ECONOMIC DEVELOPMENT
PERFORMANCE INDICATORS:
3 BRIEFING PAPERS

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1. INTRODUCTION
Recent federal legislation established an economic development committee and 12 regional advisory committees within the Denali Commission. The regional advisory committees will each develop a regional economic development plan for the economic development committee to consider. That committee is authorized to consider and approve grant and loan applications from the regional advisory committees to promote economic development and private investment to reduce poverty in economically distressed rural villages. The economic development committee can also make loans and issue grants to individual applicants.

To measure the success of its program in promoting economic development and reducing poverty, the economic development committee—in consultation with the First Alaskans Institute—may develop rural development performance measures. Those measures may include economic, educational, social, and cultural indicators.

The Denali Commission asked ISER to review and inventory existing performance measures for rural Alaska, before the commission begins studying and collecting new measures.

ISER is in a unique position to undertake this review and inventory. ISER has just completed a comprehensive review of The Status of Alaska Natives in 2004, for the Alaska Federation of Natives. That report includes separate chapters on demographics, economics, health (physical and social), education, and the village economy. The study collected indicators of performance from federal, state, local, private, and other sources into a report showing trends, inter-racial comparisons, and Alaska regional comparisons.

ISER has also been involved in developing the Alaska Progress Report for the Alaska Humanities Forum’s Alaska 20/20 Project. That report includes performance measures for the state and regions in five topic areas—economy, education, communities, environment, and government.

ISER is also currently directing the Alaska portion of an international study entitled Survey of Living Conditions in the Arctic, which involves detailed household surveys in rural arctic areas in Russian, Alaska, and other countries. Finally, ISER also maintains several databases of Alaska information on economic, health care, education, and other topics and continuously monitors data on these and other topics related to Alaska.
2. **CHOOSING PERFORMANCE INDICATORS**

“Cheshire Cat,” Alice began, “Would you tell me, please, which way I ought to go from here?” “That depends a good deal on where you want to get to,” said the Cat. --Lewis Carroll

The Government Performance and Results Act of 1993 initiated the current era of performance management in the public sector. It requires federal agencies to have a strategic plan that identifies program goals and objectives, the means to achieve those goals, and measures to assess program performance. Performance measures can be used to improve program management as well as allocate resources.

Figure 1 shows a system model of program inputs, outputs, and outcomes. Performance means comparing inputs with outputs. There is more than one way to do this, however. The simplest concept is **efficiency**: the ratio of outputs to inputs. For example, an efficiency measure for a jobs program might be the number of job placements divided by program expenditures. **Quality** is the ratio of outputs that meet a specified quality standard: for example, the ratio of full-time-equivalent job placements paying more than 150 percent of the minimum wage. **Effectiveness** measures program outcomes in terms of program objectives: for example, reduction in the poverty rate attributable to the program, compared to the costs of the program. The Governmental Accounting and Standards Board has developed standard definitions of these concepts for systematic performance accounting.\(^1\)

The final concept is social **impacts**, which is a more holistic concept focusing on broad social goals and incorporating secondary effects, such as the effects of the jobs program on subsistence hunting and the transmission of cultural values to the next generation. Impacts are hard to measure and therefore seldom used in day to day, year to year performance management. But impacts are the real bottom line for public programs, and should be assessed in the program planning and evaluation cycle.

The remainder of this memo will focus on effectiveness measures for the Denali Commission's economic development initiative.

Figure 2 illustrates the relationship of the economic development initiative to the complex social goal of community well-being.\(^2\) While the scope of the initiative is as yet undefined, presumably it will be centered on the jobs and entrepreneurship side of the cash economy. The commission must decide whether to focus their indicators of

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\(^1\) *Concept Statement No. 2: Service Efforts and Accomplishments Reporting*, (Issued 4/94) Governmental Accounting and Standards Board. A summary is available at, and the full document can be ordered from, [http://accounting.rutgers.edu/raw/gasb/](http://accounting.rutgers.edu/raw/gasb/). These standards are already in use by a number of city and state governments.

\(^2\) Five of these six dimensions of community well-being—except health which is our addition—are from “Defining Community Sustainability: a Report from Community Involvement Phase 1 of the NSF Community Sustainability Project” by Gary Kofinas and Steve Braund, 1996. [http://www.taiga.net/sustain/lib/reports/sustainability.html](http://www.taiga.net/sustain/lib/reports/sustainability.html)
performance on market outcomes only, or to include indicators for other dimensions. There are tradeoffs.

First, you get what you measure. If the indicators are used for allocating money or other material incentives, communities and programs will re-orient to deliver what is measured-- and may fail to deliver what is not measured. For example, if jobs is the chosen measure, programs that create lots of short-term jobs will be favored over programs that make long term investments in education and skills, or focus on developing community capacity for administration and management, or protect subsistence and environmental capital. Indicators must be carefully chosen to serve their intended purpose.

On the other hand, complex outcomes are harder to measure. For example, the human and social capital required for running a business organization is harder to define and tally than jobs. Future outcomes cannot be measured; programs that have a long time lag between the program activities and the final outcomes, such as investments in education to increase future earnings, cannot be fairly evaluated and compared with programs that have near term outcomes. Complex outcomes have multiple causes, and it is difficult to distinguish the results of the program from other, independent factors. For example, did the unemployment rate decline because the jobs program worked, because a short-term construction project skewed the data that quarter, because discouraged workers stopped looking for jobs, or because unemployed people left the community? Figure 1 shows the confounding roles of time and independent factors in measuring outcomes.

Finally, less is more. A few, well chosen, well-understood indicators are more likely to be used and used effectively than a complex constellation of indicators. Multiple indicators are difficult to reconcile. One way to integrate multiple indicators is to create an index, such as the Human Development Index, but developing an index is a difficult technical and political exercise because fixing the elements and weights requires some agreement on relative values.

The trade-off between a few economic indicators or a complex of social indicators will largely be driven by the mix of programs whose outcomes will be measured and compared. The more similar the programs, the easier it will be to define a common set of outcomes to measure; the more heterogeneous the mix, the broader, more abstract, more multi-dimensional and complex the outcome measures must be to define a common denominator for program outcomes.

Beyond what to measure there is the question of how to measure it. Choosing indicators that are readily available makes them more useful over time and more widely used. Some dimensions of the program outcomes will have lots of existing data series to choose from for indicators, while other dimensions will require new data collection. New data collection is not only costly, but provides no historical perspective. The frequency, sample size, and unit of analysis of the data are all critical. More frequent data and larger sample sizes generally permit more robust analysis to relate changes in outcomes to changes in program activities and to distinguish other factors. The time-lag for data
collection and analysis determines whether the information is available in time for decision-making. The unit of analysis in the data must match the program target; for example, if the program goals involve the distribution of outcomes across individuals or households, aggregate measures for the community or region are not very helpful. For some program outcomes, qualitative measures may be sufficient: is the direction of change positive or negative? For others, a finely graduated quantitative measure may be needed to detect small changes in program outcomes.

The following seven criteria may be used for assessing and comparing alternative measures of performance:\(^3\)

- **Utility:** is it useful to program managers and decision makers?
- **Validity:** does it really measure the program outcomes it is intended to measure, or is it driven largely by other factors?
- **Reliability:** is it consistent? Does it produce the same results repeatedly?
- **Precision:** is it sensitive enough to measure small changes?
- **Feasibility:** is it practical? Can the measure be collected over time with available resources?
- **Cost:** how much does it cost to collect?
- **Unit cost reporting:** does it measure outcomes in units that can be compared to program cost units?

The first step in developing performance measures is to clearly define program goals and objectives. Program managers must clearly articulate the purposes of the program, the intended program clients and stakeholders, the program activities, intended results and quality, and the expected time frame for accomplishing program objectives. The authorizing legislation provides general guidance: the primary program goal is to reduce poverty in economically distressed villages. The unit of analysis is therefore villages. The commission must operationally define which villages are “economically distressed.” The commission must define “poverty.” The legislation states that poverty will be reduced by means of grants and loans to promote “economic development” and private investment; each of these terms must be defined. Is “economic development” synonymous with “rural development”? The legislative wording implies that “economic growth” is the principal mechanism to “reduce poverty,” but goes on to specifically state that measures of rural development may include economic, educational, social and cultural indicators.

This section has provided a brief overview of the types of issues involved in developing performance indicators. But it is all very general and abstract. A more specific and concrete analysis of the issues will be possible once the Commission’s economic development program is better defined.

Figure 1. Categories of Measures
Figure 2. Dimensions of Community Well-being

- Cash Economy
  - Dividends and transfers
  - Jobs and businesses
  - Wildlife and environment
  - Hunting and sharing

- Subsistence Economy
  - Schooling and training
  - Traditional knowledge and skills

- Education
  - Language and cultural values
  - Communicating cultural values to others

- Health
  - Physical, mental and behavioral health

- Culture
  - Local Control
    - Effective institutions
    - Local leadership

Community Well-being
3. **Performance Indicators in Other Countries**

The international community, academics, and policymakers have in recent years devoted considerable resources to evaluating well-being both across countries and over time. Here we introduce the major types of indicators discussed in the academic literature, along with briefly discussing strengths and weaknesses of the proposed measures.

**Introduction**

Until recent years a country’s aggregate output, or gross domestic product (GDP), was used almost exclusively as the primary measure of economic development. Both comparative (i.e. between countries) and over time, growth in GDP per capita was commonly used to describe changes in well-being. Recognizing the inadequacy of this measure of well-being, the United Nations began to devise and collect other macro-level quantitative measures of health, education, employment and housing in addition to real income data in the mid-1950’s. More explicit attempts at capturing human level well-being were made by M.D. Morris (1979) and more recently in the UN’s Human Development Index (DasGupta, 1993).

Mainstream use of GDP per capita as the primary measure of economic progress began to noticeably change around the time of the Bruntland commission. The UN Commission on Environment and Development, chaired by the Norwegian Prime Minister Gro Bruntland, released a report in 1987, *Our Common Future*, in which the committee defined “sustainable development” as “to meet the needs of the present without compromising the ability of future generations to meet their own needs.” The definition articulated in that report continues to be an important factor in shaping development objectives for many international organizations.

Given the influence of the Bruntland commission, contemporary indicators of well-being often reflect both current well-being and future capacities. GDP as an exclusive index cannot satisfy this definition of development. First, GDP measures current aggregate output, and growth refers to changes in the current period relative to the past. Current output may or may not reflect future productive capacity: a high current level of GDP may be achieved by concentrating on the production of consumption goods at the expense of capital goods. Second, a change in GDP does not account for changes in all of an economy’s assets: most notably, it does not account for changes in the stocks of human and natural capital. An economy may increase current consumption by depleting non-renewable resources. This change in natural capital should be included in analysis of future growth potential. Finally, measuring changes in GDP alone does not provide much insight into changes in determinants of well-being such as life expectancy and infant mortality (Sen and Anand, 1994). While GDP per capita is correlated with such things as health care, education and clean drinking water, the linkages are often indirect.¹

¹ Also, as noted by Ravallion (2001), increases in aggregate wealth are dispersed differently across regions and households in a country. Macro measures of well-being are made more effective by micro-level empirical studies that highlight regional differences in development.
As carefully articulated in DasGupta (1993, 2001), there are essentially two methods of capturing individual well-being. One may measure either the "determinants"—i.e. the inputs of well-being—or the very "constituents" of well-being—i.e. the ends themselves. For example, if life expectancy is a component of well-being then inputs include sufficient water, natural resources and GDP per capita. Some constituents of well-being are also determinants, for example education. In any case, when properly measured, analyses based either on constituents or determinants of well-being should, theoretically, produce similar results. But in practice, because of data constraints, measures of well-being under the different methods are sometimes quite different.

In what follows we briefly discuss indicators relevant to each approach, along with an overview of strengths and weaknesses of each. To begin, we discuss measures focusing on constituents of well-being, of which the most important measure is the UN's Human Development Index. Second, we look at changes in wealth, along with a corollary discussion on project evaluation.

Specific Measures

**Constituents of Well-being Methodology**

Under the constituents of well-being approach, indicators that comprise well-being\(^5\) are aggregated in some fashion to produce standardized indices across countries or regions. The most widely used international measure is the UN's Human Development Index.

As discussed above, the impetus behind this approach was an effort to move away from measuring "opulence" and toward measuring "the quality of human lives" (Anand and Sen, 1994). In particular, while GDP and constituents of well-being are certainly correlated, the channel by which GDP influences well-being is typically indirect. For instance, Anand and Ravallion (1993) show that variations in life expectancy are robustly explained by public health spending and an index of poverty, but that including GDP does not increase the explanatory power. Proponents of this approach maintain that measuring constituents of well-being captures more concrete outcomes than measuring inputs or determinants of well-being. They argue that determinants of well-being, while necessary for improvements in well-being, may not be sufficient causes.

The United Nations human development indicators are the most comprehensive and widely cited of such indicators. The five indicators provided in the current Human Development Report are presented in Table 1. below. The most widely cited measure used in international comparisons is the Human Development Index (HDI) which is shown in row one. The HDI measures longevity, education and GDP per capita. To calculate the index, a country’s indicators are compared to international benchmarks, and the relative performance gaps are measured on a standardized scale of 0 to 1. A simple average of the three dimensions determines a country’s HDI, with 1.0 representing the highest state of well-being. Box 1 explains the calculation of the index in detail.

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\(^5\) Choosing which indicators to include as constituents of well-being is also an important part of the process.
<table>
<thead>
<tr>
<th>Table 1. Human Development Indices, 2003</th>
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</thead>
<tbody>
<tr>
<td><strong>Categories of Well-Being</strong></td>
</tr>
<tr>
<td><strong>Long and Healthy Life</strong></td>
</tr>
<tr>
<td>Human Development Index: life expectancy at birth</td>
</tr>
<tr>
<td>Human poverty index I: probability of not surviving to age 40</td>
</tr>
<tr>
<td>Human poverty index II: prob. of not surviving to age 60</td>
</tr>
<tr>
<td>Gender-related development index: female and male life expectancy</td>
</tr>
<tr>
<td>Gender empowerment measure: female and male shares of parliamentary seats</td>
</tr>
<tr>
<td>Knowledge</td>
</tr>
<tr>
<td>adult literacy rate</td>
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<tr>
<td>adults lacking functional literacy</td>
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<tr>
<td>female and male literacy rate</td>
</tr>
<tr>
<td>female and male shares of positions as legislators, senior officials and managers</td>
</tr>
<tr>
<td>Economic Participation and Decision-making</td>
</tr>
<tr>
<td>female and male shares of positions as technical and professional positions</td>
</tr>
<tr>
<td>Power Over Economic Resources</td>
</tr>
<tr>
<td>female earned income</td>
</tr>
<tr>
<td>male earned income</td>
</tr>
<tr>
<td>Standard of living</td>
</tr>
<tr>
<td>gross enrollment ratio</td>
</tr>
<tr>
<td>population without access to improved water source</td>
</tr>
<tr>
<td>percent below poverty</td>
</tr>
<tr>
<td>Social Exclusion</td>
</tr>
<tr>
<td>GDP per capita</td>
</tr>
<tr>
<td>percent of underweight children</td>
</tr>
<tr>
<td>long-term unemployment rate</td>
</tr>
<tr>
<td>male earned income</td>
</tr>
</tbody>
</table>

*Source: Human Development Report, 2003*
Box 1. Calculating the Human Development Index

Calculating the HDI

This illustration of the calculation of the HDI uses data for Albania.

1. Calculating the life expectancy index
The life expectancy index measures the relative achievement of a country in life expectancy at birth. For Albania, with a life expectancy of 73.4 years in 2001, the life expectancy index is 0.807.

\[
\text{Life expectancy index} = \frac{73.4 - 25}{85 - 25} = 0.807
\]

2. Calculating the education index
The education index measures a country's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment. First, an index for adult literacy and one for combined gross enrolment are calculated. Then these two indices are combined to create the education index, with two-thirds weight given to adult literacy and one-third weight to combined gross enrolment. For Albania, with an adult literacy rate of 85.3% in 2001 and a combined gross enrolment ratio of 69% in the school year 2000/01, the education index is 0.798.

\[
\text{Adult literacy index} = \frac{85.3 - 0}{100 - 0} = 0.853
\]

\[
\text{Gross enrolment index} = \frac{69 - 0}{100 - 0} = 0.690
\]

\[
\text{Education index} = \frac{2}{3} \times \text{adult literacy index} + \frac{1}{3} \times \text{gross enrolment index} = \frac{2}{3} (0.853) + \frac{1}{3} (0.690) = 0.798
\]

3. Calculating the GDP index
The GDP index is calculated using adjusted GDP per capita (PPP US$). In the HDI income serves as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge. Income is adjusted because achieving a respectable level of human development does not require unlimited income. Accordingly, the logarithm of income is used. For Albania, with a GDP per capita of $3,680 (PPP US$) in 2001, the GDP index is 0.602.

\[
\text{GDP index} = \frac{\log(3,680) - \log(100)}{\log(40,000) - \log(100)} = 0.502
\]

4. Calculating the HDI
Once the dimension indices have been calculated, determining the HDI is straightforward. It is a simple average of the three dimension indices.

\[
\text{HDI} = \frac{1}{3} \times \text{life expectancy index} + \frac{1}{3} \times \text{education index} + \frac{1}{3} \times \text{GDP index} = \frac{1}{3} (0.807) + \frac{1}{3} (0.798) + \frac{1}{3} (0.602) = 0.735
\]

Source: UN Human Development Report, 2003
The UN Division for sustainable development provides a separate set of 58 sustainable development indicators. And the World Bank's World Development Indicators provide 800 indicators for more than 200 countries. Similar to the Human Development Index these separate indicators may be combined in various ways to form simple aggregate indices useful for policymakers in evaluating well-being across countries.

However, as forcefully argued by DasGupta (2001), the primary drawback with using the constituents of well-being approach exclusively, is that such a measure does not provide information about the state of future well-being. In particular, he argues that the same criticism made of GDP can also be made of the human development indicators. Hidden behind a high indicator today may be a reduction in the stock of capital necessary to maintain the level of well-being into the future. In the next section we discuss his argument that properly valuing and evaluating the determinants of well-being avoids this problem.

**Determinants of Well-Being Methodology**

*Changes in Wealth and Changes in Well-Being*

Assessing changes in well-being through measuring changes in total assets is one way to calculate changes in determinants of well-being. While the precise relation between well-being and wealth may not always be immediately clear it is generally true that most measures of well-being are increasing in wealth, given how wealth is defined in this approach. Wealth in this context is the sum of an economy’s physical capital, human capital, natural capital, and to some extent, social capital. Typically, such a measure is in

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8 The approach described in this section is, for the most part, based on discussions in Dasgupta (2001; 1993).

9 **Human capital**: The knowledge, skills, and experience of people that make them economically productive. Human capital can be increased by investing in education, health care, and job training.

**Physical capital (produced assets)**: Buildings, machines, and technical equipment used in production plus inventories of raw materials, half-finished goods, and finished goods.

**Natural capital**: A stock of natural resources—such as land, water, and minerals—used for production. Can be either renewable or nonrenewable.


Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions. Increasing evidence shows that social cohesion is critical for societies to prosper economically and for development to be sustainable. Social capital is not just the sum of the institutions which underpin a society—it is the glue that holds them together.

terms of the macro or national economy, but as we will discuss, measures of wealth are also feasible on a regional or even project level.

Key to the determination of total wealth is estimating changes in natural capital. In valuing natural capital, a price should be used that reflects the total social cost or benefit of an additional unit increase or decrease in a particular good. This “accounting price” will differ from the observed “market price” if there are social costs or benefits associated with the good that are not captured by private owners of the natural capital. For instance, consider a water and sewer project. The market price would equal the flow of profits over the life of the project; the accounting price would include, in addition, the benefits from improvements in health, property values, and possibly fisheries (if, for instance, runoff without the project were harming the local fishery).\(^\text{10}\)

Market prices may also be used to estimate a lower bound value for certain types of natural and human capital. For instance, as described in DasGupta (2001), in a paper calculating the optimal harvest rate of blue whales, Spence (1974) bases the value of the blue whale simply on the market price of whale meat. Even when using this lower bound price (that doesn’t capture the total social benefits of blue whales), he showed that it was in the interest of the whaling industry to declare a moratorium on blue whale harvesting until the sustainable whale population was reached. Placing a higher price on the value of the whale (an accounting price) would have resulted in the same general conclusion.

While changes in net wealth as an index of well-being has not received as much attention as the HDI and other indicators, since 1999 the World Bank has published such a measure in its annual *World Development Indicators*. This measure is called “adjusted net savings” and includes an estimate of physical capital (net national savings), human capital (education expenditures), and natural capital (four indicators). Changes in natural capital include net forest depletion, mineral depletion, energy depletion, and CO2 damage.\(^\text{11}\)

In Table 2, we present this measure of wealth from the World Bank and other measures of well-being for various countries as discussed in DasGupta (2001). Select countries are compared in light of changes in GNP per capita, wealth per capita, and the Human Development Index. Although the measure of “wealth,” is incomplete it clearly captures different information compared to the Human Development Index and other measures of well-being.

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\(^\text{10}\) See chapter 8 “Valuing Goods” of DasGupta (2001) for a more thorough discussion of accounting prices and valuing environmental costs and benefits.

Table 2. Average Annual Changes in Well-Being, Using Different Measures*

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>2.3</td>
<td>-2.40</td>
<td>1.0</td>
<td>+ (8.0)</td>
</tr>
<tr>
<td>India</td>
<td>2.1</td>
<td>-0.50</td>
<td>2.3</td>
<td>+ (7.7)</td>
</tr>
<tr>
<td>Nepal</td>
<td>2.4</td>
<td>-2.60</td>
<td>1.0</td>
<td>+ (11.4)</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2.9</td>
<td>-1.70</td>
<td>2.7</td>
<td>+ (8.5)</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>2.7</td>
<td>-2.00</td>
<td>-0.2</td>
<td>+</td>
</tr>
<tr>
<td>China</td>
<td>1.7</td>
<td>1.09</td>
<td>6.7</td>
<td>+ (7.0)</td>
</tr>
</tbody>
</table>

*Table from Partha DasGupta (2001)
** this is based on the World Bank’s estimate of wealth described above – it includes an estimate physical capital, human capital, and natural capital.
*** this data from UN Human development report 2003, based on 5 year average changes in the HDI

A very different portrait of well-being is painted by the respective measures. According to data in the table, well-being dramatically increased for all regions based on the Human Development Index and changes in GNP per capita also show modest improvements. However, changes in real wealth per capita (where wealth is defined above) were negative, except for China, indicating a decline in well-being. Interestingly, places where positive changes in the HDI were greatest corresponded to places where negative changes in wealth per capita were greatest. In Nepal average annual change in wealth per capita was -2.60 while average change in the HDI was around 11.4. The situation is nearly parallel in the case for Bangladesh.

This evidence underscores the point that the choice of an intertemporal (across time) versus a static mechanism significantly influences the measurement of well-being. Based on the HDI (a static measure), China has made the least progress (7.0), relative to other countries in the table, whereas based on wealth per capita, China has made the greatest progress (1.09) (which gives a better picture of wealth available for future well-being).

Finally, the table illustrates differences when looking only at growth in GNP per capita. Relative to the Human Development Index, we see that growth in GNP per capita is relatively lower for the countries in the sample. Countries that scored highest in terms of improvements in GNP did not necessarily score highest in terms of increases in the HDI (i.e. China and India), and vice versa. Relative to wealth per capita, GNP also presents a relatively brighter picture for most countries.

The primary benefit associated with measuring determinants of well-being is the ability to simultaneously present a picture of current well-being and projected future well-being. That is, changes in total wealth (including human capital, physical capital, and natural capital) provide insight not only into current living conditions but also into future capacities for well-being. This “macro-economic” measure of wealth, as we have
discussed it thus far, can also be generalized to smaller regions and indeed to project evaluation, as we discuss below.

Changes in Net Benefits: Project Evaluation

The corollary to measuring changes in wealth is social cost benefit analysis and this methodology is particularly useful in project evaluation. Put another way, changes in determinants in well-being due to a policy program are equal to the sum of changes in wealth resulting from specific projects. Social cost-benefit analysis may be used as a tool to measure the change in wealth accruing from a specific project.\(^\text{12}\)

Social cost benefit analysis is a methodology where the projected net benefits of a particular project (the benefits minus the costs for each period) are evaluated over the life of the project prior to implementation of the project. It is particularly important to value all relevant benefits and costs including those which are economic, environmental, and human capital related. Using cost-benefit analysis to evaluate the feasibility of a project is a common requirement for many projects funded by the World Bank and other international organizations and there are numerous case specific publications by these organizations detailing their methodology for projects ranging from water and sewer to large infrastructure such as a dam.

The accepted practice is to calculate the discounted net-present value (summing the discounted costs and benefits over the life of the project) where accounting prices are used in valuing non-market goods.\(^\text{13}\) Projects with a positive net-present value are accepted (they add positively to total wealth over the life of the project). Similarly, project A may be compared directly to project B, such that the project with the greatest calculated net-present value is the project expected to offer the greatest increase to well-being.

When comparing projects between regions, the net present value approach also provides for straightforward comparisons. For instance, without accounting for natural capital it may be that in region Y project A would offer the same net present value as project A in region X. But suppose that there is a unique type of environmental degradation in region X that project A would address as an indirect benefit whereas in region Y this indirect benefit to the environment would not be realized. All other things being equal, the discounted net present value of project A would be higher in region X relative to region Y when accounting for the environmental benefits.

Conclusion

Effective indicators of well-being share important characteristics: they have policy relevance; they are analytically sound and measurable, and they provide a sense of future

\(^{12}\) This point is skillfully articulated in Chapter 10 of DasGupta (2001).

\(^{13}\) Future benefits and costs are given less weight relative to current values. Sensitivity analysis is the procedure of valuing the project under a range of discount rates. It may be that the positive present value calculated for a particular project is highly sensitive to the discount rate selected. In such case, this information should be made clear to policymakers deciding between projects.
well-being (Hamilton, 2003; DasGupta, 2001). In the discussion above we presented an overview of indicators used in the development literature to evaluate country-level well-being.

Apart from straightforward measures of GDP per capita there are essentially two mainstream approaches in the literature. First, simple aggregates of social indicators of development can be constructed which provide insights into particular elements of well-being. We described this approach as measuring the constituents of well-being and the most important example of this approach is the UN’s Human Development Index. The UN Human Development Report emphasis on shifting policymaker focus toward measuring changes in human well-being rather than simple changes in national incomes has had an important impact on the types of development projects pursued by international organizations.

Second, we discussed measuring the determinants of well-being, (i.e. the inputs to well-being such as national wealth) as an alternate approach. While the “constituents of well-being” approach provides important information to policymakers, it is not sufficient to provide an accurate picture of well-being, particularly future well-being. Changes in national wealth—when wealth includes natural capital, physical capital, and human capital—provides a clearer picture, particularly when considering future well-being. On a more micro-level we described how social cost-benefit analysis used in project evaluation, when it accounts for changes in physical capital, natural capital, and human capital, can similarly provide important information about changes in present well-being and expectations for the future.
References


4. **INVENTORY OF ALASKA PERFORMANCE INDICATORS**

In this section we present an inventory of data sources currently available for potential use as indicators of economic development, poverty reduction, and improvements in well-being in rural Alaska.

We began with a short list of 13 measures that we felt 1) might be used to describe economic development, poverty, or well-being in the rural setting, and 2) could be influenced by the economic development projects and policies that the Denali Commission might undertake in the future.

Our list of *Measures* is as follows.\(^{14}\)

- Total Income
- Earnings by Place of Work
- Jobs in Community
- Employment by Place of Residence [Unemployment]
- Business Activity
- Household Consumption
- Real and Financial Assets
- Poverty
- Price Level
- Private Business Activity

- Subsistence
- Well-Being
- Education

For each *Measure* we identified one or more specific quantifiable *Indicators*. Each *indicator* is a piece of data that is currently collected and usually reported on a regular time interval for a specific geographic area of the state.

We present a description and an analysis of each indicator, based on a number of criteria that can help to determine how useful each is for the tracking progress in economic development, poverty reduction, and well-being enhancement. The information provided about each *Indicator* is as follows:

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\(^{14}\) Health care is excluded because we felt the link between economic development initiatives and health, although present, are harder to identify than the Measures we have included. The Status of Natives Report 2004, prepared by ISER, concludes that Native Alaskans have made great progress in dealing with the traditional health problems faced by the Native community such as Tuberculosis. Behavioral health problems, such as diabetes, are now the bigger challenge faced by the Native community.
**MEASURE:** The general dimension of well-being of interest

**Indicator:** The specific quantitative measure of that dimension of well-being

**Definition:**

A definition of the indicator

**Source:**

Agency that produces the indicator

**Regionalization**

The smallest geographical region reported for the indicator

**Frequency**

The time interval for reporting the value of the indicator

**Quality**

Collection Method

The process for collecting the information

Consistency of data over time

The consistency in the methods of data collection over time.

Conformity of indicator to measure

How closely and completely the indicator represents the measure

Smoothness

Sensitivity to variation that is unrelated to economic variable

**Strengths**

Main positive features

**Weaknesses**

Main negative features

**Overall Evaluation:**

General evaluation of usefulness

**Related Data Sources:**

Other indicators that are similar but less useful, for various reasons

There are many more indicators available for the state as a whole than for the census areas—the 27 subdivisions commonly used by both the federal and state governments when reporting data on a regional level. Data that allow us to track activity at the level of the local community is not often available—but there is some that could be quite useful for tracking purposes—particularly income and poverty indicators.

Not only does the number of available indicators drop off dramatically as one goes from the level of the state down to the community, the quality of the data and its usefulness for tracking also may decline, for a number of reasons.

First, it is very expensive to collect data at the community level for all communities, either by a census (where the entire relevant population is contacted), or by a survey (where only a sample of the relevant population is contacted). The U.S. Census of Population, conducted once every 10 years, is a good example of the great expense as well as planning and administrative effort involved in surveying the entire population in their homes. A large part of the expense is associated with quality control—everything from how the questions are asked to the protocols used to fill in the forms.
Second, the expense is exacerbated by the need to have well-trained people collecting the information. A considerable part of the census budget is for the training of the people administering the census. It is more expensive to collect data in rural areas, and the quality of collection efforts is often less than in urban areas.

Third, when communities are small, the number of observations for some indicators are likely to be small enough that the characteristics of individuals can be identified. For example, the Internal Revenue Service (IRS) reports the number of personal tax returns by size of income, by zip code. In small places there may only be one person filing a return with an income in a particular category. When that is the case, the information cannot be reported in a public document.

Fourth, identifying trends and changes in indicator values that are permanent is difficult in small places, where the normal variation in values over time is not dampened by the presence of a large number of observations. For example, many health indicators for Alaska are based on a small number of events. When health events are sub-divided by borough/census area, race, sex, or age, the number that results often lacks statistical significance and may inadvertently identify an individual. Confidentiality issues are likely to arise with small denominators, small numerators, or rare events. In Healthy Alaskans 2010, a publication of the Alaska Department of Health and Social Services’ Division of Public Health, confidentiality is protected by withholding events with counts of less than four, or by aggregating data over time or over larger geographical areas to produce a larger cell size. Concerns about the reliability and stability of the data arise with small numerators that represent rare or infrequent events. Twenty events is the usual threshold for reliability for estimating age-adjusted rates. Rates based on fewer than 20 events have relative standard errors of 23 percent or more. In order to address these concerns when reporting Alaska health data, the Division of Public Health has attempted to increase numerator size by combining multiple years of data, collapsing data categories, or expanding the geographic area under consideration.

Indicators available at the census area level are generally more “robust” than those available at the place level (less subject to errors), but they can present a skewed picture of conditions in particular places within the census area. This is because most census areas in rural Alaska tend to consist of one large community—a regional center—surrounded by a large number of small villages. Conditions in the villages may be very different from those in the regional center, but an indicator for the entire census area will often be more representative of the regional center than of the many surrounding smaller places.

The indicators in this inventory come from a large number of federal and state agencies. Some of the indicators are collected for descriptive purposes, such as the information in the U.S. Census of Population. Much information is collected as an integral part of some administrative process. A good example is employment information, which the state Department of Labor collects when businesses make their payments to the state under the unemployment insurance program. Some indicators consist of estimates made using
equations and other techniques. This is the case for some local-area indicators like median family income.

We present information on indicators that, with one or two possible exceptions, are already published by the agencies producing the information. However, we observe that there are instances where administratively collected data either is not published at the level of geographic detail which might be available to the agency, or is not published at all.

More reporting of such information that is collected but not published represents the most cost-effective way to increase the number and geographical coverage of indicators. If the indicator is important, and the agency can be persuaded to disseminate the data it has already collected, this would probably be less expensive, and produce data of higher quality, than undertaking an independent effort to collect that data in another way. (Such increased dissemination might, however, require an appropriation.) An example of this would be one of the poverty measures we identified. The percentage of school children eligible for the federal government's free lunch program is an indicator that the Alaska Department of Education currently makes available by school district. Since that information is already collected and reported by the individual schools to produce the district figure, it should be possible to capture and report school-specific information.\textsuperscript{15}

Furthermore, the schools or other community-level organizations that currently send reports to the state or federal governments could act as a means of capturing additional related data. For example, each community has an electric utility that is required to file reports with both the state and the federal governments. Modest changes in these forms, along with the capture of the information thus produced, could yield useful indicators at the local level about such things as the cost of living.

Two of the things that are obvious for the collection of quality data are first that the person reporting the data must have some incentive to do it, and second, that there must not be any built-in incentive to misrepresent the data.

We did not include one-time studies in our inventory, including databases that are not regularly and systematically updated. We also excluded databases that are entirely composed of indicators available from other sources. These databases serve a useful purpose, but because they consist of secondary data obtained from a source that is part of the inventory, they need not be repeated. Three of these important databases maintained by state agencies are:

Community Database Online of the Alaska Department of Community and Economic Development, Division of Community Advocacy

\textsuperscript{15} As with any program of this nature, one must consider the possibility of built in incentives creating a bias in the reported results.
Alaska Economic Information System of the Alaska Department of Community and Economic Development, Division of Community Advocacy

Community Profile Database of the Alaska Department of Fish and Game, Division of Subsistence (This database contains a lot of primary information about subsistence activities, but it is augmented by descriptive information from other sources about each community.)

Some additional sources of information on indicators in Alaska that we reviewed were the Alaska 20/20 Report on the condition of Alaska, and the Missions and Measures initiative of the state government. The 20/20 Report, first published in 2004, focuses primarily on statewide indicators. The Mission and Measures initiative of state government focuses on measures of efficiency in the delivery of state services and has very little overlap with local area economic development indicators. Furthermore, it is only in the beginning stages of implementation.

An extremely useful Internet portal for regional data on economics, health care, education, and other measures of well being is: www.econdata.net

A good reference document on regional economic data is: Socioeconomic Data for Understanding Your Regional Economy: A User's Guide, by Joseph Cortright and Andrew Reamer, Economic Development Administration, U.S. Department of Commerce, 1998. It contains a good overview and description of all the main data collection programs of the federal government, including such surveys as the Survey of Income and Program Participation (SIPP) and the American Housing Survey (AHS) that form the basis for many national and regional (multi-state) indicators, but which do not contain sample sizes large enough to be useful in producing Alaska-specific indicators.
Measure: Total Income (1)

Indicator: Adjusted Gross Income (AGI)

**Definition**
Gross income reported to the IRS by taxpayers on their personal income tax forms, minus deductions for IRA contributions, qualified business expenses, alimony payments, contributions toward health insurance for the self-employed, and others.

**Source**
U.S. Department of Treasury, Internal Revenue Service, Statistics of Income

**Regional Availability**
By zip code

**Frequency of Availability**
Annual

**Collection Method**
Obtained through individual income tax returns

**Consistency of Data over Time**
Numerous changes in reporting rules and tax codes each year primarily impact taxable income and tax liability rather than AGI which is relatively consistently defined each year.

**Conformity of Indicator to Measure**
AGI conforms closely to common conceptions of personal income. Aggregate AGI is a good measure of total money income for a place. AGI per return is not without problems as an indicator of household income because some households will file a single return and others will file multiple returns. In Alaska children are required, because of the Permanent Fund dividend, to file a return separately from their parents.

**Smoothness**
Changes from year to year in non-wage income will be a factor contributing to variation in AGI from year to year. Because some government cash transfers are included in AGI it does not exactly track earned income.

**Strengths**
Data available by community for residents filing from that community and broken out by level of AGI for some places so one can get some income distribution information. Data is available for every tax return filed (as opposed to a sample of people in an area).
Weaknesses
Some people in rural AK may not file returns, but most probably do because many receive refunds.

Overall Evaluation
A good indicator of cash income.

Related Data Sources
The Alaska Business Development Center has a program to provide assistance to taxpayers in rural communities in filing their income tax returns. The data is confidential, but the process is well established, and with community support, could potentially be used as a means to collect income data more quickly and completely.
Measure: Total Income (2)

Indicator: Personal Income and Per Capita Personal Income

Definition

Income received by all persons from all sources; the sum of net earnings by place of residence, rental income of persons, personal dividend income, personal interest income, and personal current transfer receipts.

Included in earnings is not only wages but also Proprietors' income, which is the current production income (including income in kind) of sole proprietorships and partnerships. Proprietors' income excludes dividends and monetary interest received by nonfinancial business and rental incomes received by persons not primarily engaged in the real estate business; these incomes are included in dividends, net interest, and rental income of persons, respectively.

Dividends consist of the payments in cash or other assets, excluding the corporation's own stock, made by corporations located in the United States or abroad to persons who are U.S. residents. It excludes that portion of dividends paid by regulated investment companies (mutual funds) related to capital gains distributions.

Interest is the interest income (monetary and imputed) of persons from all sources.

Rent income is the net income of persons from the rental of real property except for the income of persons primarily engaged in the real estate business; the imputed net rental income of the owner-occupants of nonfarm dwellings; and the royalties received from patents, copyrights, and the right to natural resources.

Personal dividend income, personal interest income, and rental income of persons with capital consumption adjustment are sometimes referred to as "investment income" or "property income."

Source

U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (REIS)

Regional Availability

Available by census area and borough

Frequency of Availability

Annual
Collection Method

95% of BEA estimates of income from earnings come from Bureau of Labor Statistics data, which are derived from tabulations of monthly employment and quarterly total wages of workers covered by state unemployment insurance (UI) legislation and of Federal workers covered by the unemployment compensation for Federal employees (UCFE) program.

BEA makes adjustments to BLS data to account for employment and wages not covered, or not fully covered, by the state UI and the UCFE programs. First, BEA adds estimates of employment and wages to the BLS data to bridge small gaps in UI coverage: For nonprofit organizations not participating in the UI program (several industries), for students and their spouses employed by public colleges or universities, for elected officials and members of the judiciary (state and local government), for interns employed by hospitals and by social service agencies, and for insurance agents classified as statutory employees (insurance agencies).

Second, BEA uses additional source data to estimate most or all of the employment and wages for the following: Farms, farm labor contractors, private households, private elementary and secondary schools, religious membership organizations, railroads, military, and U.S. residents who are employed by international organizations and by foreign embassies and consulates in the United States. Third, BEA adjusts employment and wages for misreporting under the UI and UCFE programs.

A residence adjustment converts earnings by place of work to earnings by place of residence by subtracting the outflow of wages and salaries of non-residents and adding the inflow on wages of residents earned away from home.

The earnings of self employed workers (proprietors) is based on data reported to the Internal Revenue Service tabulated from Schedule C of form 1040 and from form 1065. The geographic coding of the data is by tax-filing address. This address is assumed to be the same as the address of the place of residence.

Income from dividends, interest, and monetary rent are based on Federal individual income tax data.

Income from transfers (mostly government payments) for Federal programs is typically calculated from the Treasury Department’s Monthly Treasury Statement or administrative reports of the Federal agencies that administer the programs. For programs partially funded by the Federal government but administered by state or local government, the source data is typically the reports by the responsible Federal agency or the state or local government.
For programs funded and operated by the state or local government, the source data are typically drawn from Census Bureau publications, including State Government Finances.

Consistency of Data
Annual revisions are conducted at end of calendar year as more complete information becomes available. Comprehensive revisions are conducted every 4-5 years to improve and modernize accounts to keep pace with U.S. economy.

Conformity of Indicator to Measure
Personal income includes most but not all sources of what is generally considered money income. Missing are private retirement benefit payments as well as realized capital gains. Some items are included, such as the rental value of owner occupied housing, foods stamps, and medical assistance (Medicare and Medicaid), that some people would not think of as current income.

Smoothness
This indicator is very stable and when a revision is made it generally includes a backward revision covering several years so trend information is not lost by these revisions.

Strengths
BEA personal income estimates are detailed and include estimates of sources of income not captured by estimates from BLS and Census.

Weaknesses
Data is not available below the Census Area level. Estimates of non-wage sources of income are less reliable at the Census Area level than the state level. The residence adjustment of earnings is also not very accurate. Some important sources of purchasing power (private pensions and capital gains) are excluded. Non-monetary income generally excluded.

Overall Evaluation
A good indicator because of its detail and consistency over time. Over reliance on it can be a problem because of weakness of its non-earnings component (residence adjustment, dividends, interest, rent, and transfers).

Related Data Sources
None.
Measure: Total Income (3)

Indicator: Household and Family Money Income

Definition
Money income includes earnings, unemployment compensation, workers’ compensation, social security, supplemental security income, public assistance, veterans’ payments, survivor benefits, pension or retirement income, interest, dividends, rents, royalties, estates, trusts, educational assistance, alimony, child support, assistance from outside the household, and other miscellaneous money income.

It is income before deductions for taxes or other expenses and does not include lump-sum payments or capital gains. It excludes the value of employment fringe benefits and of government provided non-cash benefits such as food stamps, Medicare, Medicaid, or subsidized or public housing.

Source
U.S. Department of Commerce, Bureau of the Census, Census of Population

Regional Availability
By place

Frequency of Availability
Every 10 years

Collection Method
Household survey of sample of census area

Consistency of Data over Time
The Census questions on sources and amounts of income do not change much from Census to Census so the information is consistent over time.

Conformity of Indicator to Measure
This indicator comes close to the common conception of income as it is based on the respondent rather than administrative records. At the same time this is a disadvantage because of the inability of some people to accurately recollect their income from different sources.

Smoothness
This series will tend to be relatively smooth.
Strengths
Includes almost all sources of money income, but is only available once every 10 years. The detail that is available allows for useful analyses, but not for annual trend analysis.

Weaknesses
Because the data is collected at the household level, it is difficult capture cash income by individual. As with all surveys, the estimates may differ from the actual values because people may have a difficult time recalling their income from different sources from the previous year. Only available once every 10 years.

Overall Evaluation
A useful measure, especially combined with the number of households to get average or median household income, but not good for project or program evaluation except in the very long term.

Related Data Sources
Median household money income and persons living in poverty are reported by the U.S. Department of Commerce, Bureau of the Census annually for the state as part of its Consumer Income (P60) Series of publications.

The American Community Survey of the U.S. Department of Commerce, Bureau of the Census, will generate annual estimates of household, family and per capita money income, and poverty rates. The sample is small and the program is just getting underway. Reliable data below the state level is unlikely to be available.

Median household income and poverty rates are estimated annually by the U.S. Department of Commerce, Bureau of the Census, for states, counties, and school districts, based on an estimating model.
Measure: Earnings by Place of Work (1)

Indicator: Covered Wages and Salaries (ES-202)

Definition
Wages and salaries paid to nonfarm wage and salary employment—“covered employment” that is within the unemployment insurance program. Excludes the self employed, and military, but includes federal civilian workers.

Source
Alaska Department of Labor

Regional Availability
By Census Area. (More detailed breakouts of some larger communities have been published in the past, but not on a recurring basis.)

Frequency of Availability
Monthly

Collection Method
Data reported by establishments (businesses) in the process of paying unemployment insurance premiums, so it is a 100-percent sample.

Consistency of Data over Time:
Employment data were based on the Standard Industrial Classification (SIC) system through 2000. Beginning January 2001, employment data are published according to the North American Industrial Classification System (NAICS). This change in coding of employment categories has rendered most employment data prior to 2001 incomparable to data after 2001. For example, comparing retail trade and manufacturing employment data from 2000 to 2001 would suggest significant drops in employment that would be artificial.

Conformity of Indicator to Measure
This indicator comes close to reflecting total earnings, except that it misses earnings of the self employed which is a large and growing part of the total. For example, most of the commercial fishing industry and important parts of the hospitality industry are composed mostly of the self employed.

Smoothness
This series will tend to be smooth.

Strengths
A useful source of information about earnings by census area because it is timely and consistent., and the data is high quality.
Weaknesses
The data are reported by establishment rather than where the wages are actually earned. Some establishments are headquartered in urban areas, but the workers are in rural parts of the state. These workers and their earnings tend to be reported in the urban areas rather than where the work actually took place. Some data is suppressed if the number of firms and earnings is small.

Overall Evaluation
One of the most useful measures of economic activity at the local level.

Related Data Sources
U.S. Census of Population once every 10 years provides information on earnings by place of residence.

The County Business Patterns of the U.S. Department of Commerce, Bureau of the Census, reports annual and first quarter payroll by industry to the county and zip code level. (Zip Code Business Patterns). In fact there is very little information from this source below the county level for Alaska, because of the small number of establishments reported.

Average wage data is collected by the Alaska Department of Labor, in accordance with the standard method of reporting economic data approved by the U.S. Department of Labor, Bureau of Labor Statistics. This is done through a survey for the Occupational Employment Statistics (OES). It includes straight-time, gross pay, exclusive of premium pay. No distinction is made between union and nonunion wages. Base rate, cost-of-living allowances, guaranteed pay, hazardous-duty pay, incentive pay including commissions and production bonuses, tips, and on-call pay are included. Excluded are back pay, jury duty pay, overtime pay, severance pay, shift differentials, non-production bonuses, and tuition reimbursements. Data is available annually by industry for aggregations of census areas. (Other measures of wage rates are also generated and reported by the Alaska Department of Labor.)
Measure: Earnings by Place of Work (2)

Indicator: Total Earnings (REIS)

Definition
Wages and salaries paid to nonfarm wage and salary employment, military wages, and self employed earnings (proprietor income).

Source
U.S. Department of Commerce, Bureau of Economic Analysis

Regional Availability
By Census Area

Frequency of Availability
Annual

Collection Method
Data on earnings of covered employees is reported by establishments (businesses) in the process of paying unemployment insurance premiums, so it is a 100 percent sample. This is the same data as the ES-202 program. It is adjusted for some small missing categories of workers, and to this is added military and proprietor income which comes from IRS data and other sources.

Consistency of Data over Time
Employment data were based on the Standard Industrial Classification (SIC) system through 2000. Beginning January 2001, employment data are published according to the North American Industrial Classification System (NAICS). This change in coding of employment categories has rendered most employment data prior to 2001 incomparable to data after 2001. For example, comparing retail trade and manufacturing employment data from 2000 to 2001 would suggest significant drops in employment that would be artificial.

Conformity of Indicator to Measure
This indicator comes closest to reflecting total earnings..

Smoothness
This series will tend to be smooth except the estimate of proprietor income in small regions can be volatile.

Strengths
The most comprehensive indicator of earnings. Proprietor earnings estimate is not as robust as wage earnings.
Weaknesses
The data is reported by establishment rather than where the wages are actually earned. Some establishments are headquartered in urban areas, but the workers are in rural parts of the state. These workers and their earnings tend to be reported in the urban areas rather than where the work actually took place. Some data is suppressed if the number of firms and earnings is small. Proprietor earnings estimate subject to error. Not timely.

Overall Evaluation
One of the most useful measures of economic activity at the local level.

Related Data Sources
None
Measure: Jobs in Community (1)

Indicator: Employment of Covered Workers (ES-202)

Definition
Count of the number of workers (full and part time) covered by unemployment insurance program including federal civilian, state, and local government employees. Excludes the self employed and military. (A person can have more than one job at any point in time.)

Source
Alaska Department of Labor

Regional Availability
By Census Area. (More detailed breakouts of some larger communities have been published in the past, but not on a recurring basis.)

Frequency of Availability
Monthly

Collection Method
Data reported by establishments (businesses) in the process of paying unemployment insurance premiums, so it is a 100 percent sample.

Consistency of Data over Time
Employment data were based on the Standard Industrial Classification (SIC) system through 2000. Beginning January 2001, employment data are published according to the North American Industrial Classification System (NAICS). This change in coding of employment categories has rendered most employment data prior to 2001 incomparable to data after 2001. For example, comparing retail trade and manufacturing employment data from 2000 to 2001 would suggest significant drops in employment that would be artificial.

Conformity of Indicator to Measure
This indicator comes close to reflecting total employment, except that it misses the self employed which is a large and growing part of the total. For example, most of the commercial fishing industry and important parts of the hospitality industry are composed mostly of the self employed.

Smoothness
This series will tend to be smooth.

Strengths
A useful source of information about employment by census area because it is timely and consistent., and the data is high quality.
Weaknesses
The data is reported by establishment rather than where the wages are actually earned. Some establishments are headquartered in urban areas, but the workers are in rural parts of the state. These workers and their earnings tend to be reported in the urban areas rather than where the work actually took place. Some data is suppressed if the number of firms and earnings is small.

Overall Evaluation
One of the most useful measures of economic activity at the local level.

Related Data Sources
The County Business Patterns of the U.S. Department of Commerce, Bureau of the Census, reports annual and first quarter payroll by industry to the county and zip code level. (Zip Code Business Patterns). In fact there is very little information from this source below the county level for Alaska, because of the small number of establishments reported.

Current Employment Statistics (CES), collected through surveys of establishments by the Alaska Department of Labor and Workforce Development, is timely information about current employment, but does not provide much geographical or industry detail.
Measure: Jobs in Community (2)

Indicator: Total Employment (REIS)

Definition
Total employment includes not only covered wage and salary employment (ES-202) but also the military and the self-employed (proprietors), both full time and part time jobs.

Source
U.S. Department of Commerce, Bureau of Economic Analysis

Regional Availability
census area

Frequency of Availability
Annual

Collection Method
Data on earnings of covered employees is reported by establishments (businesses) in the process of paying unemployment insurance premiums, so it is a 100 percent sample. This is the same data as the ES-202 program. It is adjusted for some small missing categories of workers, and to this is added military and proprietor income which comes from IRS data and other sources. Proprietor estimates are based on IRS tax data that reflect the address of the proprietor indicated on their tax return.

Consistency of Data over Time
Employment data were based on the Standard Industrial Classification (SIC) system through 2000. Beginning January 2001, employment data are published according to the North American Industrial Classification System (NAICS). This change in coding of employment categories has rendered most employment data prior to 2001 incomparable to data after 2001. For example, comparing retail trade and manufacturing employment data from 2000 to 2001 would suggest significant drops in employment that would be artificial.

Conformity of Indicator to Measure
This indicator comes closest to reflecting total employment.

Smoothness
This series will tend to be smooth except the estimate of proprietors in small regions can be volatile.

Strengths
The most comprehensive indicator of workers employed in a region. Proprietor estimate is not as robust as wage earnings.
Weaknesses
Self-employment estimates are largely on a place-of-residence basis rather than on the place-of-work basis of covered employment. Also, self-employment estimates reflect the total number of sole proprietorships or partnerships active at any time during the year—as opposed to the annual average measure used for wage and salary employment.

Overall Evaluation
One of the most useful measures of economic activity at the local level.

Related Data Sources
None.
Measure: Employment by Place of Residence
[Unemployment] (1)

Indicators: Employed, Unemployed, Labor Force, Unemployment Rate, Labor Force Participation Rate (Local Area Unemployment Statistics)

Definition

Employed is a measure of the number of people who have jobs (not the number of jobs). Workers can hold more than one job or switch jobs during the time measured and then be counted by more than one employer, complicating the relationship between the number of workers and the number of jobs.

Unemployed represents the number of people who are actively seeking employment but not employed in a given month. Anyone who is not actively seeking employment in the week leading up to and the week during the 12th of the reference month is excluded from the unemployed count.

Total Labor Force is the sum of employed and unemployed.

Labor Force Participation Rate is the ratio of the labor force to the total (civilian) non-institutionalized population 16 years and over.

The Unemployment Rate is the ratio of people classified as unemployed to the total labor force, and is calculated by dividing the unemployed by the total labor force and multiplying that number by 100.

Source

Alaska Department of Labor, in accordance with the standard method of reporting economic data approved by the U.S. Department of Labor, Bureau of Labor Statistics under the Local Area Unemployment Statistics Program (LAUS).

Regional Availability
Census Area

Frequency of Availability
Monthly

Collection Method

Estimates are derived from a combination of 4 sources—the Current Population Survey (CPS), unemployment insurance claims data, the Current Employment Statistics (CES) survey of establishments, and the ES-202 data. Estimates are based largely on samples and extrapolation.

Consistency of Data over Time:

Changes in the methodology can lead to changes in the estimates over time.
Conformity of Indicator to Measure
The estimated number of unemployed may not be an accurate measure in places where employment opportunities are limited or non-existent.

Smoothness
Because it is an estimate developed from a number of sources, it is subject to fluctuations.

Strengths
The data is timely and compiled in conformity with federal guidelines established by the Bureau of Labor Statistics.

Weaknesses
Because employment opportunities in rural Alaska are scarce, many individuals are not considered part of the labor force because they have not conducted an active job search during the reference period and therefore do not meet the official definition of unemployed.

Overall Evaluation
The absence of employment opportunities that exclude segments of the population from the definition of unemployed and the scale of reporting that inhibits comparisons between small communities, these indicators are not useful for small areas.

Related Data Sources
U.S. Census of Population once every 10 years provides information on employment (and earnings) by place of residence as well as labor force participation.

The American Community Survey of the US Department of Commerce, Bureau of the Census, will generate annual estimates of employment and labor force participation. The sample is small and the program is just getting underway. Reliable data below the state level is unlikely to be available.
Measure: Employment by Place of Residence
[Unemployment] (2)

Indicator: Unemployment Insurance Claimants and Payments

**Definition**
Amount paid to eligible unemployed persons under the Unemployment Insurance Program.

**Source**
Alaska Department of Labor

**Regional Availability**
By zip code

**Frequency of Availability**
Not presently published. Available in a computer file requiring a special extraction.

**Collection Method**
Actual payments.

**Consistency of Data over Time**
The structure of benefits does change over time, affecting the payment amounts and eligibility.

**Conformity of Indicator to Measure**
The number of unemployed should be low when employment is high and vice versa. However, many people not working, but desiring to work, are either not counted among the unemployed, or are not currently receiving benefits. Conformity with resident employment is consequently quite low.

**Smoothness**
This indicator varies in the short run due to fluctuations in the business cycle.

**Strengths**
Available at the zip code level.

**Weaknesses**
Low conformity to the measure.

**Overall Evaluation**
Not a good indicator.

**Related Data Sources**
None.
Measure: Business Activity (1)

Indicator: Number of Small Businesses

Definition
Small businesses are defined as businesses with fewer than 500 employees based on 2000 firm size data.

Source

Regional Availability
By state

Frequency of Availability
Annual

Collection Method
Data obtained from surveys conducted by U.S. Department of Commerce, Census Bureau, Statistics of U.S. Business

Consistency of Data over Time
Data subject to changes in definitions and reporting made by entities such as the Census Bureau and U.S. Department of Labor, Bureau of Labor Statistics.

Conformity of Indicator to Measure
Small business activity is only one component of total business activity, but an important one.

Smoothness:
Because it is survey based, it is subject to variation over time.

Strengths:
Detailed report provided information on number of businesses, firm size by industry, employment, business turnover, women and minority owned businesses, and small-business-friendly lending institutions.

Weaknesses:
Not available regionally

Overall Evaluation
Because data is only available for the whole state and Anchorage, this indicator should not be used for gauging business activity in rural Alaska.

Related Data Sources
None.
Measure: Business Activity (2)

Indicator: Number of Businesses (Establishments)

Definition
An establishment is a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one or more establishments. When two or more activities are carried on at a single location under a single ownership, all activities generally are grouped together as a single establishment. The entire establishment is classified on the basis of its major activity and all data are included in that classification.

Source
U.S. Census Bureau, County Business Patterns

Regional Availability
Census Area. The census bureau also publishes Zip Code Business Patterns, but because of the small number of establishments in most Alaska places, little information is reported at the community level.

Frequency of Availability
Annual

Collection Method
County Business Patterns basic data items are extracted from the Standard Statistical Establishment List, a file of all known single and multiestablishment employer companies maintained and updated by the U.S. Census Bureau. The annual Company Organization Survey provides individual establishment data for multi-establishment companies. Data for single-establishment companies are obtained from various Census Bureau programs, such as the Annual Survey of Manufactures and Current Business Surveys, as well as from administrative records of the Internal Revenue Service, the Social Security Administration, and the Bureau of Labor Statistics. Data is obtained from administrative records rather than survey.

Consistency of Data
Definition of establishment is consistent over time.

Conformity of Indicator to Measure
Business activity is accurately reflected by the number of business establishments, although growth in current businesses may be a better indicator.
Smoothness
Fluctuations will occur in small places due to poor quality of the administrative records.

Strengths
Widely used to analyze economic activity of businesses, so reports are detailed and wide geographic availability. Data is obtained from administrative records and therefore not subject to sampling errors.

Weaknesses
Data for industries with fewer than 100 employees as well as data for detailed industries withheld to avoid disclosing data for individual companies, are not shown in the printed reports.

Overall Evaluation
The number of business establishments in a community as reported by the County Business Patterns report is a strong indicator of business activity in rural communities. The reports are detailed, available for small regions, and data is obtained from direct records and not through a sample (not subject to sampling errors).

Related Data Sources
None.
Measure: Business Activity (3)

Indicator: Alaska Business Licenses

Definition
All persons (sole proprietors, partnerships, and corporations) who engage in a business activity in Alaska must hold a business license for that activity. In addition, businesses which sell tobacco products must have a tobacco endorsement on their business license. A license is valid for two years, which consists of the current year in which the license is granted plus all of the next calendar year. Business licenses expire on December 31.

Source
Alaska Department of Community and Economic Development, Division of Occupational Licensing (http://www.deed.state.ak.us/occ/search3.htm)

Regional Availability
Each business license provides the address of the business, which contains city and zip code information.

Frequency of Availability
Business information is provided for each license; the expiration date of each license is contained in the information for each license, with expired licenses listed in red. There are over 100,000 licenses contained in the database, with over 74,000 currently active. New licenses are posted in the online database when they become active, and are colored red when they expire and are not renewed.

Collection Method
Information on business licenses is collected when a license is filed with the Division of Occupational Licensing

Consistency of Data over Time
Licenses that are not renewed before their expiration date expire at the end of that calendar year, so the database of licenses changes on 12/31 of each year.

Conformity of Indicator to Measure
Since all businesses in Alaska must have a business license, business activity is accurately reflected by business licenses. However, any business can file for a license, regardless of how productive that business is or whether is actually conducts any business.

Smoothness
Since the file is purged at year end, the data has seasonality.
Strengths
Business license information contains detailed information for each business including: exact address of business, status of license, original date of issue, current date of issue, expiration, business type, permission for tobacco sales, export, line of business, primary activity of business, secondary activity of business, and owner name.

Weaknesses
Any business can file for a license, regardless of how productive that business is or whether it actually conducts any business during the life of its license.

Overall Evaluation
In itself, a business licenses only provides the information listed above in the strengths section. It does not tell you anything about how well the business is performing, how much income it earned, how many people it employs, etc. Also, if a business changes its name, it has to file for another license, which does not represent the creation of another business (which would suggest an increase in business activity for that area) but only the change of a business name.

Related Data Sources
None.
Measure: Household Consumption (1)

Indicator: Average Residential Electricity Consumption

Definition
Total residential electricity sales for the fiscal year, divided by the number of residential customers.

Source

Regional Availability
All Alaska communities with electric utilities that participate in the state Power Cost Equalization Program.

Frequency of Availability
Annual (fiscal year basis).

Collection Method
Administrative records of the state, based on filing by the utilities.

Consistency of Data over Time
Definition is consistent over time.

Conformity of Indicator to Measure
We expect a positive relationship between electricity consumption and total household consumption, but the relationship will not be a strict percentage.

Smoothness
The quality of reporting has not always been high, but is probably improving over time.

Strengths
Available for small rural communities on a regular annual basis.

Weaknesses
Reporting has not always been high quality.

Overall Evaluation
A useful indicator. It might be possible to capture additional useful information about the village economy using this reporting mechanism.

Related Data Sources
The U.S. Department of Energy, Energy Information Agency, collects information each year from every electric utility, except the very smallest, and makes it available in a series of databases. This data includes residential sales and the number of residential customers. It is a useful supplement to the Power Cost Equalization data, but does not include all Alaska utilities, is only available with a considerable lag, and covers the calendar year rather than the fiscal year.
Measure: Household Consumption (2)

Indicator: Sales Tax Revenues

Definition
Local tax revenues from items covered by the sales tax.

Source
Alaska Department of Community and Economic Development, Alaska Taxable.

Regional Availability
By community, for those that impose a sales tax.

Frequency of Availability
Annual

Collection Method
Survey by the state assessor. Not every community reports each year.

Consistency of Data over Time
Data is collected from each community every year. Variation over time for a community can result from changes in the tax rate, coverage of items, presence of non-residents in the community, and changes in business activity that is also subject to the tax.

Conformity of Indicator to Measure
Sales tax revenues per household is a rough proxy for household cash expenditures in the community, but many items are not taxed and households also make purchases outside the local community.

Smoothness
For small places revenues may vary dramatically from year to year as the number of businesses with taxable sales may change.

Strengths
Readily available on the community level each year with some lag. Correlates with household spending.

Weaknesses
Variation in revenues can be the result of many factors independent of changes in spending for the average household.

Overall Evaluation
A weak indicator of consumption that must be used with extreme caution.

Related Data Sources
Alaska Department of Community and Regional Development collects data on taxes by type for its community profiles. This data is less complete than the data in Alaska Taxable.
Measure: Real and Financial Assets (1)

Indicator: Property Tax Revenues

 Definition
 Local property tax revenues from property covered by the tax.

 Source
 Alaska Department of Community and Economic Development, Alaska Taxable.

 Regional Availability
 By community, for those that impose a property tax.

 Frequency of Availability
 Annual

 Collection Method
 Survey by the state assessor. Not every community reports each year.

 Consistency of Data over Time
 Data is collected from each community every year. Variation over time for a community can result from changes in the tax rate, coverage, collection methods, and changes in business activity that is also subject to the tax.

 Conformity of Indicator to Measure
 Property tax revenues per household is a rough proxy for household real assets, but much of the property in rural Alaska is tax exempt and this measure does not account for mortgages and other debt that cause the value of net assets to be less than gross assets.

 Smoothness
 For small places revenues may vary dramatically from year to year as the number of businesses with taxable property changes.

 Strengths
 Readily available on the community level each year with some lag.

 Weaknesses
 Many communities do not have a property tax. Variation in revenues can be the result of many factors independent of changes in the value of property.

 Overall Evaluation
 A weak indicator of asset value that must be used with extreme caution.

 Related Data Sources
 Alaska Department of Community and Regional Development collects data on taxes by type for its community profiles. This data is less complete than the data in Alaska Taxable.
Measure: Real and Financial Assets (2)

Indicator: Small Business Loan Originations

Definition
Number and amount of small business loans (less than $1 million) originated.

Source
Federal Financial Institutions Examination Council (FFIEC)

Regional Availability
By census area (some census tract data may be available).

Frequency of Availability
Annual

Collection Method
Reports of lenders submitted to agency as part of the Community Reinvestment Act (CRA).

Consistency of Data over Time
Data appears to be collected consistently over time.

Conformity of Indicator to Measure
This indicator is as related to business activity as it is to assets. New loan originations does not measure net assets.

Smoothness
For small places origination may vary dramatically from year to year as the number of businesses changes.

Strengths
Readily available for each place each year with small lag.

Weaknesses
Only available on the census area level for many places.

Overall Evaluation
This could prove to be a valuable indicator of new business activity at the census division level.

Related Data Sources
The Federal Financial Institutions Examination Council also reports considerable information on mortgage lending activity under the Home Mortgage Disclosure Act (HMDA), but only for Anchorage.
Measure: Real and Financial Assets (3)

Indicator: Homeownership Rates

Definition
Share of households owning their own homes.

Source

Regional Availability
By place.

Frequency of Availability
Every 10 years.

Collection Method
Sample of households in the census.

Consistency of Data over Time:
The census questions about homeownership do not vary much between censuses and when they do, the changes are well-documented.

Conformity of Indicator to Measure
Homeownership is only one of the real and financial assets that households may have, albeit an important one.

Smoothness
This indicator will not vary much over time.

Strengths
Available on the community level. This indicator conforms to the measure.

Weaknesses
Only available in 10-year intervals.

Overall Evaluation
A good indicator but available very infrequently.

Related Data Sources
Alaska Housing Finance Corporation and the Regional Housing Authorities generate considerable data as part of their programs, but neither produces information on homeownership rates on a regular basis.
Measure: Poverty
Special Considerations
When thinking about measures of poverty, readers need to keep in mind that (1) the federal government has two somewhat different measures of poverty—for different purposes—and (2) government public assistance programs have a variety of eligibility guidelines.

The federal poverty threshold is a figure set by the Bureau of the Census every year to compare poverty nationwide. It is for statistical purposes; it isn’t used in determining eligibility for any programs. The advantage is that it’s long-term and consistent. The disadvantage is that it makes no allowance for higher costs of living, so many people believe it underestimates poverty in Alaska.

The federal poverty guidelines are issued every year by the federal Department of Health and Human Services. These do take some account of differences in living costs, and they are higher incomes guidelines for Alaska and Hawaii. These guidelines are used in some programs, including the school lunch program and the food stamp program. They are not, however, used for determining eligibility for Medicaid or Temporary Aid to Needy Families (TANF).

The current poverty threshold has been subject to considerable criticism. Some of the shortcomings of the current measure are listed below (from Maryland Budget and Tax Policy Institute at http://www.marylandpolicy.org/POVERTYfaq2002.htm: Today's poverty thresholds are based on food expenditures in 1955. However, since that time there have been many changes in consumption patterns. For example, housing costs have risen much faster than food costs. As a result, food costs would now make up a much smaller share of the family budget than in the 1950s. Further, child care costs would be expected to consume much more of a family budget now than in 1950s.

In calculating the official poverty statistics, the Census Bureau compares cash income before taxes to the thresholds. This method excludes the impact of taxes, including the Earned Income Credit, and ignores the impact of near-cash transfers such as food stamps.

The current poverty thresholds are uniform nationally; however, it is clear that costs of living—most notably, housing costs—vary substantially both within and among regions. Several experts have offered suggestions on how the current poverty measure can be improved. Two notable publications include:

*Measuring Poverty: A New Approach,* Constance F. Citro and Robert T. Michael, eds., National Academy Press, 1995. This book resulted from a Congressionally-mandated review of the poverty measure that was undertaken by the National Academy of Sciences. The academy convened a panel of national experts to contribute to the publication.


To account for some of the potential shortcomings of the current poverty measure, the Census Bureau also publishes national poverty statistics for several alternative measures. These alternative measures include different combinations of income and transfers that are excluded from the official measure, and also show the numbers and percentages of people who live in families with income below 150 percent, 200 percent, and other factors of the current poverty thresholds.
Measure: Poverty (1)

Indicator: Percent of Families Living Below Poverty Line

Definition
The percentage of families with family income below specified money income thresholds, varying by family size and composition. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. The official poverty definition counts money income before taxes and does not include capital gains and non-cash benefits (such as public housing, Medicaid, and food stamps). Poverty is not defined for people in military barracks, institutional group quarters, or for unrelated individuals under age 15 (such as foster children). Definition from: www.census.gov/population/pop-profile/2000/chap13.pdf

Source:
U.S. Bureau of the Census.

Regional Availability:
Census area

Frequency of Availability
Annual

Collection Method
Sample data

Consistency of Data over Time
Data is produced consistently over time, but there are questions about the accuracy of sample data in Alaska.

Conformity of Indicator to Measure
Because this measure is not adjusted for geographic differences in living costs, critics say it may underestimate poverty in Alaska.

Smoothness
This indicator should not be subject to sudden spikes.

Strengths
Is available over time and allows for national comparisons. Thresholds are updated annually for inflation, with the consumer price index.

Weaknesses
Calculations of thresholds are based on costs of food as of 1955, as noted in Special Considerations; calculation methods do not take into account the effects of taxes, nor of transfers such as food stamps; no allowance for living cost differences
Measure: Poverty (2)

Indicator: Percent of Persons below Poverty

Definition
To determine a person's poverty status, one compares the person's total family income with the poverty threshold appropriate for that person's family size and composition. If the total income of that person's family is less than the threshold appropriate for that family, then the person is considered poor, together with every member of his or her family. If a person is not living with anyone related by birth, marriage, or adoption, then the person's own income is compared with his or her poverty threshold. From: http://quickfacts.census.gov/qfd/meta/long_101618.htm
For full description of poverty data see http://www.census.gov/hhes/poverty/povdef.html.

Other factors affecting the usefulness of this measure are the same as those described on the previous page for Families Living Below Poverty Line.
Measure: Poverty (3)

Indicator: Share of school children who can qualify for free lunches

Definition:
Children whose family income is 130 percent or less of the federal poverty guideline can qualify for free school lunches through the national school lunch program.

Source
Alaska Department of Education and Early Development, Child Nutrition Services

Regional Availability
School districts

Frequency of Availability
Reported annually

Collection Method
School districts are required to submit reports to Alaska Department of Education.

Consistency of Data Over Time
Formerly the Department of Education only reported the combined number of school children who could qualify for "free or reduced price" lunches, which was not as clear a measure of poverty. Kids whose family income is 185 percent of the federal income guideline can qualify for reduced price lunches. In 2003-2004, DEED began to separately report the share of children qualifying for free lunches.

Conformity of Indicator to Measure
This is a good measure of poverty.

Smoothness
This indicator should not be subject to sudden sharp changes.

Strengths
Figures are available at the school district level; data based on reports from all school districts.

Weaknesses
Department of Education could change policy about reporting data at level needed.

Overall Evaluation
This has the potential to be a very good measure of poverty, if the state Department of Education continues to report the share of school children qualifying for free lunches in each district. If the state stopped reporting at that level, it would still be possible, although much more labor-intensive, to collect the data from individual districts.
Measure: Poverty (4)

Indicator: Caseload of families receiving assistance under the Alaska Temporary Assistance Program (ATAP)

Definition
The Alaska Temporary Assistance Program (ATAP) provides cash and work services to low-income families with children, to help them with basic needs while they work toward becoming self-sufficient. This program is provided under the federal Temporary Assistance for Needy Families (TANF) block grant. The state sets its own income guidelines based on the cost of living in Alaska. Native non-profits can also qualify to administer ATAP in their regions; and three do so; the Native organizations report to the Division of Public Assistance. They have the authority to set guidelines but have so far chosen to follow the state guidelines.

Source
Division of Public Assistance, Alaska Department of Health and Social Services

Regional Availability
Depends on willingness of agencies to report below statewide level and the need to protect confidentiality.

Frequency of Availability
Monthly

Collection Method
The Division of Public Assistance monitors and reports the ATAP caseload.

Consistency of Data Over Time
Data before welfare reform is not consistent with that since.

Conformity of Indicator to Measure
This is not as straightforward a measure of poverty as it might seem. A growing caseload would indicate an increase in poverty among Alaskans, but a declining caseload would not be as clear a measure of declining poverty. That’s because with the advent of national welfare reform in the late 1990s, most recipients can now receive benefits for only a limited time.

Smoothness
Should not be subject to sharp variations.

Strengths
Data is reliable and reported frequently.

Weaknesses
As noted above, welfare recipients who reach the end of their allowable benefits must leave the program, even if other circumstances could still qualify them for
benefits. (However, residents of many small villages currently have an exemption from benefit limits, because unemployment is so high.) Also, tracking the caseload in Alaska is also more complicated than it used to be. The state Division of Public Assistance still administers most of the caseload, but Native non-profits—Association of Village Council Presidents, Tanana Chiefs Conference, and Tlingit Haida Central Council—now administer ATAP in a few areas. But the Division of Public Assistance still reports the total caseload on a monthly basis.

**Overall Evaluation**

Welfare reform has made this a less straightforward measure of poverty.
Measure: Poverty (5)

Indicator: Number of people who receive Adult Public Assistance

Definition
The state established the Adult Public Assistance program 15 years ago to provide financial assistance to needy aged, blind, and disabled persons and to help them attain self-support or self-care. People who receive APA financial assistance are over 65 years old or have severe and long-term disabilities that impose mental and physical limitations on their day-to-day functioning.

Source
Division of Public Assistance, Alaska Department of Health and Social Services

Regional Availability
Depends on willingness of agency to report data at below state level and need to protect confidentiality.

Frequency of Availability
Monthly

Collection Method
The state Division of Public Assistance monitors and report the APA caseload

Consistency of Data Over Time
Barring any changes in eligibility guidelines, the data should be consistent over time.

Conformity of Indicator to Measure
Since people must have a long-term disability in order to qualify for this assistance, this population tends to remain beneficiaries of the APA program for their entire adult lives. As a result, this number would not be a good indicator of change in poverty levels.

Smoothness
This indicator should be relatively smooth over time.

Strengths
Data is reliable and reported frequently.

Weaknesses
As noted above, this is not a broad measure of changing poverty in the general population.

Overall Evaluation
This is not a good measure of changing poverty among Alaskans.
Related Data Sources
The state government is establishing an assistance program intended to help low-income older people who depended on the Longevity Bonus program that was eliminated last year. As time passes, this could potentially be a good measure of poverty among older Alaskans.
Measure: Poverty (6)

Indicator: Medicaid caseload

Definition
Medicaid is an entitlement program created by the federal government and is the primary public program for financing basic health and long-term care services for low-income Alaskans. It is funded through a combination of federal and state funds. The program focuses on coverage for low-income children, pregnant women, families, the elderly, the blind, and the permanently disabled. The federal government establishes guidelines that require the state to cover specific categories of people and types of benefits. It is, however, the legislature's responsibility to determine which services are to be covered, the qualifying standards, and the categories of people who will be eligible for benefits under the Medicaid program. Within these guidelines and constraints, the Alaska Department of Health and Social Services has considerable flexibility in establishing financial eligibility criteria, benefit packages, and payment policies.

The Division of Health Care Services (DHCS) administers the Medicaid program. While DHCS is responsible for program and policy development, the Division of Public Assistance (DPA) is responsible for determining the eligibility of individuals and families in need of Medicaid benefits. The majority of Medicaid recipients are beneficiaries of other programs and services administered and delivered by DPA. Most recipients of Alaska Temporary Assistance benefits receive Medicaid benefits. Many children, young adults, and elderly or disabled persons receiving Medicaid also receive food stamps or Adult Public Assistance benefits.

Source
Alaska Division of Public Assistance

Regional Availability
Depends on willingness of agency to report at below state level and need to protect confidentiality.

Frequency of Availability
Monthly

Collection Method
DPA monitors and reports caseload

Consistency of Data Over Time
The number of Alaskans who can qualify for Medicaid depends on standards and guidelines the state sets—and those have been changed a number of times over the past 20 years. A big change in the late 1990s was the addition of Denali KidCare for children and pregnant women who did not qualify for traditional
Medicaid but who lacked medical coverage. If medical costs continue to climb at the rapid rate they have in recent times, there will be increasing pressure to narrow Medicaid eligibility. In fact, in 2003 the legislature narrowed eligibility for the Denali KidCare program.

Conformity of Indicator to Measure
As we just discussed, this indicator is subject to change with changing program guidelines. Also, Native organizations that now manage federal Indian Health Service programs have in recent years made efforts to make sure that any Natives who are eligible for Medicaid coverage actually apply for that coverage; this keeps IHS costs down. In past years, some people who could qualify for Medicaid didn’t apply because they were eligible for IHS services anyway. These and other complications make this a less straightforward measure of poverty—but if guidelines stabilized, it could be a reasonable, broad measure.

Smoothness
Should be relatively stable over time, barring changes in eligibility guidelines or program coverage.

Strengths
Data is reliable and collected frequently.

Weaknesses
Discussed above.

Overall Evaluation
This could be a reasonable broad measure of poverty, if anyone who wanted to use it was aware of and could take into account the complications caused by changing Medicaid guidelines and other factors.
Measure: Poverty (7)

Indicator: Number of school children whose families receive any form of public assistance

Definition
The Alaska Division of Public Assistance prepares an annual report for the Alaska Department of Education that lists children whose families receive any form of state public assistance. This includes kids whose families are on welfare, have Medicaid, or use food stamps. DEED uses the data to plan for its free and reduced lunch program.

Source
Alaska Department of Education and Early Development and the Alaska Division of Public Assistance

Regional Availability
Community level

Frequency of Availability
Published annually.

Collection Method
The Alaska Division of Public Assistance reports data, based on program caseloads, to the Department of Education.

Consistency of Data Over Time
Should be consistent, barring any changes in what is included under “public assistance.”

Conformity of Indicator to Measure
This could be a good measure of poverty, because it includes all forms of public assistance and is based on reliable data.

Smoothness
Should be relatively stable over time, absent big changes in eligibility guidelines or program coverage.

Strengths
Reliable data; available at community level; broad measure

Weaknesses
A few children from poor families will likely not be counted, because their families receive ATAP benefits through a Native regional non-profit and they have neglected to sign-up for food stamps or Medicaid with the state.

Overall Evaluation
This data could be a reasonable measure of poverty.
Measure: Poverty (Other Potential Indicators)

The measures discussed briefly below are, for various reasons, less useful as indicators of poverty. We mention them here just to cover the full field of potential poverty measures.

**Number of families receiving child care subsidies**
Source: Alaska Division of Public Assistance  
http://health.hss.state.ak.us/dpa/programs/ccare/
The State of Alaska maintains Child Care Assistance Programs to help eligible families with the cost of child care so they can work, participate in job training and education programs or other qualifying work activities. These assistance programs are called PASS I, PASS II, and PASS III: Parents Achieving Self-Sufficiency. PASS I is administered by the Department of Health & Human Services, Division of Public Assistance. These subsidy programs are primarily funded by the federal Child Care Development Fund and Temporary Assistance to Needy Families grants. If a family qualifies for PASS II or PASS III assistance, a portion of that family's child care costs may be subsidized on a sliding scale determined by family size and income. To be eligible for PASS II or PASS III child care assistance, Alaskan families must meet both income and activity criteria. Eligibility determinations are made by Local Administrators working through Grantee Agencies in 21 communities around the state.

Part of the state's TANF grant goes to helping pay for child care for families either on welfare, recently off welfare, or simply low-income. Families on welfare or just off have priority; if there's enough money allocated, other low-income families can also get the subsidy. The problem with using this as a measure over time is that in any given year, there might be waiting lists of families who could qualify for the subsidies but don't receive them because there isn't enough money allocated to the program.

**Native families receiving subsidized housing through HUD**  
Source: U.S. Department of Housing and Urban Development, Native American Housing and Self-Determination Act (NAHASDA) and Alaska Regional Housing Authorities  
It is very difficult if not impossible to get complete or timely information from the housing authorities.

**General Relief and General Relief Medical**  
Source: Alaska Division of Public Assistance General Relief Assistance  
General Relief Assistance (GRA) is designed to meet the immediate, basic needs of Alaskans facing extreme financial crisis. Examples of basic needs include shelter and utilities. Under limited circumstances, GRA can provide assistance for clothing, transportation and food for those not eligible to receive food stamps. Limited medical care can be provided and there is limited funding to provide a dignified burial for the indigent. Eligibility for General Relief Assistance is always determined on a month-to-month basis. Applicants must demonstrate and verify an unmet emergent need in the month of application that can be satisfied by GRA. The amount of money allocated has shrunk over the years, and is at the legislature's discretion.
Percent of people not covered by health insurance.
http://www.census.gov/hhes/hlthins/historic/hilhistt4.html
The CPS sample is small in Alaska and the rural sample is very limited. The CPS sample is not sufficient to represent the state of Alaska in a single year. The best practice is to use a 3-5 year average and to be very cautious about breakdowns of the data. Beginning with the March 1998 CPS, people with no coverage other than access to Indian Health Service are no longer considered covered by health insurance; instead, they are considered to be uninsured. This distorts the data for Alaska.
Measure: Price Level (1)

Indicator: Consumer Price Index

Definition
The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. The CPI represents changes in prices of all goods and services purchased for consumption by urban households. User fees (such as water and sewer service) and sales and excise taxes paid by the consumer are also included. Income taxes and investment items (like stocks, bonds, and life insurance) are not included. Indexes are available for major groups of consumer expenditures (food and beverages, housing, apparel, transportation, medical care, recreation, education and communications, and other goods and services), for items within each group, and for special categories, such as services.

Source
U.S. Department of Labor, Bureau of Labor and Statistics

Regional Availability
Anchorage is the only Alaskan city for which the index is available.

Frequency of Availability
The CPI index is published every six months for Anchorage. The semiannual index is the arithmetic average for the six-month periods from January through June and July through December.

Collection Method
Each month, BLS data collectors visit or call thousands of retail stores, service establishments, rental units, and doctors' offices, all over the United States to obtain price information on thousands of items used to track and measure price change in the CPI. These economic assistants record the prices of about 80,000 items each month, representing a scientifically selected sample of the prices paid by consumers for the goods and services purchased. During each call or visit, the economic assistant collects price data on a specific good or service that was precisely defined during an earlier visit. If the selected item is available, the economic assistant records its price. If the selected item is no longer available, or if there have been changes in the quality or quantity (for example, eggs sold in packages of 8 when previously they had been sold by the dozen) of the good or service since the last time prices had been collected, the economic assistant selects a new item or records the quality change in the current item. The recorded information is sent to the national office of BLS where commodity specialists, who have detailed knowledge about the particular goods or services priced, review the data. These specialists check the data for accuracy and consistency and make any necessary corrections or adjustments. These can range
from an adjustment for a change in the size or quantity of a packaged item to more complex adjustments based upon statistical analysis of the value of an item’s features or quality. Thus, the commodity specialists strive to prevent changes in the quality of items from affecting the CPI's measurement of price change.

**Consistency of Data Over Time:**
From time to time the market basket is adjusted to reflect the appearance of new goods and services.
CPI data are seasonally adjusted. Seasonal influence include price movements resulting from changing climatic conditions, production cycles, model changeovers, and holidays. BLS annually re-estimates the factors that are used to seasonally adjust CPI data, and seasonally adjusted indexes that have been published earlier are subject to revision for up to 5 years after their original release. Therefore, unadjusted data are more appropriate for escalation purposes.

**Conformity of Indicator to Measure**
CPI is the most widely accepted indicator of the price level for consumers, but the consumption pattern of each consumer is different.

**Smoothness**
Generally steady annual increases.

**Strengths**
The CPI is the best measure for adjusting payments to consumers when the intent is to allow consumers to purchase, at today's prices, a market basket of goods and services equivalent to one that they could purchase in an earlier period. It is also the best measure to use to translate retail sales and hourly or weekly earnings into real or inflation-free dollars.

**Weaknesses**
The CPI may not be applicable to all population groups. The CPI-U is designed to measure the experience with price change of the U.S. urban population and, thus, may not accurately reflect the experience of people living in rural areas. Also, the CPI does not produce official estimates for the rate of inflation experienced by subgroups of the population, such as the elderly or the poor.

The CPI cannot be used to measure differences in price levels or living costs between one place and another; it measures only time-to-time changes in each place. Like other data the CPI is also subject to measurement errors from sampling and non-sampling errors.

**Overall Evaluation**
Not directly applicable to rural Alaska. The index is calculated for Anchorage only, and is a reflection of the urban price level. However changes in the prices for many items consumed in rural areas are closely related to in price changes in urban areas.
Measure: Price Level (2)

Indicator: UA Cooperative Extension Service, Alaska Food Cost Survey

Definition
Survey of the price of a limited number of common consumer goods at regular intervals at selected locations in Alaska.

Source
University of Alaska Fairbanks, Alaska Cooperative Extension (www.uaf.edu/ace/fcs/fcs.html)

Regional Availability
The food cost report is available for the following 18 Alaskan communities: Anchorage, Barrow, Bethel, Cordova, Delta, Fairbanks, Greater Copper River Valley, Homer, Juneau, Kenai-Soldotna, Ketchikan, Kodiak, Mat-Su, Naknek-King Salmon, Nome, Seward, Stika, and Tok. The survey also includes data for Portland, OR and the U.S. average.

Frequency of Availability
Quarterly (March, June, September, December)

Collection Method
Up to three stores in each of the 19 communities listed above are surveyed each March, June, September, and December for the cost of a specific set of food and non-food items. The 104 food items selected were taken, with some modification, from the U.S. Department of Agriculture’s low-cost food plan, which is itself based on a nationwide survey of eating habits of Americans, conducted in 1977-78. In addition, the costs of such items as water, propane and electricity are collected. All costs are adjusted to reflect local sales tax where applicable. The estimated prices of unavailable food items in various communities are calculated as the expected cost, as judged from the prices of all available items relative to the price of those items in Anchorage. The percentage of foods unavailable in each community are shown in the survey.

Consistency of Data over Time
The number of communities surveyed in each report has changed almost every year, from 20 in 1997, to 22 in 1998, and so on. The food and non-food items surveyed at each store have remained the same throughout the life of the survey.

Conformity of Indicator to Measure
The market basket is a fair representation of purchased food but does not purport to cover the entire range of items purchased by consumers.
Smoothness
Because of changes in the number of communities surveyed each year, data is somewhat unstable. And because of the high likelihood of sampling error and problems with sample quality, the measure of price level as indicated by the Alaska Food Cost Survey is not completely captured.

Strengths
The survey is the only study of prices conducted for Alaskan communities other than Anchorage.

Weaknesses
The quality of the survey is questionable, since the number of communities surveyed in each report has changed almost every year, and data is only collected for three businesses in each surveyed community.

Overall Evaluation
Despite problems with the quality and quantity of site-specific data collection, the Alaskan Food Cost Survey provides the only indication of price level in Alaska communities outside Anchorage and is therefore somewhat useful in gaining an understanding of general price trends across Alaska. Care should be taken when making specific observations regarding the data.
Measure: Price Level (3)

Indicator: Average Residential Electricity Price

Definition
Average price of utility electricity to residential customers, before the Power Cost Equalization program adjustment.

Source

Regional Availability
All Alaska communities with electric utilities that participate in the state Power Cost Equalization Program.

Frequency of Availability
Annual (fiscal year basis).

Collection Method
Administrative records of the state, based on filing by the utilities.

Consistency of Data over Time:
Definition is consistent over time.

Conformity of Indicator to Measure
Rural households spend a larger share of their cash income on electricity than urban households because of the high price. Therefore the price of electricity is an important element in determining the cost of living. It is, however, only one of the components in the household budget.

Smoothness
The quality of reporting has not always been high, but is probably improving over time.

Strengths
Available for small rural communities on a regular annual basis.

Weaknesses
Reporting has not always been high quality. Although a useful measure of the price of electricity to the consumer, it is not necessarily a good measure of the cost of business in a community, because different utilities have different cost structures.
Overall Evaluation
A useful indicator. It might be possible to capture additional useful information about the village economy using this reporting mechanism.

Related Data Sources
The U.S. Department of Energy, Energy Information Agency (EIA), collects information each year from every electric utility, except the very smallest, and makes it available in a series of databases. This data includes residential sales and the number of residential customers. It is a useful supplement to the Power Cost Equalization data, but does not include all Alaska utilities, is only available with a considerable lag, and covers the calendar year rather than the fiscal year.

Both the Power Cost Equalization program and the EIA collect and publish information on the cost of fuel used in electric utilities, also by individual utility. This information is of some use in measuring the cost of living and the cost of business in rural places. Aside from reporting problems, the market for fuel in each community is small, with a small number of wholesale transactions during the course of the year. The result might be an accurate picture, but one not particularly useful for tracking changes over time.
Measure: Price Level (4)

Indicator: Housing Costs

Definition
The amount or share of household income spent on housing.

Source

Regional Availability
By place.

Frequency of Availability
Every 10 years.

Collection Method
Sample of households in the census.

Consistency of Data over Time:
The census questions about housing-related expenditures do not vary much between censuses and when they do, the changes are well-documented.

Conformity of Indicator to Measure
Housing expenditures are the largest part of the budget for most households and although this indicator measures expenditure rather than cost, it does provide some information about costs across places.

Smoothness
This indicator will not vary much over time.

Strengths
Available at the community level.

Weaknesses
Only available in 10-year intervals. Differences due to variation in the quality and quantity of housing are not controlled for.

Overall Evaluation
A useful indicator but available very infrequently.

Related Data Sources
Alaska Housing Finance Corporation occasionally publishes a Housing Affordability Index relating housing costs to income. This is not available on a regional basis. Alaska Housing Finance Corporation and the Regional Housing Authorities generate considerable data as part of their programs, but neither produces information over time on housing costs by region.
Measure: Private Business Activity (1)

Indicator: Limited Entry Permits by Place of residence

Definition
Limited entry permits allow commercial fisherman the right to harvest fish from limited commercial fisheries in Alaska. The annual report on permit and fishing activity by year, state, census area, or city provides information on permit activity and fishing activity by fishery group and fishery code. Residency of fishers is based on the residency they claimed and the address provided. For the purpose of this report, Alaska residents who provided a nonresident address are treated as nonresidents and reported according to their state address. Person's claiming to be nonresidents but providing an Alaskan address are assigned to the "Other States and Countries" category.

Source
Commercial Fishing Entries Commission, Alaska Department of Fish and Game (http://www.cfec.state.ak.us/GPBTYCEN/2002/MNU.HTM)

Regional Availability
The annual report provides information broken down by state, Alaskan census areas, Alaska cities, and a grand total for the year regardless of the fishers' residency.

Frequency of Availability
Annual

Collection Method
Permit Activity is information based on permits that are issued. It reflects potential fishing activity not actual fishing activity. Some permit holders are unable or do not wish to use (i.e. fish) their permit. In limited fisheries permit holders are required to renew their permit every year, even if they are not going to participate in the fishery.

Fishing activity information is based on fish ticket data for permit holders who made a commercial landing in a fishery. Noncommercial catch, such as derby, educational, test fishing, hatchery catch and catch kept for personal consumption, is excluded from the report.

Consistency of Data over Time:
There can be discrepancies between the number of permit holders and the number of permits issued. Only the current holders of the permits as of the end of the year are counted. Revoked holders, people who received the permit through as emergency transfer, and people who permanently transferred their permit away during the year are not counted. This differs from the counts of “Fishermen Who
Fished," where all fishermen who made at least one landing are counted. Further, only valid permits held as of the end of the year are counted. Permits that were revoked during the year are not counted. In most cases the number of permits issued will equal the number of permit holders. This number will not be same if the DEC - Division of Investments has foreclosed on more than one permit in the same fishery or in a few cases where a person who held an interim-use permit in a limited fishery received a permanent permit through transfer.

Conformity of Indicator to Measure
While private sector activity is comprised of more than the information provided by limited entry permits by residence, commercial fishing is a vital economic and cultural component of rural Alaskan communities.

Smoothness
Information will accurately reflect the condition of the industry.

Strengths
Permit and earnings information is detailed and provided for all Alaska communities and census areas.

Weaknesses:
It is difficult to substantiate some information provided by permit holder. Also, confidentiality requirements prevent reporting of totals for some fisheries.

Overall Evaluation
Strong indicator of private sector activity in rural Alaska, since commercial fishing is a significant source of economic activity in many communities. Information is detailed, well organized, and easy to obtain on a variety of levels (for instance, by community, fishery, permit number, or permit holder).
Measure: Private Business Activity (2)

Indicator: Community Development Quota Expenditures

Definition
CDQ expenditures by category.

Source
Alaska Department of Community and Economic Development, Division of Community and Business Development

Regional Availability
For all CDQ organizations, each made up of several rural communities.

Frequency of Availability
Quarterly reports, compiled annually.

Collection Method
Quarterly reports submitted to the agency by each CDQ organization.

Consistency of Data over Time
Definition of costs consistent over time.

Conformity of Indicator to Measure
This is a good measure of this activity.

Smoothness
As the CDQ program grows and matures, the quality of reporting should improve. Variation in the harvest from year to year will occur independent of the level of effort devoted to the harvest.

Strengths:
Available on a regular annual basis.

Weaknesses:
Not currently readily available for individual communities, although it could be reported by community. Additional data could potentially be extracted from the reports, or the reports could be expanded to gather additional information at the community level.

Overall Evaluation
A potentially useful indicator, and a potentially valuable reporting methodology for the villages that are members of a CDQ organization. It might be possible to capture additional useful information about the village economy using this reporting mechanism.
Measure: Private Business Activity (3)

Indicator: Mining Expenditures

Definition
The amount spent each year on mining exploration and mining development, as well as the annual value of production.

Source
Alaska Department of Community and Economic Development and the Department of Natural Resources.

Regional Availability
Eight mineral regions in the state.

Frequency of Availability
Annual.

Collection Method
Phone interviews, questionnaires, press releases, and other public information.

Consistency of Data over Time
The definitions of expenditures do not change over time.

Conformity of Indicator to Measure
These expenditures are a good indicator of the level of current activity in the industry.

Smoothness
The quality of reporting may vary from year to year.

Strengths
Data is potentially reported from a large number of respondents throughout the state. There is the possibility of collecting and reporting additional information about the industry using this mechanism, as well as presenting it regionally in a way that corresponds to other economic data.

Weaknesses:
Reporting has not always been high quality, and the information is currently presented regionally by mineral regions. These regions do not correspond to other more commonly used geographic divisions of the state.

Overall Evaluation
A potentially useful indicator. It might be possible to capture additional useful information about the industry using this reporting mechanism.

Related Data Sources
None.
Measure: Private Business Activity (4)

Indicator: Tourist Visits by Place

Definition
Tourists are defined as non-residents traveling to Alaska, excluding seasonal workers. The major visitor categories are vacation and pleasure, visiting friends and relatives, business and pleasure, and business only.

Source
Alaska Visitors Statistics Program, Alaska Department of Community and Economic Development

Regional Availability
Detailed data of tourist visits by place are broken down into five regions: Denali Park, Interior/North, South Central, Southeast, and Southwest. General arrival data is also available for specific places of interest such as border crossings, visitor centers, and national parks.

Frequency of Availability
Since 2000, visitor statistics are reported on a semi-annual basis, with a summer report and a fall/winter report.

Collection Method
Arrival data is collected from U.S. Customs data at highway stations, airports and airlines, cruise lines, and the Alaska Marine Highway System. The number of visitors that arrive by each mode of entry are calculated using weighted visitor percentages from the total arrival figures. A profile of visitors by region is then constructed, including visitor response information on age, income, and reasons for visiting.

Consistency of Data over Time
Frequent revisions are made due to problems with sampling design or errors, including changes in survey locations and techniques, sample size, definition of economic unit, and availability of data. However, the underlying methodology is required to be maintained for each report for data comparison and trend extension.

Conformity of Indicator to Measure
Tourist visits by place provides some useful information on private sector activity at the regional level, but is of limited use at the rural level.

Smoothness
Trends are unstable from year to year in different locations as changes are frequently made in data sources.
Strengths
Revisions are made to each report in an effort to rectify problems in past reports, although those revisions come at the expense of consistency.

Weaknesses
Researchers have identified sampling and weighting errors in rural area visitor statistics. Regional availability restricts comparisons between specific rural communities. Quality of data collection and analysis varies as sampling changes are made each report.

Overall Evaluation
Because the data is intended to give information about the visiting population as a whole, the currently available data is a poor indicator of private sector activity in rural Alaska. In addition, many visitors to rural areas are resident Alaskans, who are excluded from the database.
**Measure: Subsistence (1)**

**Indicator: Subsistence Salmon Fishery Participation and Harvest**

**Definition**
Number of permits issued and fished and the number of salmon caught by type.

**Source**
Alaska Department of Fish and Game, Division of Subsistence

**Regional Availability**
By community

**Frequency of Availability**
Annual. But only available for two years, the most recent being 2000.

**Collection Method**
Survey.

**Consistency of Data over Time**
Agency resources devoted to collection of this information may vary over time, affecting the consistency of the data collection effort and reporting over time.

**Conformity of Indicator to Measure**
Salmon harvest is an important component of subsistence activities, but not the only one and not in all regions. Because of the considerable natural year to year variation in harvest, this indicator is best viewed over the long run rather than from year to year.

**Smoothness**
Salmon harvest is impacted by natural factors that are independent of participation and effort.

**Strengths**
Available at the community level.

**Weaknesses**
Lengthy process from reporting to publication of information.

**Overall Evaluation**
Most useful for long term trend analysis of fisheries.

**Related Data Sources**
None.
Measure: Subsistence (2)

Indicator: Participation and Harvest

Definition
Number of households participating in subsistence, harvest in numbers and weight by type, and sharing of harvest.

Source
Alaska Department of Fish and Game, Subsistence Division

Regional Availability
Community

Frequency of Availability
A subset of communities are surveyed each year

Collection Method
Community survey

Consistency of Data over Time:
There is general consistency in the basic information collected in the survey across communities and over time

Conformity of Indicator to Measure:
This is a good collection of information about subsistence, but it is difficult to summarize in a meaningful way. Time spent engaged in subsistence activities would be a useful additional measure.

Smoothness:
Harvests and participation are influenced by many factors.

Strengths:
A wealth of detailed information about subsistence activity at the community level.

Weaknesses:
Each community is only surveyed irregularly so there is no capability to track from year to year.

Overall evaluation
This is a useful survey for general descriptive purposes but not for evaluation.

Related Data Sources
None.
Measure: Well-Being

Special Considerations

Many health indicators for Alaska are based on a small number of events. When health events are sub-divided by borough/census area, race, sex, or age, the number that results lacks statistical significance and may inadvertently identify an individual. Confidentiality issues are likely to arise with small denominators, small numerators, or rare events. In Healthy Alaskans 2010, a publication of the Alaska Department of Health & Social Services, Division of Public Health, confidentiality is protected by withholding events with counts less than four, or by aggregating data over time or over larger geographical areas to produce a larger cell size. Concerns about the reliability and stability of the data arise with small numerators that represent rare or infrequent events. Twenty events is the usual threshold for reliability for estimating age-adjusted rates. Rates based on fewer than 20 events have relative standards errors of 23 percent or more. In order to address these concerns when reporting Alaska health data, the Division of Public Health has attempted to increase numerator size by combining multiple years of data, collapsing data categories, and/or expanding the geographic area under consideration.

http://health.hss.state.ak.us/dph/targets/ha2010/default.htm

Most agencies and organizations base their calculations of health measures by race on figures from the U.S. census. There was an important change in reporting categories between the 1990 and 2000 census. In the 2000 census, for the first time, people answering census questions could specify more than one primary race. So 2000 census data include not only people who described themselves as just Alaska Native, but also those who reported being of Native and some other race. State agencies are still grappling with how to report racial information for Alaskans of more than one race—and especially how to compare data from before 2000 with data since 2000.

Another recent change also complicates comparisons over time. To compare rates of disease or death among populations—say to compare death rates from heart disease among Alaska Natives and other Americans—statisticians do what they call “age adjusting,” because not all populations have the same age make-up. For example, Alaska Natives as a people are younger than the overall American population. To make populations comparable, statisticians use a “standard population,” with specific shares of the population in each age group. That way, rates of death or other measures aren’t affected by the fact that a population has more older or more younger people. The federal government now uses the 2000 U.S. population as the standard. But for the previous 60 years, the 1940 U.S. population was the standard. The change is important, because it means that rates calculated with the 1940 standard aren’t directly comparable with rates calculated under the new standard.
Measure: Well-Being (1)

Indicator: Percentage of Alaskans Reporting Acute (Binge) and Chronic Drinking

Definition
Data is from the Alaska Behavioral Risk Factor Survey. This data collection process was implemented in Alaska as an ongoing surveillance system in 1991. Alaska adults, age 18 years old and older, are interviewed regarding their health and day-to-day living habits. Households with a telephone are selected by a scientifically designed and conducted random telephone survey.

Acute or binge drinking is defined as drinking five or more drinks on one occasion within a 30-day period. Chronic drinking is defined as drinking an average of 60 or more alcohol drinks in the month preceding the survey.

Source

Regional Availability
The survey is designed to report population prevalence at a regional or state level. Alaska’s BRFSS (1998 or later) supports five geographic regions generally described as Anchorage and vicinity, Gulf Coast, Southeast, Rural, and Fairbanks and vicinity.

Frequency of Availability
Annual

Collection Method
Survey

Consistency of Data Over Time
Data should be consistent over time, unless there is some change in the way binge or chronic drinking are defined.

Conformity of Indicator to Measure
Heavy drinking is one of a number of potential measures of well-being.

Smoothness
Should be relatively stable.
Strengths
Data is regularly collected from a scientifically drawn sample.

Weaknesses
Same weaknesses inherent in all self-reported data.

Overall Evaluation
A reasonable but very partial indicator of adult well-being.
Measure: Well-Being (2)

Indicator: High-School Students Use of Alcohol, Drugs, and Inhalants

Definition
Self-reported prevalence of drug, alcohol, and inhalant use among Alaska high-school students. The Alaska Division of Public Health administers the Alaska Youth Risk Behavior Survey. Results from the YRBS are intended to help detect changes in youth risk behaviors over time. The results can identify differences among ages, grades, and genders.

Source
Youth Risk Behavior Survey; a joint project of the Alaska department of Health and Social Services and Education

Frequency of Availability
Data collected every other year, but past collection efforts have been very uneven.

Regional Availability
Depends on size of sample and number of students and districts participating.

Collection Method
Survey of a sample of high-school students from districts that participate.

Consistency of Data over Time
The survey was first conducted in Alaska in 1991, but analysts say only the 1995 and 2003 surveys are representative of high-school students statewide. In other years, low participation, refusal of the Anchorage School District to participate, and other problems limited the data collected.

Conformity of Indicator to Measure
This is one of a number of potential measures of well-being among young people in Alaska.

Smoothness
Results are influenced by level of district and student participation.

Strengths
Most comprehensive measure available of drinking and drug use among Alaska teenagers.
Weaknesses
The reliability of the data depends on an adequate number of school districts and students agreeing to participate. In the past, participation was not representative in several years.

Overall Evaluation
This is one reasonable measure of well-being, as long as adequate and representative data are collected.
Measure: Well-Being (Other Potential Measures)
Below are several other potential measures of well-being among Alaskans. They are narrower in scope than the two indicators we just described; which are based on representative samples of Alaskans. The largest shortcoming of those listed below are that most are based on a relatively small number of incidents that can vary sharply from year to year; not necessarily reflecting trends. Also, statistics on alcohol- and drug-induced deaths exclude some deaths indirectly caused by alcohol and drugs. And some—like special-needs housing—provide important information about a segment of Alaskans but are not broad reflections of change. We list them to allow the Denali Commission to see the range of indicators available.

Injury Rate and Death Rates for Alcohol/Drug Involved Motor Vehicle Crashes:
All Ages and Ages 16-25
Source: Alaska Department of Transportation and Public Facilities
Motor vehicle crashes include traditional highway vehicles, pedestrians, pedcyclists, all-terrain vehicles, snowmachines, and motorcyclists.

Alcohol Related Death, Native and Non-Native
Source: Alaska Bureau of Vital Statistics.
Alcohol-induced mortality includes death due to alcohol psychoses, alcohol dependence syndrome, non-dependent abuse of alcohol, alcohol-induced chronic liver disease and cirrhosis, and alcohol poisoning. It does not include deaths due to traumatic injury, such as motor vehicle crashes. Consistent data on alcohol-related deaths is difficult to capture because of the many ways in which alcohol and other drugs can cause death.

Rate for drug-induced deaths in Alaska—Alaska Natives and all Alaskans
Source: Alaska Bureau of Vital Statistics
Causes of drug-induced deaths include drug psychosis, drug dependence, suicide, and intentional and accidental poisoning that result from illicit drug abuse. It excludes accidents, homicides, and other causes indirectly related to drug use. Also excluded are newborn deaths due to the mother’s drug use.

Suicide Death Rates in Alaska: Alaska Natives and All Alaskans
Suicide Rates for Alaska Youth (Age 15-19)
Source: Alaska Bureau of Vital Statistics, Alaska Division of Public Health
“Suicide in Alaska: A Walk through Data on Age, Sex and Race Group Statistics,”
Suicide is legally defined as the act of voluntarily and intentionally taking one’s own life. Persistent patterns of suicide and suicide attempts are indicators of the poor mental health status of individuals and communities. This data is based on the decision of the medical examiner or the certifying physician at the time of death and some professionals believe that it may under-report the numbers.
**Alaska Suicide Attempt Rate**
Source: Alaska Trauma Registry
Alaska Youth Risk Behavior Survey
The Alaska Trauma Registry collects data relating to injuries that result in hospital admission but does not include injuries treated in emergency departments and outpatient settings. YRBS reports the percent of high school students (grades 9-12) who attempted suicide requiring medical attention in the past 12 months. (See discussion of YRBS data under Alaska High School Students Alcohol Use)

**Rates of Child Abuse in Alaska, Unduplicated Substantiated Reports, per 1,000 Children under age 18.**
Source: Alaska Department of Health and Social Services, Office of Children's Services.
Alaska’s child maltreatment rates are presented as five-year moving averages in order to smooth out the random fluctuations that can occur due to the state’s small population size. Single-year averages are extremely misleading for another reason as well: the substantiated rates are based on the investigations COMPLETED during that fiscal year, and are not based on the cohort of reports RECEIVED that year. Because of delays in entering the results of completed investigations, changes in the rates of substantiated reports from year to year do not necessarily reflect real increases or decreases in maltreatment during those periods.

**Inventory of Special Needs and Supported Housing 1995 and 2000**
AHFC (Alaska Housing Finance Corporation) did inventories in 1995 and 2000 of special needs and supported housing. The data was reported in two categories – Anchorage and excluding Anchorage.
Measure: Education (1)

Indicator: Percentage of students dropping out of high school

Definition
The Alaska Department of Education and Early Development classifies students as dropouts if they (1) left school without graduating or completing an approved program; (2) moved out of the school district or state and are not known to be enrolled elsewhere; (3) enrolled in adult education programs or schools not approved by the district; or (4) were suspended or expelled from school and failed to return.

Source
Alaska Department of Education and Early Development

Regional Availability
By school district

Frequency of Availability
Annually. Typically, rates are available from EED about 9 months after the end of the school year.

Collection Method
Posted on DEED’s Web site

Consistency of Data over Time
Fairly good. Districts may differ in who they consider a drop-out, especially for those students who simply don’t show up in the fall, and may have transferred but may have left school. Older data may need adjustment as sometimes data is reported for grades 7-12, sometimes 9-12.

Conformity of Indicator to Measure
Some students who are listed as drop-outs later complete their HS education through re-enrollment, home school or other programs. Students who transfer to home or private schooling and then drop out are never counted as drop-outs. Data is not collected on private or home schooled students.

Smoothness
Indicator is smooth statewide, but highly volatile in small districts.

Strengths
Can be comparable to other state and national rates; is always collected.

Weaknesses
Schools have incentives to undercount drop-outs;
Overall Evaluation
A good indicator

Related Data Sources
None
Measure: Education (2)

Indicator: Teens not in school and not working

Definition
The percentage of teenagers, ages 16 through 19, who are not in school, not working, and not in the military. It includes both high-school dropouts and those who have either high-school or General Education Development (GED) diplomas but are not working.

Source

Regional Availability
State level

Frequency of Availability
Annually, with about a 3-year lag

Collection Method
Cited in national Kids Count Data Book

Consistency of Data over Time
Good.

Conformity of Indicator to Measure
The CPS for Alaska is not as reliable as for other states. Non-Anchorage geographic sample is too small and does not change over time, meaning that too few rural areas are represented, to accurately generalize to the non-represented areas. Because sampled census areas do not change annually, multi-year averages will not solve the problem.

Smoothness
Good

Strengths
Comparable to national data.

Weaknesses
Not reliable for Alaska; not possible to fix with additional data collection.

Overall Evaluation
Fair indicator
Measure: Education (3)

Indicator: Percentage of Alaskan Students who passed HSGQE (High School Graduation Qualifying Examination)

Definition
The Alaska High School Graduation Qualifying Examination (HSGQE), the result of a 1997 state law, assesses students in reading, writing and math. Students first attempt this test in the spring of 10th grade. They must pass all three sections to graduate, and may re-take failed sections each fall and spring while they are in high school, and for another three years after they have completed high school. Students who fail the test but complete all other graduation requirements are given a certificate of completion instead of a diploma. Non-public school students are not required to take the test.

Source
Alaska Department of Education and Early Development

This data is collected and reported on DEED’s web site at the school, district, and statewide levels, two to three months after test administration. Additionally, each fall DEED issues a report (required by the federal “No Child Left Behind” Act) that summarizes the data and provides analysis of pass rates by ethnic group, economically disadvantaged, and special education status.

Regional Availability:
Available to the school level

Frequency of Availability:
Twice per year

Collection Method:
See DEED Web site

Consistency of Data over Time:
Poor, as passing scores for the test have been changed; the state is not in the process of scrapping the current tests and replacing them with new ones. Scores may or may not be comparable between the new tests and the old ones. No data available before 2000.

Conformity of Indicator to Measure
It’s difficult to combine the pass rates of first-time test takers with re-takers in any meaningful way. This, 10th grade results, spring test, which should be first time test takers, is probably the most useful (although this group may include re-take results if students are retained in 10th grade).
Smoothness:
   Poor

Strengths
   Collected and reported regularly; schools are accountable for these scores.

Weaknesses
   May not accurately measure students' knowledge or readiness for the workforce. Test contents and passing scores subject to political pressure. There is substantial debate over whether the tests accurately measure the knowledge of minority students, especially rural Alaska Natives.

Overall Evaluation
   Fair indicator.
Measure: Education (4)

Indicator: Percentage of Alaskan Students Who Passed Benchmark Tests

Definition
The Alaska Benchmark Assessment is an achievement test—also with sections in reading, writing, and math—that 3rd, 6th, and 8th graders take. This benchmark provides an early measure of students’ academic abilities, and schools can use the results to better prepare students to pass the high-school exam.

Source
Alaska Department of Education and Early Development

This data is collected and reported on DEED’s web site at the school, district, and statewide levels, two to three months after test administration. Additionally, each fall DEED issues a report (required by the federal “No Child Left Behind” Act) that summarizes the data and provides analysis of pass rates by ethnic group, economically disadvantaged, and special education status.

Regional Availability
School district and individual school level

Frequency of Availability
Annually

Collection Method
Available on DEED Web site.

Consistency of Data over Time
Test contents and passing scores have changed and continue to change over time, so time series are limited to a few years.

Conformity of Indicator to Measure
Current tests are not coordinated between grade levels – this a student who fails the 6th grade reading benchmark may pass the 8th grade benchmark without two years’ worth of learning in between, or vice versa. Tests are currently being re-written. Test scores are not well correlated with students’ other standardized test results, such as the Terra Nova/ CAT6 administered in 4th, 5th, 7th and 9th grades, or the National Assessment of Educational Progress.

Smoothness
Fairly smooth at the state level; increasingly volatile at lower levels.

Strengths
Collected and reported regularly; schools are accountable for these scores.
Weaknesses
Scores may not be meaningful in assessing student progress towards the HSGQE; there is substantial debate over whether the tests accurately measure the knowledge of minority students, especially rural Alaska Natives. Third grade benchmark is especially unreliable for children who have been in a Native language immersion programs through the third grade.

Overall Evaluation
Poor indicator.