



The Canadian Rural Revitalization Foundation

*Seven Reports  
on the Identification of Rural Indicators  
for Rural Communities*

*3. Social Progress*

Prepared for the Rural Secretariat  
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## Introduction

The concept of social progress has long been considered important. Nearly 2000 years ago, Aristotle considered that the definition of a 'good society' should be the central task of philosophy (Salvaris, 2000). With the commencement of the industrial revolution, social progress began to be measured strictly from an economic perspective. In measuring the progress of a society solely by its Gross Domestic Product (GDP) and the average income of a city, region, or country, one is relying on the assumption that the more economic gain experienced, the greater the progress. Only during the past four decades has social progress been measured by including factors beyond the economic indicators of the GDP and average income (The Futurist, 1990; Salvaris, 2000; Osberg, 2001).

The measurement of social progress beyond the GDP is important for sound economic policy to be formulated, since "the quality of economic development is at least as important as the quantity of economic activity as measured by GDP" (Venetoulis & Cobb, 2004). If governments are reporting progress based solely on the GDP, they are not giving a clear picture of progress. The World Bank and United Nations Development program (UNDP) both emphasize that "the goals of development are to improve the lives of human beings, and so the success of development programs must be assessed in human rather than strictly economic terms...the purpose of development is to offer people more options" (The Futurist, 1990). The GDP cannot distinguish between growth (an increase in quantity) and development (an improvement in quality) (Osberg, 2001), and "measuring the market value of economic production tells us very little about the broader health of the community, of the environment, and nothing about the social costs of what has been produced in the economy, or about its usefulness or sustainability" (Salvaris, 2000).

## Definitions of Social Progress

Social progress has been measured and compared *between* countries, as well as measured and compared *within* a country, region or community over time. A variety of indexes have been created to measure social progress nationally, regionally and locally (Salvaris, 2000). Often the creation of these indexes has been triggered by a sense of actual or likely decline in economic and social well-being with broad social and economic problems needing community-wide solutions (Salvaris, 2000). Today, the three realms of social progress considered significant are those containing indicators that can be measured from a social, economic and environmental standpoint. The measurement of social progress has also become value based and must answer the question "progress towards what?" (GPI Atlantic Website; Custance and Hillier, 1998). "Achieving sustainable development is...a continual process of balancing progress towards objectives in each of the three areas (social, economic, environmental). It means not achieving improvements in one dimension at the expense of the others" (Custance and Hillier, 1998).

## MEASURING SOCIAL PROGRESS

### Rural Secretariat – Community Database Indicators

The economic realm of social progress has been analyzed for decades through the utilization of the GDP and average income (Futurist, 1990; Cobb et al, 2000). Despite the fact that these factors should not be the sole measurement of social progress, they are not to be ignored in its measurement either. Difficulty arises when attempting to include environmental and social aspects in the analysis of social progress since they have only been considered more recently and those indicators tend to be more abstract and specific to a community or region. Within the environmental realm of social progress, the critical concept appears to be sustainable development where social progress can be understood as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Custance and Hillier, 1998).

When considering the measurement of progress from a social perspective, it is quite evident both economic and social issues are closely linked. The fact that both social and economic factors are so closely linked “arises partly because economic development and prosperity are important determinants of ‘sociological’ change and partly because the resources produced by economic growth enable social policy expenditures” (Osberg, 2001). Conversely, “the process of economic production has social implications and social change strongly influences economic events”. Thus, a definition of social progress “must reflect a broader conception of events than the purely economic” (Osberg, 2001).

The Genuine Progress Indicator (GPI) uses similar personal consumption data as the GDP but also makes some crucial distinctions. The GPI “makes adjustments for certain factors (such as income distribution), adds certain others (such as the value of household work and volunteer work), and subtracts others (such as the costs of crime and pollution). Because the GDP and the GPI are both measured in monetary terms, they can be compared on the same scale” (Redefining Progress Website). Sharpe (1999) also argues that the GPI is multi-faceted in its measurement of social progress because it “measures consumption from the national accounts and then proceeds to make a large number of adjustments”. Consideration of the three realms of social progress is included within the GPI, with the social and especially environmental realms being expanded in the 22 variables included in the Nova Scotia GPI (GPI Atlantic Website).

Along with considering social progress from social, economic and environmental dimensions, Osberg (2001), breaks down the measurement of social progress even further. He looks at social progress from the perspective of ‘needs’ (or basic human rights) and ‘wants’ and points out how social philosophers “have attempted ...to establish the capabilities, freedoms and rights which are essential preconditions for the autonomy of all citizens”. Depending on one’s perspective, a person or group may value something more than another person or group and so it is with this in mind that Osberg argues that social progress “must be measured in the ‘enabling’ sense that a society progresses when it enables more of its citizens to choose the kind of life they personally have reason to value”. He

## MEASURING SOCIAL PROGRESS

### Rural Secretariat – Community Database Indicators

also maintains that “social progress consists of first meeting ‘needs’ and then satisfying ‘wants’” (Osberg, 2001).

Both the World Bank’s World Development Indicator and the United Nation’s Human Development Index (HDI) include 3 variables that together demonstrate whether or not a nation’s economic growth is translated into improved human well-being and social progress. The HDI is calculated as the average of the following three components: life expectancy at birth; adult literacy and; purchasing power (UNDP) or consumption per capita (World Bank) (The Futurist, 1990). Once again the key components of social progress encompass the economic, social, and environmental realms. Sharpe (1999) labels the HDI as a cross-national index of well-being. Therefore, this index is not ideal for measuring the social progress of regions within Canada since it is an index which is better suited to comparisons between nations.

The Quality of Life index (QOL) developed by psychologist Ed Diener at the University of Illinois is based on a universal set of values. The three realms of social progress appear also to be present in this index given that these values are considered to “reflect three universal requirements of human existence: meeting biological needs, coordinating social interaction, and the survival and welfare of the groups” (Diener, 1995). These three universal requirements to which Diener is referring were proposed by Schwartz (1992), and while the first and last requirement may be understood readily, the *coordinating of social interaction* as a universal value may not be. According to Schwartz, this universal value implies that “individuals restrain impulses and inhibit actions that might hurt others” (Schwartz, 1992). In other words, he is describing value types that “support smooth social relations” (Schwartz, 1992) such as security, pro-social and restrictive conformity.

The ‘Index of Economic Well-being’ (IEWB) developed by Lars Osberg and Andrew Sharpe utilizes 22 variables to measure social progress. Sharpe compares and contrasts the IEWB to the GPI, the Measure of Economic Welfare (MEW), the Index of Social Health (ISH), and the Index of Living Standards (ILS). Although these indexes concentrate mainly on the economic aspect of social progress, the IEWB includes a wide range of indicators (16) including both social and environmental variables. Osberg and Sharpe’s paper led to a website by the Organization for Economic Co-operation and Development (OECD) where 56 social indicators were included ranging from the rather general to self-sufficiency, equity, health and social cohesion indicators. Although not specifically termed social progress indicators, many of them were similar if not the same as those contained in social progress indexes. The indicators included in the OECD website were very comparable to those found in the QOL.

Based on the aforementioned literature, we propose a conceptual definition that recognizes that any index of social progress should be value-based and answer the question “progress towards what?” An index of social progress must go

**MEASURING SOCIAL PROGRESS**  
Rural Secretariat – Community Database Indicators

beyond a purely economic measure and should focus on needs of future generations by taking a long-term view, rather than simply generating economic growth (Custance and Hillier, 1998). Economic, social and environmental variables must be considered in determining social progress as well as basic human rights within the three realms. The concept of social progress is multifaceted. Within the term ‘social progress’ it is evident that the consideration of human needs must go beyond purely economic and must include numerous social and environmental aspects.

### **Social Progress Indicator Development**

As indicated, the three main realms in which to measure the social progress of a region are economic, social and environmental. The Nova Scotia GPI and the QOL appear to be two indexes that give the most detailed, clear overall measurements of social progress that can be adapted to a variety of needs both at the community and regional level. The following tables include indicators that measure social progress divided into the three subgroups of social, economic and environmental. Below each table, you will see rationale behind why each variable was chosen or not chosen.

Table 1:

#### **Social Realm**

<b>Indicator</b>	<b>Index</b>	<b>Operational Definition</b>
1. Level of Education	N.S. GPI OECD QOL WISP	Percentage of individuals with a grade 9+ level of education at census subdivision (CSD) level
2. Level of Crime	N.S. GPI OECD QOL	Not Available (N/A)
3. Life Expectancy	HDI OECD	Life expectancy at birth in average number of years at the health region (HR) level
4. Quality of Housing: affordability of housing compared to income	QOL OECD	N/A
5. Population growth	OECD QOL	Percent population change at the CSD level over the previous 5 years
6. Young Dependency Ratio	QOL OECD	Young dependency ratio at the CSD level

MEASURING SOCIAL PROGRESS  
Rural Secretariat – Community Database Indicators

Considerations for the measurement of social progress index in the social realm:

1. The level of education in a population is a key indicator of social progress. Education contributes to an individual or group's ability to generate income, organize, cope with challenges, and manage personal and collective objectives. Our indicator uses the percentage of individuals who have a grade 9 education or higher in a census subdivision (CSD)<sup>1</sup> was selected as a good indicator over post-secondary education. Post-secondary education opportunities are not always available in every region of Canada and often, individuals who want to pursue a higher level of education are forced to leave their area in order to do so.
2. Measuring the various crime rates is a good indicator of whether social progress is occurring in a region. Lower levels of crime reflect a general concern for others among the population, greater social equality, and lower levels of social unrest. However, it is difficult to determine what types of crime (property, criminal, etc.) affect social progress the most. There also an issue with the discrepancies between reported crime versus actual crime. This information may be available through the Canadian Centre for Justice Statistics. However, data on actual crime is very hard to come by especially at the regional and local level. There is the problem that crime data is collected at administrative levels that don't always match well with CSDs. It is not clear whether the crime statistics represent the residence of the perpetrator, the location of the crime, or the place where the police detachment is. For these reasons, crime was not selected as an indicator of social progress for our index.
3. Life expectancy can be very useful indicator to demonstrate the overall health of a region. In the development of our indicator to measure social progress, we have chosen life expectancy at birth in average number of years at the health region level<sup>2</sup>. The life expectancy value for a health region is assigned to each CSD in its jurisdiction.
4. The amount of income a tenant must devote to shelter is also an important determinant of social progress. The greater the percentage, the fewer resources are available for other needs and desires: food, clothing, recreation, and new initiatives. The QOL measures the percentage of renters paying 30% or more of income for rent. This variable takes into account the percentage of a tenant's average total monthly income spent on shelter-related expenses (i.e.: rent, electricity, municipal services, etc.). This variable was not chosen as part of our social progress index because

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<sup>1</sup> A census subdivision (CSD) is the general term for municipalities (as determined by provincial legislation) or an area treated as municipal equivalents for statistical purposes (Statistics Canada, 2004). Geographic boundaries are based on 2001 Statistics Canada census definitions. CSDs with populations of less than 250 people have been excluded from this analysis since the values become unreliable due to confidentiality transformations.

<sup>2</sup> Health regions are defined by the provincial ministries of health and contain several CSDs depending on the size and population of each region.

**MEASURING SOCIAL PROGRESS**  
Rural Secretariat – Community Database Indicators

it was not included in the 1996 Statistics Canada data that we are working with. Income will be accounted for in social progress index later on as part of the economic realm in table 2.

5. In Canada, most regions are not replacing populations via births, so population growth in an area may only be occurring via in-migration. Population growth is often at the basis of many other quality of life issues such as services, employment, income as well as other socio-economic factors. The population change variable measures the percentage of population change between 1996 and 2001. This variable was available only for the 2001 census thus, it was only included in the construction of the social progress index for 2001.
6. The proportion of young dependents has also been found to negatively impact social progress since it requires a higher proportion of economic and social resources to be devoted to the care of the young. In our measurement of social progress, the young dependency ratio at the CSD level has been selected. The young dependency ratio represents the number of dependents, under the age of 20, for every 100 people in the working age population (20-64 years old).

Table 2:

**Economic Realm**

Indicator	Index	Operational Definition
7. Income Distribution Incidence of Low Incomes Debt, External Borrowing and Capital Movements (GDP) Valuations of Durability Composite Livelihood Security Index	N.S. GPI R.P. GPI OECD HDI QOL	Percentage of households which fall below the low income cut-off (LICO) at the CSD level
8. Unemployment/ employment rate	OECD QOL	Unemployment rate of individuals 15 years and older at the CSD level

Considerations for the measurement of social progress index in the economic realm:

7. The distribution of the overall income is an important indicator of social progress. Populations where incomes are polarized into rich and poor tend to face higher levels of social conflict and a lower quality of life for all. For the purposes of this index, LICO (low income cut-off) at the CSD level was selected. LICO identifies the income levels at which families or unattached individuals spend 20% more than average on food, shelter and clothing. It is adjusted for family and community size.

8. Higher unemployment rates tend to lower economic stability within a region and contribute to numerous negative social outcomes including depreciation

**MEASURING SOCIAL PROGRESS**  
Rural Secretariat – Community Database Indicators

in mental and physical health. In the case of our index, the rate of unemployment at the CSD level has been chosen to measure social progress.

Table 3:

**Environmental Realm**

Indicator	Index	Operational Definition
9. Greenhouse gas emissions Sustainable Transportation Ecological Footprint Analysis Air Quality Water Quality Waste management (recycling, compost, etc.)	N.S. GPI QOL	N/A

Considerations for the measurement of social progress index in the environmental realm:

9. The quality of the environment has proved to be a fairly relevant indicator of social progress. High levels of pollution and over-use of natural resources typically lead to health, economic, and social problems. Measurements such as air and water quality in an area are often determinants of the overall health of the environment, its sustainability and the overall health of its population. Unfortunately, data on this subject at the regional level is very limited and hard to come by. As a result, it will not be included in our measurement of social progress but should be considered in the future.

To summarize, the formula used for our operational definition of the social progress index appears as follows:

Table 4:

**Social Progress Index Formulation**

SOCIAL PROGRESS INDEX= + % With Grade 9 education or higher + Average life expectancy in number of years +/- % Population change from 1996 to 2001 - Young dependency ratio - % Below LICO - Unemployment rate
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## Evaluation of the Indicator

This formula to measure social progress uses standardized scores, or Z scores<sup>3</sup>, in order to calculate this index. Each of the 6 indicators we have chosen have equal weight. In other words, education has no more or less importance or weight than does population change or young dependency ratio. Based on the literature, none of these 6 indicators seemed to demand a greater value than any others.

The following table presents the overall social progress index averages for CSDs in Canada:

Table 5:

### Social Progress: Average Characteristics of CSDs in Canada

Social Progress	N	Minimum	Maximum	Mean	Std. Dev.
1996	3921	-13.593	5.590	0.030	1.934
2001	3955	-12.622	18.543	0.025	2.219

From these results, we see that the level of social progress in Canada is very low and relatively stable. The average CSD in Canada had a social progress score of .025 in 2001, which is actually down slightly from .03 in 1996. At the same time, the variation between CSDs has increased with the standard deviation rising from 1.934 in 1996 to 2.219 in 2001. The following table presents the average social progress index breakdown of CSDs in Canada by province and territory:

Table 6:

### Social Progress: Average of CSDs by Province

Province	1996	2001
Newfoundland	-2.656	-2.943
Prince Edward Island	0.259	0.053
Nova Scotia	-0.768	-1.217
New Brunswick	-0.166	-0.317
Quebec	0.319	0.645
Ontario	0.266	0.211
Manitoba	0.501	0.069
Saskatchewan	0.896	0.650
Alberta	-0.225	0.156
British Columbia	0.209	0.002
Yukon	0.061	-1.671
Northwest	-0.295	-0.950
Nunavut	-7.204	-7.627
Total	0.030	0.025

<sup>3</sup> Z scores are a special application of the transformation rules. The Z score indicates how far and in what direction an item deviates from its distribution's mean, expressed in units of its distribution's standard deviation (Hoffman, 2002).

MEASURING SOCIAL PROGRESS  
Rural Secretariat – Community Database Indicators

Based on the results found in the table above, CSDs in the province of Saskatchewan had the highest average rate of social progress. CSDs in Saskatchewan had a social progress index of slightly less than .9% in 1996 and .65% in 2001. On the other hand, CSDs in Nunavut were found to have the lowest rate of social progress. CSDs in Nunavut territory had a social progress average of -7.6% in 2001 on average. However, we are only dealing with 23 CSDs in the case of Nunavut. Among the ten Canadian provinces, CSDs in Newfoundland were found to have the lowest rate of social progress with CSDs in that province having an average of -2.9%.

The final table looks at social progress averages by Urban-Rural type<sup>4</sup> of CSD:

Table 7:

**Social Progress: Average of CSDs by Urban/Rural Type**

urban area/rural area type	1996	2001
urban core	0.268	0.346
urban fringe	0.370	0.729
rural fringe, in CMA/CA	0.365	0.563
urban, outside CMA/CA	0.010	-0.226
rural, outside CMA/CA	-0.127	-0.062
Total	-0.020	0.032

As we see in table 7, the level of social progress tends to be lowest in rural areas outside of CMA/CAs and highest in urban fringe CSDs. Average rates of social progress in urban fringe CSDs also showed the greatest increase over the 5-year period with the average having risen from .37 in 1996 to .73 in 2001. Thus, being located near but not in an urban core region seemed to be most favorable for the conditions of social progress.

### Future Research

In future studies, it would interesting to look at the impact of the environment and crime on social progress. For the purposes of this index, we were limited to focusing mainly on census related data to explore the issue of social progress. Expanding our definition to include such things as the property crime, violent crime, water and air qualities would be extremely worthwhile in all future research conducted on the issue of social progress.

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<sup>4</sup> These breakdowns include urban core, urban fringe and rural fringe and distinguish between central and peripheral urban and rural areas within or outside of a census metropolitan area (CMA) or census agglomeration (CA) (Statistics Canada, 2004).

MEASURING SOCIAL PROGRESS  
Rural Secretariat – Community Database Indicators

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MEASURING SOCIAL PROGRESS  
Rural Secretariat – Community Database Indicators

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