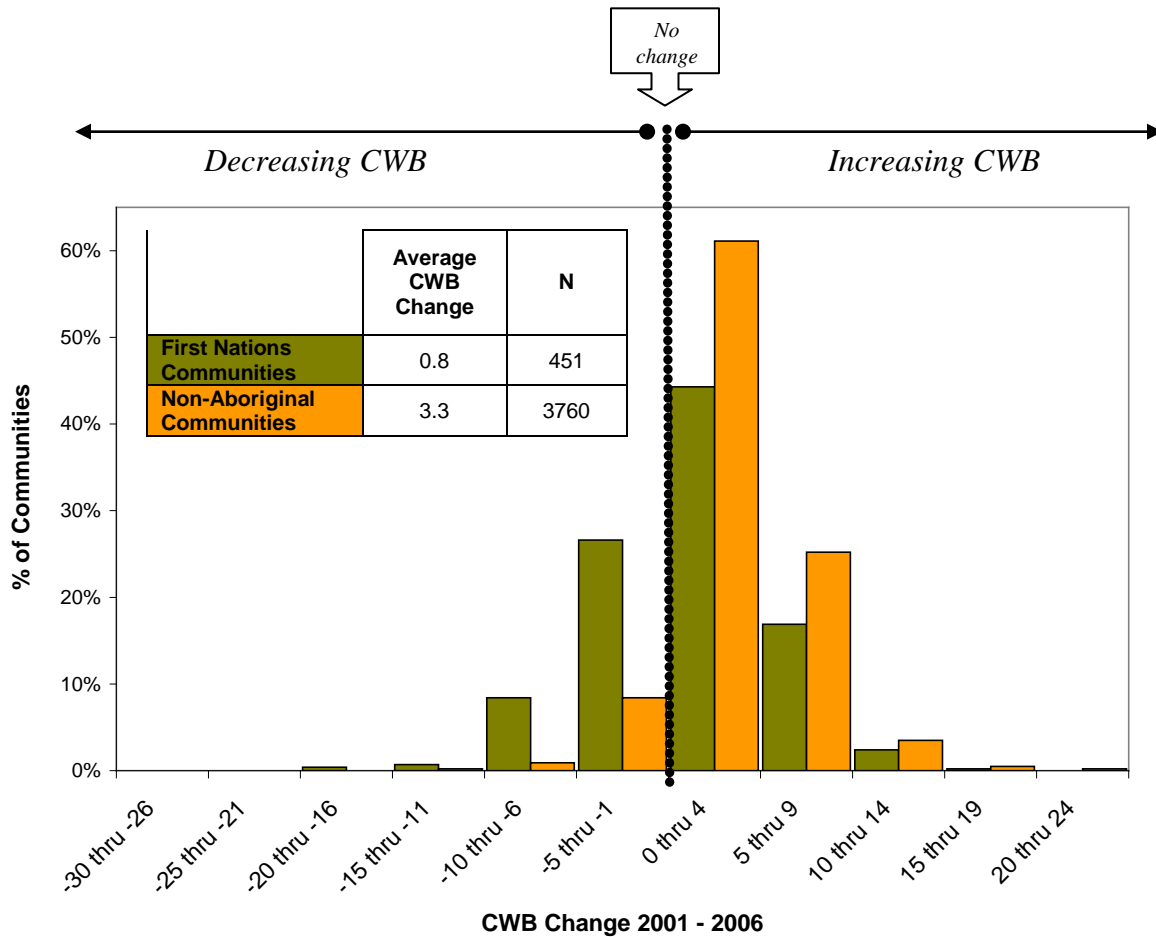
Table 1: Percentages of First Nations and Non-Aboriginal Communities Whose CWB Scores Remained Stable or Increased In Each Intercensal Period

Period	Communities where CWB scores increased or were stable	
	First Nations Communities	Non-Aboriginal Communities
1981-1991	74% (281/379)	88% (3888/4435)
1991-1996	80% (361/452)	63% (2769/4402)
1996-2001	67% (310/465)	79% (2880/3651)
2001-2006	60% (272/451)	88% (3322/3760)

<sup>12</sup> For example, imagine we are measuring well-being in only two 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 two communities in 1981 was, therefore, 50. In 2006, the average score for these 2 communities was still 50, suggesting that well-being remained stable for these communities between 1981 and 2006. When we look at the individual communities' scores, however, we see that, in 2006, Community A had a score of 100 while Community B's score had dropped to zero. The extreme "boom and bust" pattern of these communities was masked by the consistency of their average score across time.

The distribution of changes in communities' CWB scores affirm that "slow but steady" improvement was typical of both First Nations and non-Aboriginal communities in each of the intercensal periods between 1981 and 2006. Figure 4, which illustrates the changes that occurred between 2001 and 2006, provides a representative example.

Figure 4: Change in Individual First Nations and Non-Aboriginal Communities' CWB Scores, 2001-2006



### CWB Component Scores, 1981-2006

Figure 5 illustrates that First Nations and non-Aboriginal communities' average Income scores increased at a similar rate between 1981 and 2006.

Figure 5: Average Income Scores, First Nations and Non-Aboriginal Communities, 1981-2006

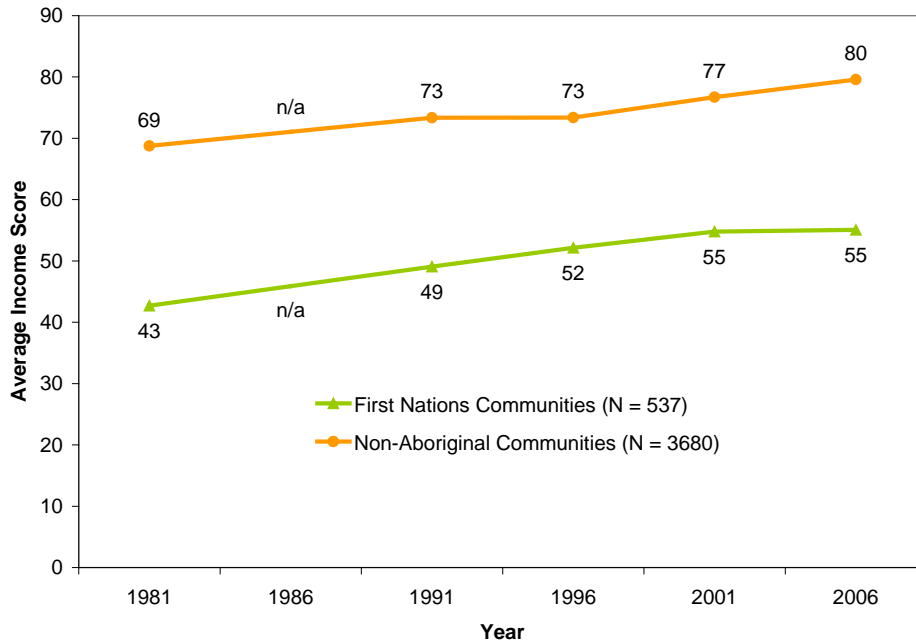
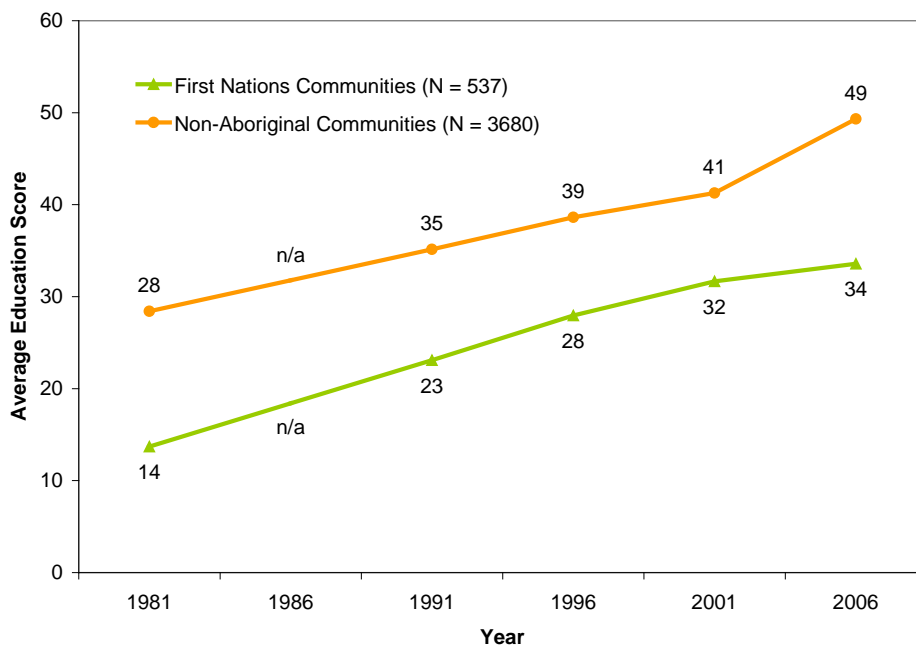


Figure 6 demonstrates that First Nations and non-Aboriginal communities' Education scores increased in a similarly consistent manner between 1981 and 2006. The most recent intercensal period is notable for the large jump in the non-Aboriginal Education score. As noted earlier, this jump may be an artefact of changes to the 2006 Census questions pertaining to education. Statistics Canada made changes to the 2006 census questionnaire "to address suspected underreporting of high school completions" (Statistics Canada 2008). The agency concluded that the changes ameliorated the problem, but cautioned that apparent increases in high school completion rates between 2001 and 2006 may be an illusory effect of the greater accuracy of the 2006 data.

Figure 6: Average Education Scores, First Nations and Non-Aboriginal Communities, 1981-2006



Figures 7 and 8, respectively, illustrate changes in the two constituents of the Education score: *High School Plus* and *University*. They demonstrate that increases in the Education component were driven by increases in communities' high school completion rates: increases in University were more modest. Again, recall that the particularly large jump in the non-Aboriginal high school completion rate may be at least partially attributable to changes to the 2006 Census questionnaire.

Figure 7: Average High School Plus Scores, First Nations and Non-Aboriginal Communities, 1981-2006

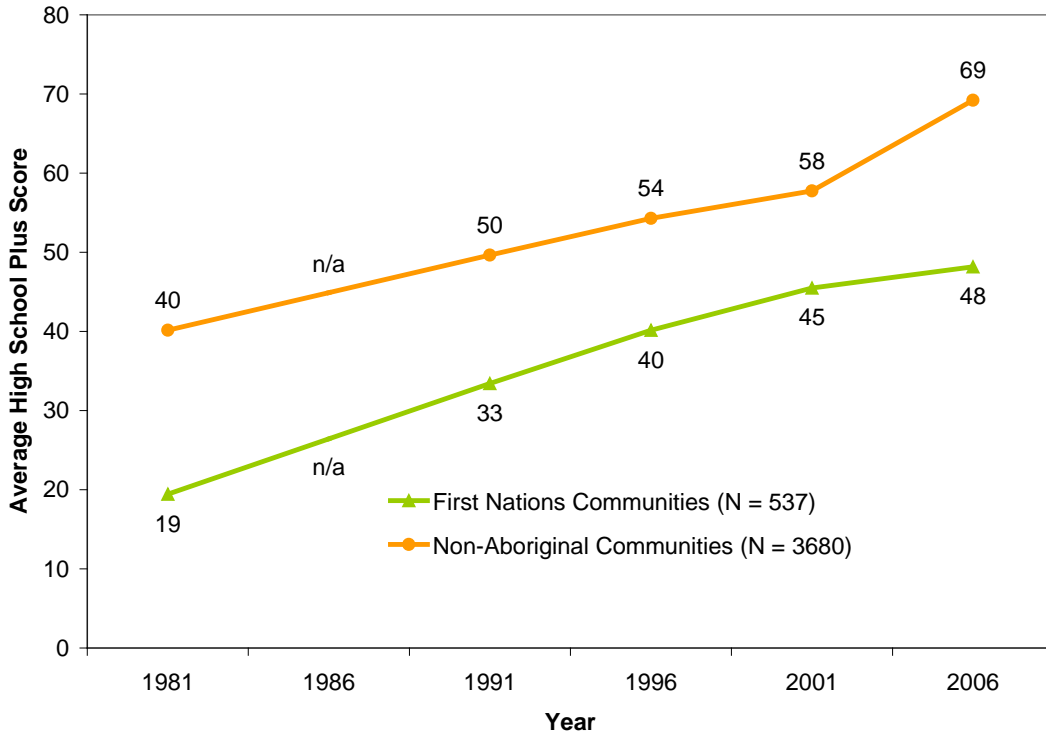


Figure 8: Average University Scores, First Nations and Non-Aboriginal Communities, 1981-2006

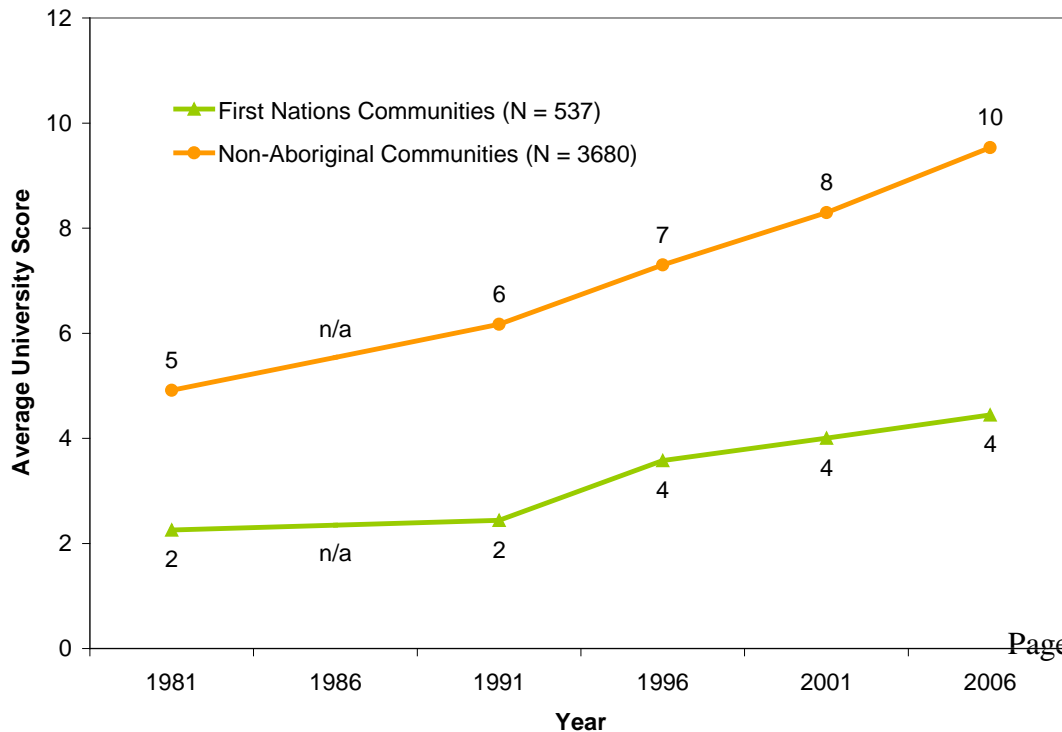
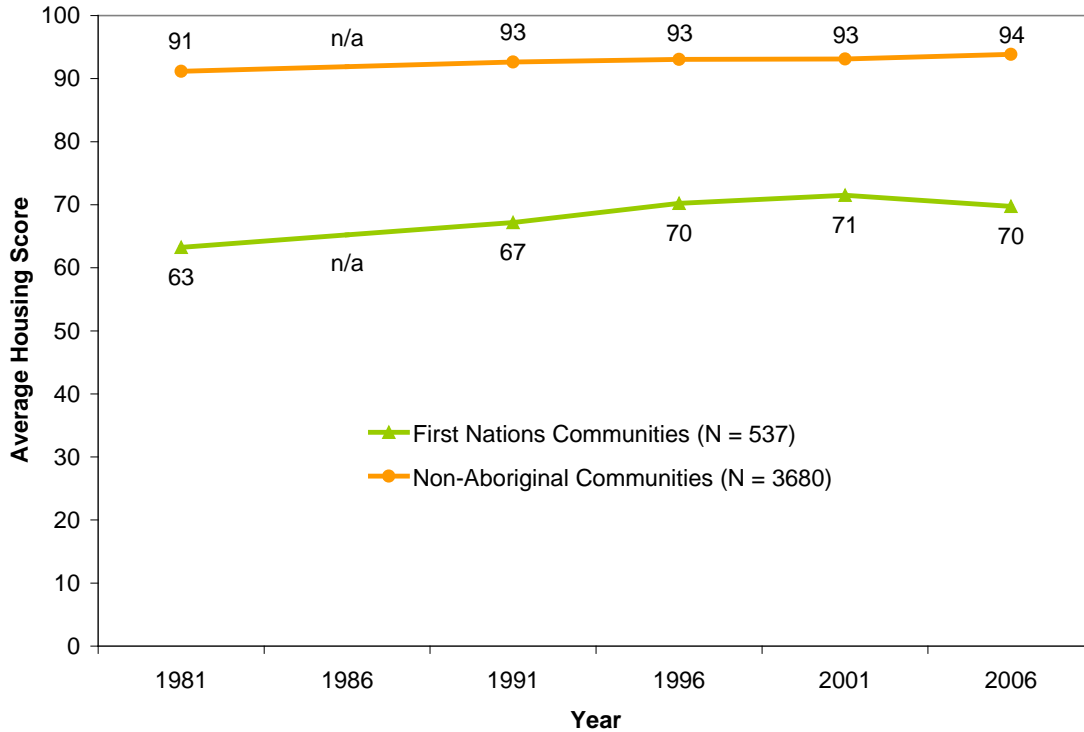


Figure 9 demonstrates that the average First Nations housing score increased somewhat between 1981 and 1996, remaining stable subsequently. The average non-Aboriginal housing score was consistently high across time, increasing slightly between 1981 and 2006.

Figure 9: Average Housing Scores, First Nations and Non-Aboriginal Communities, 1981-2006



Figures 10 and 11, respectively, illustrate changes in the two variables that compose the Housing score: *Housing Quantity* and *Housing Quality*. They demonstrate that relative stability of the overall housing scores for First Nations communities followed from large increases in housing quantity coupled with large decreases in housing quality.

Figure 10: Average Housing Quantity, First Nations and Non-Aboriginal Communities, 1981-2006

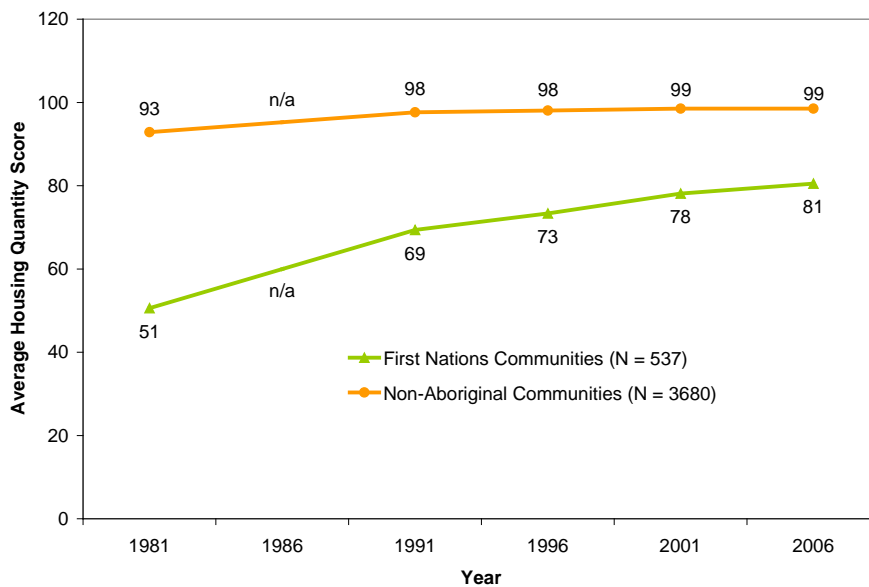


Figure 11: Average Housing Quality, First Nations and Non-Aboriginal Communities, 1981-2006

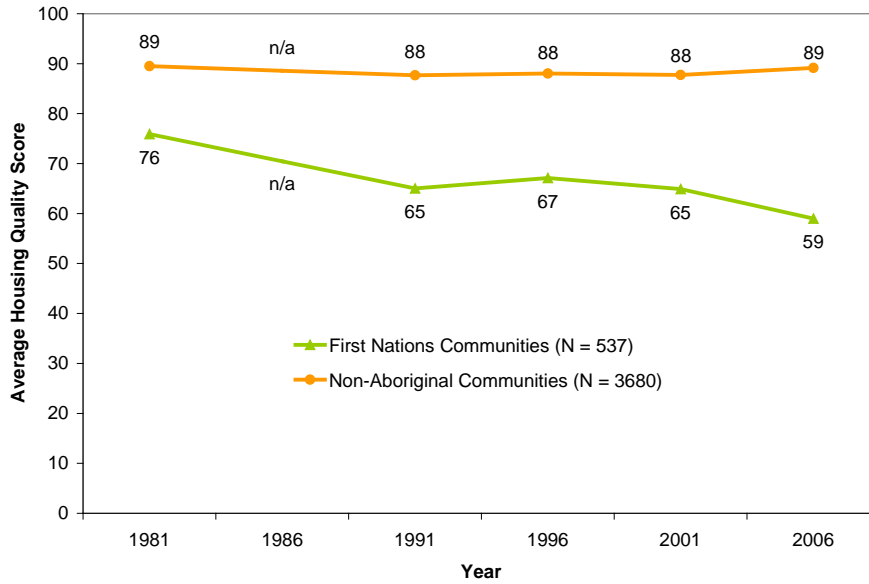
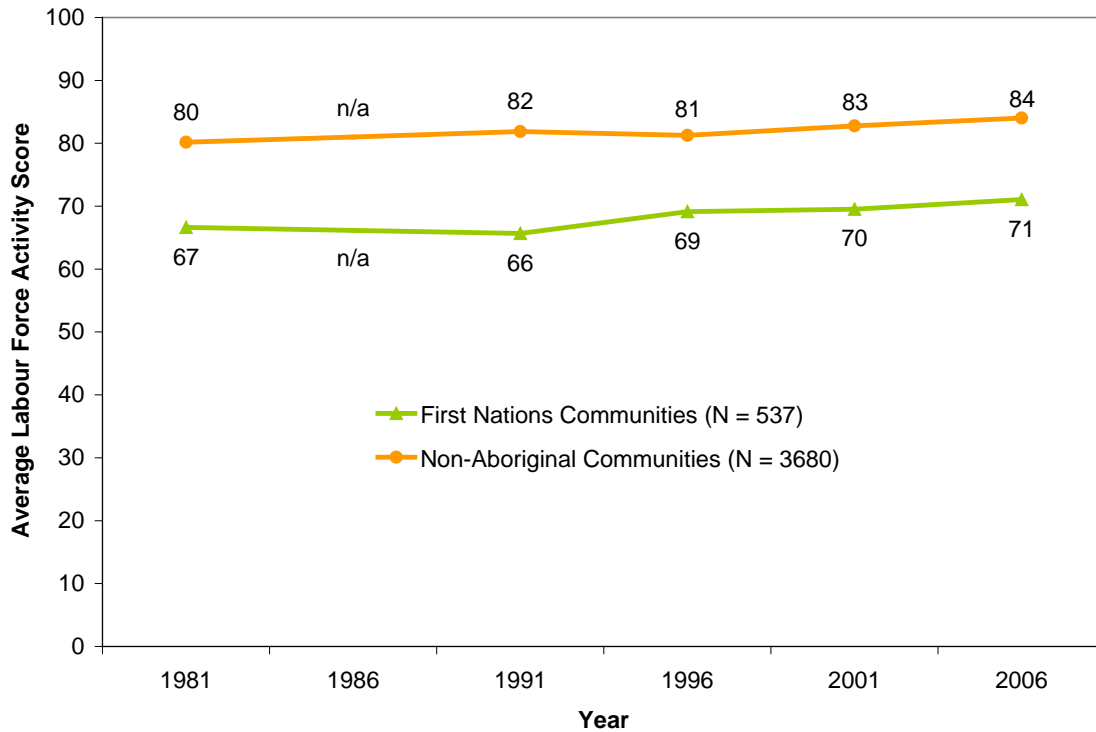


Figure 12 demonstrates that Labour Force Activity scores for First Nations and non-Aboriginal communities increased slightly between 1981 and 2006.

Figure 12: Average Labour Force Activity Scores, First Nations and Non-Aboriginal Communities, 1981-2006



Figures 13 and 14, respectively, illustrate changes in the two constituents of the Labour Force Activity score: *Labour Force Participation* and *Employment*. Labour force participation increased in both community types between 1981 and 1996, remaining stable thereafter. Employment, however, decreased in both community types between 1981 and 1991. Non-Aboriginal communities recovered to 1981 levels by 2006. By 2006, however, the average employment scores for First Nations communities remained below their 1981 levels. Notably, the relative stability observed in the Labour Force Activity component between 1981 and 1991 resulted from increased labour force participation coupled with decreased employment.

Figure 13: Average Labour Force Participation Score, First Nations and Non-Aboriginal Communities, 1981-2006

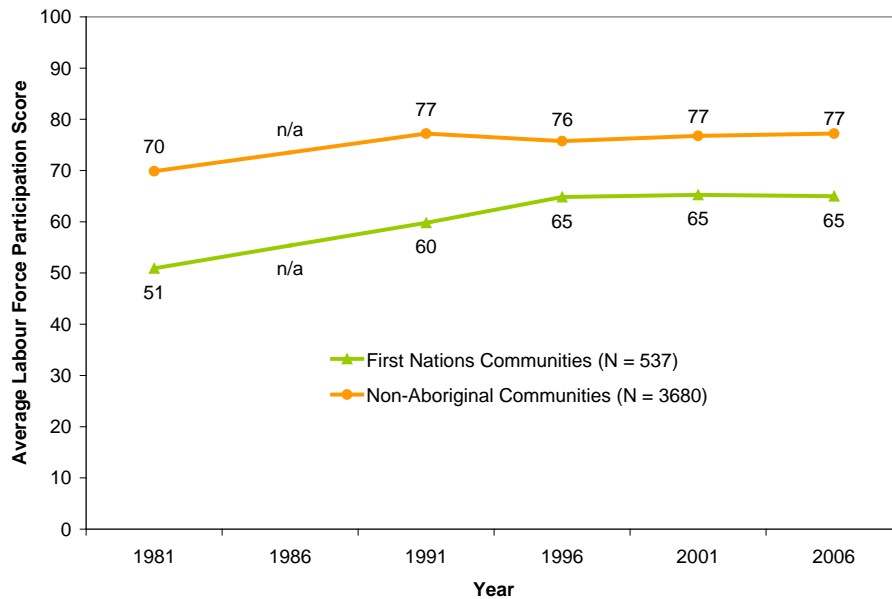
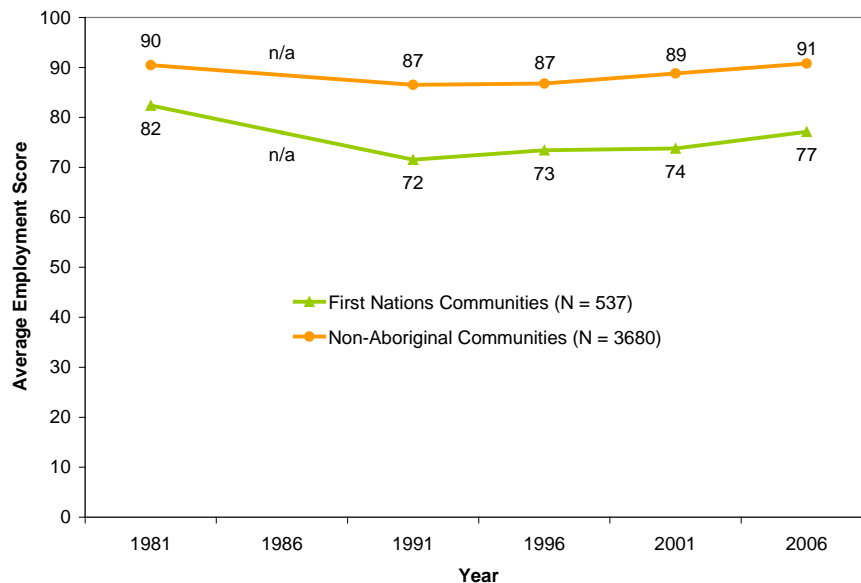


Figure 14: Average Employment Score, First Nations and Non-Aboriginal Communities, 1981-2006

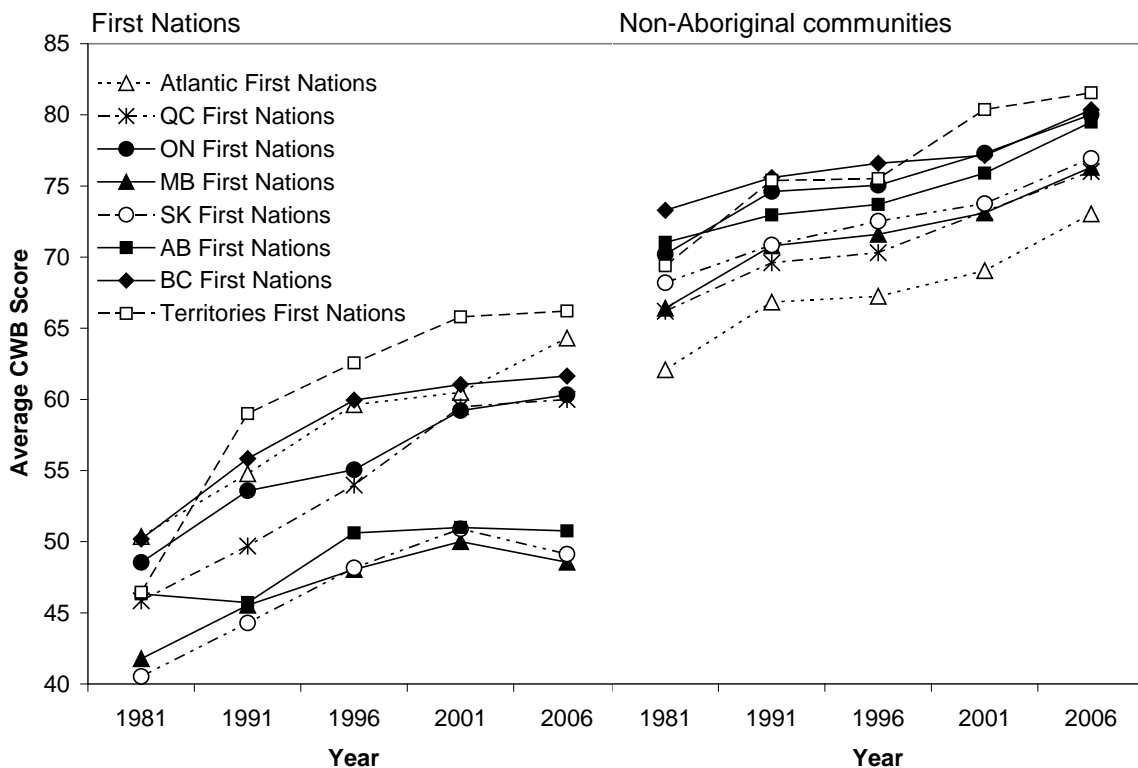




## Regional Analyses: CWB Index Scores, 1981-2006

Figure 15 plots the regional CWB averages of First Nations and non-Aboriginal communities between 1981 and 2006. It illustrates several key points. First, by 2006, First Nations communities in some regions had attained an average CWB score comparable those that non-Aboriginal communities had in 1981 and even 1991. Second, greater regional variability exists in First Nations than in other Canadian communities: the trend lines are more widely spread, The chart also illustrates that First Nations in the Prairies have particularly low CWB scores, that their disadvantage relative to First Nations in other regions has grown over time, and that well-being in Prairie First Nations declined slightly between 2001 and 2006. The large increase in the average CWB score for First Nations in the Territories is also notable.

Figure 15: CWB Index Averages by Region, First Nations and Other Canadian Communities, 1981-2006



## Summary and Conclusion

The Community Well-Being (CWB) Index is one way of quantifying well-being in Canadian communities. Both First Nations and non-Aboriginal communities' CWB scores increased between 1981 and 2006, although First Nations did not improve in the most recent intercensal period. Improvement was driven by small increases in most communities' CWB index scores and not by the combined effect of large increases in some communities and large declines in others.

In both First Nations and non-Aboriginal communities, education scores improved most, owing primarily to increases in high school completion rates. Income scores also improved considerably. Average housing scores changed little over time. For First Nations communities, however, this apparent stability followed from increases in housing quantity coupled with decreases in housing quality. Labour force activity scores increased slightly between 1981 and 2006. Between 1981

and 1991, however, the relative stability of the indicator was the combined effect of increasing labour force participation and decreasing employment.

First Nations communities had a lower CWB average than non-Aboriginal communities in all years measured. This gap decreased between 1981 and 2001, but not between 2001 and 2006. First Nations communities' component and subcomponent averages were also ubiquitously lower than those of non-Aboriginal communities. Like the overall CWB gap, gaps in income and high school completion narrowed between 1981 and 2001, but widened again between 2001 and 2006. The gap in university completion rates increased slightly, the housing quality gap even more. The employment gap widened between 1981 and 1991, stabilizing subsequently.

First Nations' average CWB scores varied by region, as did the gaps between First Nations and non-Aboriginal communities and the degree of progress between 1981 and 2006. By 2006, some regional First Nations CWB averages were on par with some non-Aboriginal regional averages observed in 1981 and 1991.

A marked and increasing disparity in well-being exists between First Nations in the Prairies and First Nations in other regions. Prairie First Nations had lower CWB averages than First Nations in each year measured. The disparities in well-being between First Nations and non-Aboriginal communities were also larger in the Prairies than in other regions. Prairie First Nations' disadvantage grew more pronounced between 1981 and 2006, as they improved less relative to First Nations in other regions and to non-Aboriginal communities in the Prairie Provinces.

First Nations' CWB, component and subcomponent scores varied considerably. While some First Nations had very low scores, others exhibited levels of well-being comparable to, and even in excess of, the Canadian norm.

Readers are cautioned against emphasizing the disparities between First Nations and non-Aboriginal communities. First Nations communities possess unique characteristics and circumstances. Consequently, one should not assume that conditions in non-Aboriginal communities represent a goal to which First Nations should necessarily aspire. Comparing these two community types is valuable primarily insofar as it aids in the interpretation of trends in well-being. For example, if well-being in First Nations improves while well-being in non-Aboriginal communities does not, the "cause" of the improvement may lie in programs, policies, conditions, etc. that are specific to First Nations. If other communities also improved, however, the source of improvement might be more plausibly sought in broader economic forces.

## References

Armstrong, Robin. (2001). The Geographical Patterns of Socio-economic Well-being of First Nations Communities. *Agriculture and Rural Working Paper Series Working Paper No. 46*. Ottawa: Industry Canada, Statistics Canada. Catalogue No. 21-601-MIE01046

Cooke, M. (2007). The Registered Indian Human Development Indices: Conceptual and methodological issues. In Jerry P. White, Dan Beavon and Nicholas Spence (Eds.), *Aboriginal well-being: Canada's continuing challenge* (pp.25-47). Toronto: Thompson Educational Publishing.

Cooke, M. and Beavon, D. (2007). The Registered Indian Human Development Index, 1981-2001. In Jerry P. White, Dan Beavon and Nicholas Spence (Eds.), *Aboriginal well-being: Canada's continuing challenge* (pp.51-68). Toronto: Thompson Educational Publishing.

Cooke, M. (2005). *The First Nations Community Well-Being Index (CWB): A Conceptual Review*. Paper prepared for Aboriginal Affairs and Northern Development Canada (AANDC). Catalogue No. R2-400/2005E-PDF

Sharpe, Andrew (1999). *A Survey of Indicators of Economic and Social Well-being*. Paper prepared for the Canadian Policy Research Network. Retrieved from <http://www.csls.ca/reports/paper3a.pdf>

Statistics Canada. (2008). Education, 2006 Census. Ottawa: Statics Canada. Catalogue No. 97-560-GWE2006003. <http://www12.statcan.gc.ca/census-recensement/2006/ref/rp-guides/education-eng.cfm>