

**Regional Socio-Economic Indicators
– External Review Part 2 -**

As part of an evaluation of the methodology and results of the Regional Socio-Economic Indicator Project, advice was sought from various researchers in academic institutions across Canada as well as federal government departments. The external reviewers were asked to comment on:

- The variables used in the construction of the indices
- Validity of the data
- Reliability of the data
- Weights used in estimating the indicators
- General views on the use of indicators for public policy.

A report was prepared in early March 1999 summarising the comments from four external reviewers. Since that initial report, two additional responses were received. One from Dr. Andrew Sharp, Executive Director, Centre for the Study of Living Standards, Ottawa, and another from Jean-Pierre Voyer, Director-General, Applied Research Branch, HRDC that also includes comments from Allan Zeesman and Michael Hatfield both of HRDC.

A summary of the comments made, and a response to these comments follows.

Comment	Response
My overall impression of your project is very favourable. The indicators provide much useful information of the socio-economic characteristics of the regions of British Columbia and should be useful for policy development purposes.	No response necessary.
It would make more sense to include the data for children and youth under the appropriate indicator or to construct a separate index for children and youth based on data from all four basic indicators.	We felt that separating the data for children and youth from the four main indicators would give increased prominence to these two demographic groups in the overall index. Many of the variables used to construct these indicators (e.g. IA and high school graduation) also were included in the four basic indicators. Hence, they are largely based on data from all four basic indicators.

<p>I did not find the variable "impending change in economic hardship" very useful as it is based on past changes, which are not necessarily indicative of future changes. I recommend it be dropped.</p>	<p>This is a good point, however, when predicting the future past change is usually, but not always, a good starting point to predict future change.</p> <p>Of more concern to us is the potential of this variable to become unstable. The evaluation contained in our report notes that this indicator will be dropped from the overall Stress Index if the swings cannot be tempered, or if it fails to reflect change in a future period.</p>
<p>I encourage the developers of the indicators to consider the use of public opinion polling data or survey data in the elaboration of the weights.</p>	<p>This is an interesting suggestion. Opinion polling is carried out regularly by BC Communications to determine the importance of issues facing the population. This source information may provide some justification for the weighting scheme use to construct the overall index.</p>
<p>While I recognize that the purpose of the indicators is not temporal analysis, it would still be very useful if time series for the data were available.</p>	<p>This is a good point and has been expressed by all the external reviewers. We will be attempting to construct a temporal index as part of Phase 3 of the project.</p> <p>However, it may not be possible to convert these Indices (at least in their current format) into temporal indicators to show change in absolute well being. Because so many of the Indices rely on administrative data, which change according to program requirements, consistent time series would be difficult. We probably should try to look at changes in relative standings – i.e. are regions improving or faltering relative to other RD's.</p>
<p>The inclusion of supplementary data that is not included in the indicators, while interesting, nevertheless overwhelms the reader and makes the argumentation difficult to follow. I suggest that this material be placed in an appendix.</p>	<p>This is a "formatting" issue that can be addressed if/when the methodology paper is released.</p>
<p>I was surprised that the unemployment rate was not included in the economic hardship index. This seems to me an important hardship variable that will not be reflected completely in welfare rates, nor, with the EI cut-backs, in the EI rate.</p>	<p>This is a good point, however, the Statistics Canada Labour Force Survey does not produce information at the regional district level. Due to sample size limitations, Development Regions, of which there are 9 in BC, are the smallest geography that unemployment rates are currently produced.</p>
<p>While construction of an overall index is useful, it is also important to continue to make available the desegregated data on which the overall index is based. Those who want to understand what accounts for the differences in the overall index across regions will need the detailed data.</p>	<p>Agreed</p>

<p>The methodology assigns a value of 100 to the best-off region and 0 to the worst-off region no matter what the variance in the variable between regions. Such a methodology fails to distinguish between variables with large and small regional differences. This may not necessarily be a problem, but it should be recognized.</p>	<p>This is a valid point and should be pointed out in the methodology paper.</p>
<p>While the weights chosen for the overall stress index seen reasonable, our experience has been that it is useful to subject them to sensitivity analysis.</p>	<p>Agreed. We have recently completed an analysis of the sensitivity of the weights and found that, in general, the weights are an important but not the sole determinant of the results as in most cases the ranking of the top 10 worst regions were unaffected. More details can be found in the April 6th research report #2 “<i>Sensitivity Analysis Part 1 – Weights</i>”</p>
<p>The weight given to the Impending Change in Economic Hardship (i.e. 5%) is so low that including it in the overall index becomes doubtful. Perhaps it should be removed from the overall index, but still calculated and sued separately as a leading indicator.</p>	<p>No a bad idea. Our initial sensitivity tests indicated that this “change” variable had the potential to become unstable. Hence, it was modified in later versions, and was eventually given a low weight in the overall index of only 5%. We may be better-off to use this index as an unweighted “supplementary” index as suggested.</p>
<p>The methodology used to calculate the index values is very sensitive to what happens in the best-performing region. Deviations from a population-weighted average, rather than the use of extremes like best and worst, will generally produce more stable results.</p>	<p>Another reviewer also made this comment. His suggestion was to measure the dispersion from the median and not the maximum value, and normalize by the inter-quartile range and not the overall range.</p> <p>We prefer the suggested approach to correct for this potential problem, as the use of a population-weighted average would be dominated by the GVRD results given the imbalance in population size across regions.</p>
<p>To avoid problems distinguishing temporary from persistent disparities among regions, a baseline year should be established whereby future differences could be compared.</p>	<p>Yes, we hope to do this. Our current plan is to update the index twice per year – a preliminary update in the late summer, and a final update in December when all the relevant data are available. Under such a scheme, the base year would be the December 1998 report.</p>
<p>Receipt of GIS alone is not a good indicator of hardship. It should be changed to the percentage of elderly receiving the maximum benefit level of GIS.</p>	<p>OK</p>
<p>A high profile violent crime can have more impact on people’s feelings of personal security that aggregate crime rates and levels. Thus, you should consider bigger weights for the violent crime rate and change in the overall crime rate.</p>	<p>This is a valid point. Our current weighting scheme already favours the violent crime rate, but it could be increased even further.</p> <p>However, our preferred approach is to have the violent and property crime rates broken out into sub-groups and weighted separately. By far the majority of violent crime is categorized as Level 1, which is considered minor crime. Similarly, more than half of property crime is theft, which is primarily comprised of bicycle theft, shoplifting and theft from motor vehicles. These minor crimes would have far less impact on the public’s feeling of personal safety in their communities than the more serious assaults and B&E’s.</p>

<p>As noted in the methodology report, the 5-year average of PYLL due to suicide is not an ideal measure of mental health. However, of the possible alternatives presented it is probably the least open to misinterpretation.</p>	<p>Agreed</p>
<p>On the education dimension, there is no indicator to measure access to lifelong learning opportunities.</p>	<p>We will look into this. A possible indicator would be the proportion of the population who lived within a certain distance (e.g. 50 kilometres) from a College or University campus.</p>
<p>Some research has shown that education may be too optimistic a proxy for skills such as literacy, especially for disadvantaged groups such as income assistance recipients and persons with disabilities.</p>	<p>Literacy skills would be an excellent indicator to include in the education index, but unfortunately we do not have any sub-provincial breakout of this variable.</p>
<p>Early research from the National Longitudinal Survey of Children and Youth (NLSCY) indicates that “bad” outcomes for children are fairly widely distributed along the socio-economic spectrum. However, it is possible that long-term bad outcomes are associated with low socio-economic status children. Hence, the high weight assigned to children receiving income assistance less than one year in the Children at Risk Index should remain for now, but it may need to be changed in future. An alternate variable that may present a more clear measure of longer-term bad outcomes for children may be the prevalence of smokers 12+.</p>	<p>Longitudinal information from the NLSCY will add new dimensions to our understanding of the factors affecting child development. It is possible that the data will show that the instability of multiple changes in poverty status is more damaging to children than consistent poverty. Because many short-term IA recipients are repeat recipients it may be necessary to put a higher weight on this subset than on the long-term caseload. We will re-evaluate our choice of variables and their weights at a later date.</p> <p>We are not able to include the prevalence of young smokers because, once more, that data is not available by Regional District.</p>
<p>For the same reason as above, we suggest replacing the variable “youth on income assistance for less than one year” with “teen pregnancies per 1000 population 15-17”.</p>	<p>The Youth Index is based on the 19-24 year age group as much as possible. Pregnancy among women over the age of 18 is not usually considered a “bad” so pregnancy data is not reported for this age group.</p> <p>We do show the 15-17 year old pregnancy rate as an unweighted indicator in the Children at Risk Index. Perhaps we should consider including it as part of the weighted index.</p>

As was the case with the other external reviewers, the observations provided were all very useful. A number of the comments that were unique to these submissions will be incorporated into the next version of the Index. The suggestion to use information from opinion polls to determine societal values, and hence, the weighting scheme in the overall Socio-Economic Index is an interesting one. It may be worthwhile to examine the polling data holdings of BC Communications to determine if some insights into the value that society puts on each of the sub-indices comprising the overall Socio-Economic Index can be obtained.