



# ECONOMIC INDICATORS REVIEW – ECONOMY AND WORKFORCE

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## DEVELOPING THE COLUMBIA BASIN RURAL DEVELOPMENT INSTITUTE'S ECONOMIC RESEARCH PILLAR

Part of a series of research papers on indicator development for the State of the Basin project in the Columbia Basin Boundary Region

APRIL 2013



*The Columbia Basin Rural Development Institute, at Selkirk College, is a regional center of excellence in applied research and information provision focused on strengthening rural communities in the Columbia Basin Boundary Region. Visit [www.cbrdi.ca](http://www.cbrdi.ca) for more information.*

## EXECUTIVE SUMMARY

The Columbia Basin Rural Development Institute (RDI) is preparing to revamp the State of the Basin report and reporting process. This document is being circulated, in its draft form, to potential users of the information products. The RDI wishes to hear from concerned parties regarding the selection of indicators, omissions, anticipated uses of the indicators, and any recommendations.

Please see the forthcoming companion report, **State of the Basin Economic Indicators: Evaluations and Data Review**, for additional discussion of these indicators.

This is a draft report

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## THE STATE OF THE BASIN INITIATIVE

The State of the Basin is an indicator and monitoring program originally developed by Columbia Basin Trust (CBT). Now a project of the Columbia Basin Rural Development Institute (RDI), the State of the Basin initiative involves collecting, analyzing and reporting on indicators in order to build an up-to-date and dynamic picture of the vitality of communities in the Basin Boundary region.

### OBJECTIVES

When originally envisioning the State of the Basin, CBT developed the following four goals. These goals collectively define the purpose of the initiative:

- **inform** citizens and organizations about the people, natural environment, communities, and economy of the Basin by providing access to accurate, credible, and timely information,
- **encourage** understanding of complex issues and trends over time, including into the future when possible,
- **signal** whether conditions are similar or different within the Basin, and in comparison to other areas to highlight and celebrate areas of achievement, and to identify significant issues, ideally before they become critical, and
- **motivate** discussion, information sharing, strategic evidence-based decisions and collective action.

### HISTORY

In 2006, CBT responded to long-standing requests for information on social, economic, environmental and other trends in the Basin by launching the State of the Basin initiative. Resulting from the work of project consultants, a volunteer working group, CBT staff and more than 50 expert advisors, the first State of the Basin report was released in 2008. This report was accompanied by a website that provided access to updated trend analyses and raw data. In order to support the application of available information, the State of the Basin initiative also provided support to individuals and communities interested in understanding and using the data. The purpose of the 2008 State of the Basin Initiative was to test the concept of indicator reporting in the region by presenting a sample of credible, locally relevant information.

Response to the 2008 project indicated that the State of the Basin initiative addressed an important need for information in the region, and that future iterations would be of benefit to local communities and organizations. Acknowledging the links between the objectives of the State of the Basin project and the mandate of the RDI, CBT transferred responsibility for the project to the RDI in 2011. Because the RDI's service area includes the entire Basin Boundary region of BC, the geographic scope of the State of the Basin has expanded beyond the area defined by CBT as "the Basin" to include a portion of the Regional District of Kootenay Boundary referred to as "the Boundary region" (figure 1).



**Figure 1: The Basin Boundary Region**

In 2012, the RDI developed an updated State of the Basin report using the same, or similar, indicators that were used in the 2008 version. However, the 2013 State of the Basin project will incorporate a significant revision to the suite of indicators monitored through the initiative. The future focus of the State of the Basin will be on researching and reporting on information that is of the highest value to Basin Boundary communities. In order to ensure the State of the Basin achieves maximum relevance and utility, consultation with key stakeholders and user groups will be an important component of the indicator development and reporting process.

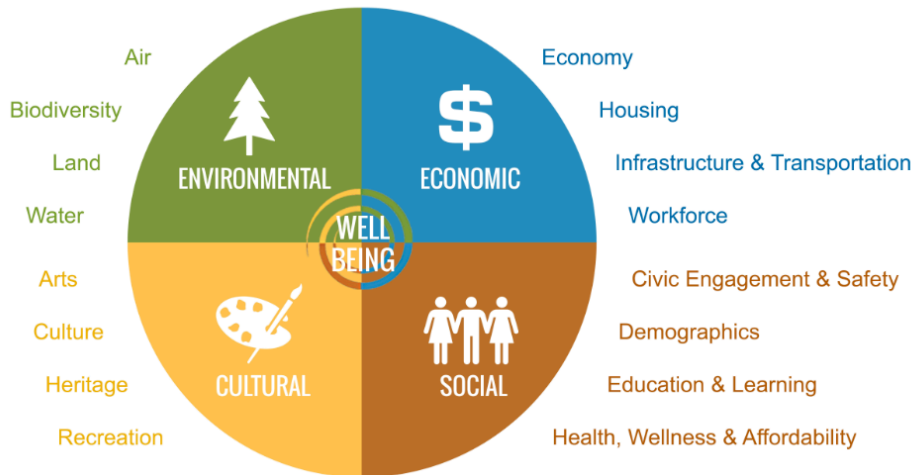
### INDICATOR MODEL

The State of the Basin uses an indicator model to report on the status of well-being in the Basin Boundary region. Indicator reporting is a growing trend among organizations that operate at various geographic scales (from global to neighbourhood-specific) and with varying scopes of interest (from those as broad as well-being to those as specific as financial performance). By distilling complex information into easily understandable measures, indicators help diverse audiences, with widely ranging backgrounds, to understand important trends.

As part of the 2013 State of the Basin update, the RDI completed research on best practices in indicator reporting and on lessons learned from the 2008 report development process. This literature review adds context-specific discussion to that research.

## RESEARCH FRAMEWORK

The RDI has developed a new State of the Basin research framework which, similar to the 2008 framework, is centred on the concepts of well-being and sustainable development. The new framework organizes research efforts into four “pillars” – society, culture, the environment, and the economy—each of which have several defined sub-themes (figure 2).



**Figure 2: Revised State of the Basin research framework**

Many indicator projects adopt a similar approach to research, understanding that “well-being” or “sustainability” are difficult concepts to measure in themselves. Instead, progress toward achieving those goals can be measured through an assessment of conditions in more narrowly-defined realms of influence.

In the literature on indicator reporting, a strong case is made for linking environmental, economic, social, and cultural indicators through a common lens such as well-being or sustainability. By adopting this approach, the State of the Basin initiative explicitly acknowledges that community vitality is dependent on the strength of all four pillars and that the environment, the economy, culture and social systems are very much interconnected. A change in conditions in one pillar or sub-theme not only affects the overall measure of well-being, but it can also affect the status of other pillars or sub-themes. Exploring these inter-pillar relationships will be a priority for State of the Basin research.

## INFORMATION PRODUCTS, TOOLS, AND SUPPORT

State of the Basin research will be made available to Basin Boundary communities in a variety of formats:

1. A snapshot report will provide an overview of the project and quick, interesting research findings in a format that will be accessible to a wide audience.
2. A full report will provide in-depth discussion of each indicator, including its relevance, current status and an analysis of regional trends.
3. The “Digital Basin” will provide web-based data tools, including:



- a. an interactive and customizable map displaying spatial features of all relevant indicators, as well as environmental, economic, social and cultural assets in the region,
- b. a customizable data viewer that allows for analysis and comparison of indicator data over time and space, and
- c. a resource library that will allow users to download supporting documents (plans, reports by other organizations, etc.) for independent analysis.

In addition, the RDI will support development and use of State of the Basin research in Basin Boundary communities by:

- liaising with key economic, social, cultural and environmental stakeholders to better understand their information needs and research capacity (such as the ability to collect and use related information),
- identifying opportunities for local data collection by key stakeholder groups,
- providing direct research support, standardized data templates, training and support materials focused on the collection and use of indicator data,
- promoting and facilitating the sharing of information and best practices across key stakeholder groups, and
- exploring opportunities to link the State of the Basin initiative with K-12 and post-secondary student learning.

## WHY ECONOMIC AND WORKFORCE DATA?

“Indicators” have become common points of discussion with policy makers at all levels, academics, and advocacy groups the world over. The term “indicator” refers to some statistical simplification (quantitative or qualitative) of reality that offers some insight into direction of change over time. We could examine health indicators (such as obesity levels in the population), social indicators (such as the number of children facing poverty), or environmental indicators (such as ambient levels of particulate matter in the air). This report is concerned with economic and workforce indicators; those indicators that tell us something about the economic fabric of our society.

Indicators are a simplification. They may, as such, reduce complex phenomena, like the labour market, into any number of single numbers that tell us something specific about a situation or suite of conditions. These numbers could be ratios, percentages, absolute levels, indices, or other composite numbers involving several other sub-indicators. Indicators are based on observations taken from our world. Indicators may inform policy makers, policy advocates, or the general public.

## DIRECT INDICATORS

A direct indicator is the simplest form of indicator that we can examine. The term direct is applied because there are no manipulations of the data. The observations of the world become the indicator. Consider an indicator of forest sector health. We may choose to track Forest Sector Revenues over time. There need be no manipulation of the data to tell the story of economic activity in the forest sector.

## COMPOSITE INDICATORS

For more complex relationships and multi-dimensional phenomena, following many individual/direct indicators can be both time-consuming and confusing. To simplify, composite indicators combine a number of direct (homogenous or relatively homogeneous) indicators into a single figure. The combination should be based on solid theory of social structure, behaviour and processes to ensure the indicator provides accurate, appropriate, and sound interpretations.

The most obvious example of a composite indicator is Gross Domestic Product (GDP). GDP measures the value of total output of an economy. Output in the mental health profession and output in the automotive industry, for instance, are rendered (relatively) homogenous by valuation through the common currency of the country. Using that common currency, GDP sums the value of all domestic production into a single indicator.

## SYNTHETIC INDICATORS

Synthetic indicators are similar to composite indicators except the individual indicators are heterogeneous. This class of indicator must be used with caution and respect to the limitations of the indicator. Heterogeneous data cannot be combined without some risk of being misled. The biggest risk is that users may draw simplistic conclusions, or outright erroneous analysis from their use. However, synthetic indicators do provide a very valuable starting point for discussions and a useful tool for stimulating public interest.

Consider the United Nations' (UN) Human Development Index (HDI). The HDI combines data on standard of living, educational attainment, and life expectancy. Standard of living is indicated by GDP levels (corrected for currency and economic composition). Educational attainment is measured using adult literacy rates, and life expectancy is measured as the life expectancy at birth. These are three very different indicators, but can be combined for a non-technical single indicator, **provided it is used with appropriate caveats** for policy or advocacy purposes.

## ECONOMIC INDICATORS

The economy is prone to fluctuations of relative growth and relative decline. These fluctuations are known as the business cycle. A complete cycle will follow the following periods: growth, peak, decline, trough. Certain indicators are said to lead the business cycle, or to indicate that change is about to occur. These indicators are called *leading indicators*. Or, some indicators may examine specific sectors. Other indicators give us specific insights into labour markets.

Our interactions with the economy, through labour markets, largely determines our ability to access consumption. The macro-economy is the foundation of the labour market. As such, the macro-economy determines both what we produce and for whom we produce it. Understanding the macro-economy and the labour market allow us to minimize uncertainty and prepare for adapting to or mitigating adverse changes. In the best case, it allows us to direct the macro-economy to maximize our well-being.

## WHAT SHOULD WE MEASURE AND HOW SHOULD WE MEASURE IT?

### EVALUATING INDICATORS

Not all indicators are created equal. It requires the devotion of resources (financial or human) to build an indicator; both to acquire the information, and to process the data. Some of the indicators discussed above are reported regularly by national or provincial statistical agencies. Some of the indicators require processing of readily available data. Some indicators require both data collection and processing. The related costs escalate as processing and data collection are added to the process.

The UN recommends the application of the TURC Test<sup>1</sup> as a first-pass screen for indicators. The TURC Test offers policy makers and researchers a simple metric by which to evaluate the appropriateness of indicators in a given setting. The elements of the TURC Test are laid out below:

#### **TURC Test**

<b>Technically sound</b>	Indicator is well-defined, describes phenomenon under consideration, robust, technically possible to compile data needed, repeatable
<b>Understandable</b>	Meaning of indicator easy for non-stats, simple to explain
<b>Relevant</b>	Indicator is meaningful to policy makers and analysts
<b>Cost-effective</b>	Indicator is worthwhile to compile

In the forthcoming companion report, State of the Basin Economic Indicators (Economy and Workforce): Evaluations and Data Review, we will approach these four questions for each of the indicators currently being produced for the Columbia Basin, and for each of the proposed indicators.

Note: The Government of Canada changed the format of Census data collection in 2011 by eliminating the “long-form” component. The National Household Survey (NHS) has replaced the

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<sup>1</sup> See United Nations (1989): Handbook on Social Indicators.

long-form survey. Since this will be the first time the NHS has been compiled, we will have to determine the quality of data that is compiled once preliminary results become available. Many of our current and proposed socio-economic indicators will be affected.

The 2008 State of the Basin Report kicked off a process of inviting quantifiable analysis into the economic planning arena of the Columbia Basin. Having a suite of economic indicators at our disposal offers benchmarks against which to measure success, and a group of tools that help identify challenges and trends that require monitoring.

The following is a list of the proposed State of the Basin indicators, for discussion purposes, that will structure future State of the Basin reports. Following the list of indicators is a discussion of what the individual indicators are and a brief description of why they are relevant and how they can be interpreted.

While this may seem an overwhelming number of figures to absorb, only a selection of the indicators that are tracked will be explicitly reported in the regular State of the Basin print reports. Some indicators will be available only to people using the State of the Basin web portal, but will be summarized within the report. Indicators marked with an asterix (those in the left column) are being considered for inclusion in the written report. Those in the right column are being considered as supporting indicators that would be made available through the web portal.

## **ECONOMY**

### ***Leading Macroeconomic Indicators***

- Leading Composite Indicator\*
- Housing Starts/Building Permits
- Part-Time Hours (non-Ag)
- EI Recipients
- S&P-TSX Index

### ***Coincident Macroeconomic Indicators***

- Coincident Composite Indicator\*
- Real GDP/cap\*
- Industrial production\*
- Manufacturing production\*
- Service production\*
- Trade Revenues\*
- Real Income
- Total Employment

### ***Lagging Macroeconomic Indicators***

- Lagging Composite Indicator\*
- Prime Bank Rate\*
- CPI\*
- Duration of unemployment

### ***General Macroeconomic Indicators (not already included)***

- Exchange Rate\*
- Existing Home Sales\*
- Business Formations & Bankruptcies\*
- Business Vitality Index (BVI)\*
- Ratio of Inventories : Sales (mfg/trade)
- Real GNP/cap

### ***Tourism Sector (some cross listing)***

- Visitor Counts\*
- Exchange Rate\*
- Real Income (Canada)\*
- Real Income (USA)\*
- Accommodation Revenues\*
- Food Service Revenues\*
- Tourism Employment
- Tourism Wages

### ***Forestry Sector***

- Forestry Revenues\*
- Trade Revenues\*
- Housing Starts (Can)\*
- Housing Starts (USA & China)\*
- Exchange Rate\*
- Fibre Prices
- Forestry Employment
- Forestry Wages

### ***Mining/Metallurgy Sector***

- Mining & Metallurgy Revenues\*
- Exploration Spending\*
- Select Metals Prices\*
- Mining / Metallurgy Employment
- Mining / Metallurgy Wages
- Exchange Rate

### ***Agricultural Sector***

- Changes in ALR\*
- Agriculture Revenues\*
- Commodity Prices\*
- Agricultural Employment
- Agriculture Wages

## **WORKFORCE**

### ***Labour Market Indicators***

- Participation Rates\*
- Employment by sector\*
- Median Income\*
- Replacement Ratio
- Dependency Ratio
- Education levels

- EI Recipients\*
- Income Assistance & GIS\*
- Duration of unemployment\*
- Gini Index\*

## DISCUSSION OF POTENTIAL INDICATORS

Below, a list of potential economic and workforce indicators is presented. For each indicator, a summary of the evaluation is provided. Again, for a more thorough treatment of the evaluation of each indicator (and a number of indicators that did not make the cut for this report), please see the companion report State of the Basin Economic Indicators (Economy and Workforce): Evaluations and Data Review.

### ECONOMY

#### LEADING COMPOSITE INDICATOR

##### *What is it?*

A Leading Composite Indicator is a combination of economic variables that usually change before the rest of the economy follows. Leading indicators typically include: Housing Starts, Unfilled Orders, Part-Time Hours, Corporate and Government Bond Spread, Long-Term and Short-Term Bond Spread, Unemployment, Exchange Rates, and a stock index, like the TSE index.

##### *What does it tell us?*

Leading economic indicators are generally related to confidence and expectations that prevail in the marketplace. A composite leading indicator combines all of those individual indicators and reports a single, indexed figure that can be used to predict whether the economy will grow or decline (provided general economic expectations are well founded).

##### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Economy is poised to expand
Decreases	Economy is poised to decline

##### *Recommended for Consideration*

Incorporate an appropriate Leading Economic Indicator.

#### HOUSING STARTS/BUILDING PERMITS

##### *What is it?*

The number of new housing construction projects and their estimated values, beginning in the referent period. The figure should be reported through both building permits and the number of projects that have broken ground. This is reported as a percentage change from the previous period.

##### *What does it tell us?*

Housing starts tend to pick up at the beginning of a business cycle, and taper at the initial signs of economic slowdown. This is reflective of consumer expectations changing, coupled with interest rates (typically low during the emergence from a recession, and increasing in response to economic growth).

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	May expect economy to grow.
Decreases	May expect economy to slow.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators; as a component of **Leading Indicators** and of **Forestry Indicators**.

**PART-TIME HOURS (NON-AGRICULTURAL)**

*What is it?*

Total hours worked in part-time jobs. If not available, the number of part-time jobs is a suitable, but weaker, proxy.

*What does it tell us?*

Before committing full-time jobs, employers will typically respond to changes in economic trends with part-time labour. This indicator gives us an idea of what business cycle trends are approaching. As PT work increases, the business cycle is typically about to enter a growth phase. PT growth should taper off at the top of the business cycle, and begin to decline right before a slow-down.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	May expect economy to grow.
Decreases	May expect economy to slow.

*Recommended for Consideration*

If data becomes available at the appropriate level of disaggregation, this indicator should be brought into our suite of economic indicators; as part of a suite of **Leading Indicators** and of **Labour Market Indicators**.

**EI RECIPIENTS: TOTAL, YOUTH, BY GENDER**

*What is it?*

The percentage of adults aged 19-64 who received employment insurance (EI) benefits, the percentage of these individuals who were youth 19-24 years old and the percentage who are female.

*What does it tell us?*

This figure tells us how whether the labour market is providing jobs for those who are looking for work. This is an indicator of the level of unemployment. Examining by sex and by age allows us to see whether certain segments of the population are being affected more than the average.



*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	More people are experiencing employment interruptions.
Decreases	Fewer people are experiencing employment interruptions.

*Recommended for Consideration*

Continue tracking this indicator. Include this in both **Leading Indicators** and **Labour Market Indicators**.

## S&P-TSX INDEX

*What is it?*

A trend indicator that follows the Toronto Stock Exchange's performance.

*What does it tell us?*

This indicator tells us whether stock-market investors have a positive or negative outlook on the economic future. This is a strong **Leading Indicator** for the economy.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	May expect economy to grow.
Decreases	May expect economy to slow.

*Recommended for Consideration*

Include the S&P TSX in the **Leading Indicators**.

## UNFILLED ORDERS (MANUFACTURING)

*What is it?*

Unfilled manufacturing orders are reported by private industry. This figure reported is the nominal currency value of orders that have not been shipped. Those guaranteed sales that need to be filled.

*What does it tell us?*

If a firm has unfilled orders, it is typically a sign that demand for their product has recently increased, such that their existing inventories and production are not keeping up. Unfilled orders give a very good indication of the level of economic production that will be occurring in the immediate future.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	May expect economy to grow.
Decreases	May expect economy to slow.

*Recommended for Consideration*

If data becomes available at the appropriate level of disaggregation, this indicator should be considered as a **Leading Indicator**.

## COINCIDENT COMPOSITE INDICATOR

### *What is it?*

A Coincident Composite Indicator is a combination of observable economic variables that represent the current state of the economy. Coincident economic variables typically include: Employment, Manufacturing Production, Retail Sales, GDP and Trade Revenues.

### *What does it tell us?*

Coincident economic variables are generally related to current production and economic activity. A composite of these variables will indicate whether the economy is growing or slowing (but it will not offer insight into magnitude).

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Economy is expanding
Decreases	Economy is declining

### *Recommended for Consideration*

Incorporate an appropriate Coincident Economic Indicator.

## REAL PER CAPITA GROSS DOMESTIC PRODUCTION (GDP)

### *What is it?*

This is a trend indicator that tracks real per capita GDP. This indicator measures the level of economic production, for a given time period, corrected for inflation (real) and population growth (per capita). This figure is reported in CAD.

### *What does it tell us?*

This indicator is the strongest indicator of commercial activity available. Provided this data can be obtained in a timely manner, this is the strongest **Coincident Indicator** for the economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Economy is expanding
Decreases	Economy is declining

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the suite of **Coincident Indicators**, and for each of the sector specific indicator sets<sup>2</sup>.

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<sup>2</sup> Provided we can obtain statistically significant disaggregated figures for the Basin region.

## INDUSTRIAL PRODUCTION

### *What is it?*

This is a trend indicator that tracks real GDP for a given segment of the economy: industrial producers. This indicator measures the level of economic production, for a given time period, directed at industrial production. This figure is reported in CAD.

### *What does it tell us?*

This indicator gives insight into the growth rates of industrial activity in the region. Industrial production is one of the key economic sectors of any economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Industrial production is expanding
Decreases	Industrial production is declining

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the suite of **Coincident Indicators**.

## MANUFACTURING PRODUCTION

### *What is it?*

This is a trend indicator that tracks real GDP for a given segment of the economy: manufacturing producers. This indicator measures the level of economic production, for a given time period, directed at manufacturing facilities. This figure is reported in CAD.

### *What does it tell us?*

This indicator gives insight into the growth rates of manufacturing activity in the region. Manufacturing is one of the key economic sectors of any economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Manufacturing production is expanding
Decreases	Manufacturing production is declining

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the suite of **Coincident Indicators**.

## SERVICE PRODUCTION

### *What is it?*

This is a trend indicator that tracks real GDP for a given segment of the economy: the service sector. This indicator measures the level of economic production, for a given time period, directed at service provision. This figure is reported in CAD.

### *What does it tell us?*

This indicator gives insight into the growth rates of service activity in the region. The service sector is one of the key economic sectors of any economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Service provision is expanding
Decreases	Service provision is declining

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the suite of **Coincident Indicators**.

## TRADE REVENUES

### *What is it?*

This is a trend indicator that tracks changes in the level of international trade. This indicator measures the amount of economic production, for a given time period, that is destined for export. This figure is reported in CAD.

### *What does it tell us?*

This indicator gives insight into the role that international trade plays for the economy. This may also be viewed as a metric of the level of global integration playing out within the economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Exports are growing
Decreases	Exports are declining

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the suite of **Coincident Indicators**.

## REAL PER CAPITA INCOME (LESS TRANSFER PAYMENTS)

### *What is it?*

This is a trend indicator that tracks income (wages/salaries, investment income, and rents), corrected for inflation and population growth. Transfer payments are payments made by the government without any service or product traded in return (welfare, equalization payments etc.). This figure tells us how much of the money generated by economic production makes it back to the household sector. This figure is reported in CAD.

### *What does it tell us?*

This indicator gives us insight into changes in the household sector's access to consumer goods through earned income. Coupled with GDP figures, this indicator can offer insight into the distribution of wealth that is created by the business sector (i.e. do incomes grow at the same rate as economic production).

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Domestic incomes are growing
Decreases	Domestic incomes are declining

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the suite of **Coincident Indicators**.

## NON-AG EMPLOYEE HOURS (NUMBER OF EMPLOYEES - IF HOURS UNAVAILABLE)

### *What is it?*

This is a trend indicator that tracks the number of hours worked by the labour pool, exclusive of workers in the agricultural sector<sup>3</sup>.

### *What does it tell us?*

This indicator gives us a picture of the quantity of labour being used in our productive economy. This is highly correlated to economic activity and is a primary driver for changes in income.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Employment is increasing
Decreases	Employment is declining

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the suite of **Coincident Indicators**.

## LAGGING COMPOSITE INDICATOR

### *What is it?*

A Lagging Composite Indicator is a combination of observable economic variables that may inform expectations regarding the duration of current economic trends. Lagging economic variables typically include: the Consumer Price Index, Duration of Unemployment and the Interest Rate.

### *What does it tell us?*

A Lagging Composite Indicator will give insight into the expected duration of current economic trends (i.e. Lagging indicators may

### *How do we interpret it?*

Depends on the indicator.

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<sup>3</sup> The agricultural sector behaves adequately differently from the rest of the economy that economists typically analyse agriculture separately. This prevents effects in one segment of the economy from tainting results in the other.

### *Recommended for Consideration*

Incorporate an appropriate Lagging Economic Indicator.

## PRIME BANK RATE

### *What is it?*

This is a trend indicator that tracks changes in the interest rate charged by the Bank of Canada. The Bank of Canada manipulates the prime rate as a policy tool. It is, thus, an indicator of the Bank of Canada expectations for economic performance

### *What does it tell us?*

This indicator gives an idea how concerned the Bank of Canada is with inflation or stimulating the economy. The bank generally raises interest rates if they are worried about inflation, and lower rates to stimulate the economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Bank of Canada is concerned with inflation
Decreases	Bank of Canada is concerned with stimulating growth

### *Recommended for Consideration*

This indicator should be considered for our suite of economic indicators, as part of the **Lagging Indicators**.

## CONSUMER PRICE INDEX (CPI)

### *What is it?*

This is a trend indicator that tracks changes in overall price levels. The CPI tracks the prices of a “basket of goods” that is representative of a “typical” consumer’s purchasing patterns

### *What does it tell us?*

The CPI tells us the rate of inflation, or how quickly general price levels increase.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Prices are increasing
Decreases	Prices are falling

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of the **Lagging Indicators**.

## DURATION OF UNEMPLOYMENT

### *What is it?*

This is a trend indicator that tracks the length of time it takes for the unemployed to find jobs. This reflects what has been happening in the recent past in the labour market.

### *What does it tell us?*

This indicator gives users a picture of how long the unemployed must search for new work. In a recession, we would expect search times to increase. Provided this data can be obtained in a timely manner, this is a good **Lagging Indicator** for the economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	The unemployed are experiencing longer search times
Decreases	The unemployed are finding jobs faster

### *Recommended for Consideration*

Provided data is available in a timely manner, this indicator should be brought into our suite of economic indicators, as part of the suites of: **Lagging Indicators** and **Labour Market Indicators**.

## EXCHANGE RATE

### *What is it?*

This is a direct indicator of the CAD:USD exchange rate. We've chosen the American rate, as the USA is the principal trading partner for Boundary Basin regional businesses and the source of the majority of international visitors.

### *What does it tell us?*

Tracking the exchange rate tells us how far the Canadian dollar will go purchasing foreign goods and services. It also gives us a relative measure of how attractive Canadian goods and services will appear in foreign markets.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
CAD Appreciates	Canadians can afford more imports; foreigners can afford fewer Canadian exports
CAD Depreciates	Canadians can afford fewer imports; foreigners can afford more Canadian exports

### *Recommended for Consideration*

This indicator should be brought into our suite of **Macroeconomic Indicators**.

## EXISTING HOME SALES / PRICES<sup>4</sup>

### *What is it?*

This indicator tracks the number of home sales, average closing price, and trends.

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<sup>4</sup> Discussion of this indicator also included in Housing and Infrastructure Literature Review.

### *What does it tell us?*

Housing affordability is an issue that is consistently flagged at public meetings and amongst policy makers and business interests. Changes in the housing market contribute to changes in overall well-being and do so significantly, given the proportion of income usually spent on housing.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Increased activity in market / Positive pressure on prices
Decreases	Decreased activity in market / Negative pressure on prices

### *Recommended for Consideration*

This indicator should be considered for our suite of **Macroeconomic Indicators**.

## **BUSINESS FORMATIONS & BANKRUPTCIES**

### *What is it?*

The number of new businesses that incorporate and the number of businesses that file for bankruptcy.

### *What does it tell us?*

This figure gives us an indication of the general qualities of the business climate in the region. However, the business formations figure only reports incorporations. Given the proportion of business in the region that are sole-proprietor / small-business, this figure will lack depth when applied to the Basin-Boundary region.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Business sector supports new business / Business sector is not supporting existing businesses
Decreases	Business sector is not supporting new businesses / Business sector is supporting existing businesses

### *Recommended for Consideration*

Continue tracking this indicator and include it in the **Macroeconomic Indicators**.

## **BUSINESS VITALITY INDICES (BVI)<sup>5</sup>**

### *What is it?*

The BVI is a composite index that benchmarks a community's perceived business environment.

### *What does it tell us?*

This is a composite / synthetic indicator that was developed by the Centre for Innovative and Entrepreneurial Leadership (CIEL). This has not been peer reviewed or tested extensively.

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<sup>5</sup> The Business Vitality Initiative process was developed by and remains the intellectual property of the Centre for Innovative and Entrepreneurial Leadership (CIEL)



However, the communities that have worked through BVIs have been happy with the product and process.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Communities have a positive outlook on their prospects and on their business sector.
Decreases	Communities are feeling less positive about their prospects and about their business sector.

*Recommended for Consideration*

This indicator should be considered for our suite of **Macroeconomic Indicators**.

### RATIO OF INVENTORIES : SALES (MFG AND TRADE)

*What is it?*

This indicator follows the ratio between inventories and sales.

*What does it tell us?*

When sales are high, inventories will tend to be drawn down; they will tend to build when business is slow. This indicator tells us, generally, whether inventories are building or falling relative to sales.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Production is greater than sales
Decreases	Production is not keeping up with sales

*Recommended for Consideration*

Provided data can be obtained at an appropriate regional level, this indicator should be considered for our suite of economic indicators, as part of the **Macroeconomic Indicators**.

### REAL PER CAPITA GROSS NATIONAL PRODUCT (GNP)

*What is it?*

This is a trend indicator that tracks real per capita GNP. This indicator measures the level of economic production by citizens (as opposed to GDP that measures activity within the referent area – regardless of *who* produces it, for a given time period, corrected for inflation (real) and population growth (per capita).

*What does it tell us?*

Comparing this figure against GDP indicates how much of the wealth generated by local production leaves the area.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Production by locals (regardless of where it occurred) grew

Decreases      Production by locals (regardless of where it occurred) fell

*Recommended for Consideration*

Provided data can be obtained at an appropriate regional level, this indicator should be considered for our suite of economic indicators, as part of the **Macroeconomic Indicators**.

### BASIN VISITOR CENTRE USAGE

*What is it?*

The number of individuals/groups who sought travel advice at Visitor Centres, within the Kootenay Rockies tourism region.

*What does it tell us?*

This is the best available measure of the number of tourists who travel through the Basin. A stable or growing level of visits usually signals a stable or growing tourism sector.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	An increase in the number of consumers in the Tourism sector.
Decreases	A decrease in the number of consumers in the Tourism sector.

*Recommended for Consideration*

Continue tracking this indicator and include it in the **Tourism Sector Indicators**.

### REAL INCOME (USA)

*What is it?*

See previous description of Real Income. Many international visitors to the region come from the United States.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Tourism Sector Indicators**.

### ACCOMMODATIONS REVENUES

*What is it?*

The gross revenues from rooms rented (not including operations with fewer than three rooms).

*What does it tell us?*

Room revenues provide a measure of the financial activity of the accommodation sector, which is a large component of the tourism industry in the Basin. Used in conjunction with the above noted tourism figures, we begin to see a picture of tourism in the Basin.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Increased activity in part of the Tourism sector.
Decreases	Decreased activity in part of the Tourism sector.

*Recommended for Consideration*

Continue tracking this indicator and include it in the **Tourism Sector Indicators**.

## FOOD SERVICE REVENUES

*What is it?*

The gross revenues from food service establishments.

*What does it tell us?*

Food service revenues provide a measure of the financial activity in a large sub-sector of the tourism industry in the region. Used in conjunction with the above noted tourism figures, we begin to see a picture of tourism in the Basin.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Increased activity in part of the Tourism sector.
Decreases	Decreased activity in part of the Tourism sector.

*Recommended for Consideration*

Continue tracking this indicator

## TOURISM EMPLOYMENT (FULL-TIME AND PART-TIME)

*What is it?*

Number of people employed in the Tourism Sector. This is broken down by gender, age and education.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Tourism Sector Indicators**.

## TOURISM WAGES

*What is it?*

The average wages earned by labour in the Tourism Sector (hourly, weekly, monthly, and annual), broken down by gender.

*Recommendation*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Tourism Sector Indicators**.

## FORESTRY REVENUES

### *What is it?*

The gross revenues from forestry operations, including extraction, processing and management.

### *What does it tell us?*

Tracking forestry revenues give us an indication of the level of activity in the forest sector.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Increased activity in the Forestry sector.
Decreases	Decreased activity in the Forestry sector.

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Forestry Sector Indicators**.

## TRADE REVENUES

### *What is it?*

The gross revenues from forestry operations, including extraction, processing and management shipped to the export market.

### *What does it tell us?*

This allows us to track the interaction between forestry producers and the export market.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Increased forestry exports.
Decreases	Decreased forestry exports.

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Forestry Sector Indicators**.

## HOUSING STARTS (USA & CHINA)

### *What is it?*

Housing starts figures from the two largest economies.

### *What does it tell us?*

Housing is the main driver of the dimensional lumber market. Housing starts in our trading partners' domestic markets should have an impact on their import demand. Forestry is a major export market for British Columbia.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	May lead to increased prices and trade.

Decreases      May lead to decreased prices and trade.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Forestry Sector Indicators**.

## FIBRE PRICES

*What is it?*

Current market prices for a variety of log and timber prices.

*What does it tell us?*

Forestry is a primary industry. Fibre prices have a direct impact on the health of the Forest Sector.

*How do we interpret it?*

Indicator	Indication
Increases	Increased revenues and activity in the Forestry sector.
Decreases	Decreased revenues and activity in the Forestry sector.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Forestry Sector Indicators**.

## FORESTRY EMPLOYMENT

*What is it?*

Number of people employed in the Forestry Sector. This is broken down by gender, age and education.

*What does it tell us?*

This figure tells us how employment in the forestry sector is changing.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Forestry Sector Indicators**.

## FORESTRY WAGES

*What is it?*

The average wages earned by labour in the Tourism Sector (hourly, weekly, monthly, and annual), broken down by gender.

*What does it tell us?*

This figure tells us how well jobs in this sector pay labour.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Forestry Sector Indicators**.

## MINING & METALLURGY REVENUES

### *What is it?*

The gross revenues from Mining & Metallurgical sectors.

### *What does it tell us?*

Tracking these revenues give us an indication of the level of activity in the Mining & Metallurgical sector.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Increased activity in the Mining & Metallurgical sectors.
Decreases	Decreased activity in the Mining & Metallurgical sectors.

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Mining Sector Indicators**.

## EXPLORATION SPENDING

### *What is it?*

This is the total spending on exploration and surveying.

### *What does it tell us?*

This figure tells us about the expectations of management in the mining sector. When management thinks prospects are good, they tend to spend money on exploration. They tend to reduce exploration spending when the markets look poor.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Strong expectations for mining sector.
Decreases	Weak expectations for mining sector.

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Mining Sector Indicators**.

## SELECT METALS PRICES

### *What is it?*

Current market prices for a variety of metals (i.e. metallurgical coal, lead, silver, etc.)

### *What does it tell us?*

Mining is a primary industry. Metals prices have a direct impact on the health of the mining sector. Since minerals are one of the primary inputs in the metallurgical sector, metals prices (similarly) have a direct impact on the health of the Metallurgical Sector.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	May lead to increased activity in the Mining & Metallurgical Sectors.
Decreases	May lead to decreased activity in the Mining & Metallurgical Sectors.

#### *Recommendation*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Mining Sector Indicators**.

### **MINING & METALLURGY EMPLOYMENT**

#### *What is it?*

Number of people employed in the Mining & Metallurgical Sector. This is broken down by gender, age and education.

#### *What does it tell us?*

This figure tells us how employment in the Mining & Metallurgical sector is changing.

#### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Mining Sector Indicators**.

### **MINING & METALLURGY WAGES**

#### *What is it?*

The average wages earned by labour in the Mining & Metallurgical Sector (hourly, weekly, monthly, and annual), broken down by gender.

#### *What does it tell us?*

This figure tells us how well jobs in this sector pay labour.

#### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Mining Sector Indicators**.

### **CHANGES IN AGRICULTURAL LAND RESERVE**

#### *What is it?*

This reports any changes to the physical lands managed under the Agricultural Land Reserve.

#### *What does it tell us?*

This figure may give an indication that the ALR is facing transformative pressures. This may be indicative of changing land use competition.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Agricultural Land-Base is being eroded.
Decreases	Agricultural Land-Base is stabilizing.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Agricultural Sector Indicators**.

## AGRICULTURE REVENUES

*What is it?*

The gross revenues from the Agricultural Sector.

*What does it tell us?*

Tracking these revenues give us an indication of the level of activity in the Agriculture sector.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Increased activity in the agricultural sectors.
Decreases	Decreased activity in the agricultural sectors.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Agricultural Sector Indicators**.

## COMMODITY PRICES

*What is it?*

Current market prices for a variety of commodities (i.e. dairy, etc.)

*What does it tell us?*

Agriculture is a primary industry. Commodity prices have a direct impact on the health of the Agricultural Sector.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	May lead to increased activity in the Agricultural Sector.
Decreases	May lead to decreased activity in the Agricultural Sector.

*Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Agricultural Sector Indicators**.



## AGRICULTURAL EMPLOYMENT

### *What is it?*

Number of people employed in the Agricultural Sector. This is broken down by gender, age and education.

### *What does it tell us?*

This figure tells us how employment in the Agricultural sector is changing.

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Agricultural Sector Indicators**.

## AGRICULTURE WAGES

### *What is it?*

The average wages earned by labour in the Agricultural Sector. Hourly, weekly, monthly, and annual. Broken down by gender.

### *What does it tell us?*

This figure tells us how well jobs in this sector pay labour.

### *Recommended for Consideration*

This indicator should be brought into our suite of economic indicators, as part of a suite of **Agricultural Sector Indicators**.

## WORKFORCE

### LABOUR FORCE PARTICIPATION RATE: TOTAL, BY AGE, BY GENDER

#### *What is it?*

The Labour-Force is defined as those people of working age (15 and over) who are employed or seeking employment. The Participation Rate measures the percentage of the working age population that is part of the Labour-Force<sup>6</sup>.

#### *What does it tell us?*

This figure can inform us about trends in the population's decision whether to engage in the labour market or not. Specifically, this indicator is most relevant in gender, age-group, and regional comparisons. This data is needed to understand economic and social structures that create working environments that induce or reduce participation rates.

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<sup>6</sup> Canada Participation Rate = 68.5%

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	More people are engaged in the formal labour market.
Decreases	Fewer people are engaged in the formal labour market.

### *Recommended for Consideration*

Continue tracking this indicator and include it in the **Labour Market Indicators**.

## **EMPLOYMENT: BY SECTOR, BY FULL-TIME VS. PART-TIME**

### *What is it?*

The number of people employed, broken down by sector and by full-time vs. part-time employment.

### *What does it tell us?*

This figure tells us which sector of the economy is providing the most jobs, and gives an indication of the quality of those jobs (F-T vs P-T). Examining trends in these figures tells us which sectors are growing/declining in their importance to generating income for the workforce.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	More people are being employed in a sector / with full-time work.
Decreases	Fewer people are being employed in a sector / with full-time work.

### *Recommended for Consideration*

Continue tracking this indicator and include it in the **Labour Market Indicators**.

## **MEDIAN REAL INCOME: DISTRIBUTION (M/F, HOUSEHOLD, ETC.)**

### *What is it?*

The median income of the population, for people 15 years and over. Distribution of income provides figures describing the numbers of people earning less than the median, more than the median, and the nature of the range of incomes.

### *What does it tell us?*

The median represents the mid-point, meaning half of the population have incomes above that point and half below. Indicators are built for the total population and for men and women, or any other population of interest.

Median income reflects the relative income opportunities in a local economy. The median levels for men and women illustrate the differences between the genders, and may highlight income challenges for women in a particular area.

Income distribution is very important as a complementary statistic used to understand the social structure and opportunities open to members of different economic strata.

“Real” means that the figures have been corrected for inflation, thus reflecting “real” changes in purchasing power.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Positive growth in regional incomes
Decreases	Negative growth in regional incomes

*Recommended for Consideration*

Continue tracking this indicator and include it in the **Labour Market Indicators**.

## INCOME ASSISTANCE & GIS RECIPIENTS

*What is it?*

The percentage of residents of a specific age who receive BC Basic Benefits or the Guaranteed Income Supplement (GIS).

*What does it tell us?*

This indicator provides a rough estimate of the level of poverty in an area, and an indication of the need for income support to mitigate the negative impacts of that poverty.

Residents from 0-64 years are eligible for BC Basic Benefits if their family is unable to earn an adequate income and they qualify based on restrictive criteria. The first indicator measures the percentage of residents in this age group who receive Benefits; the second specifically measures the percentage of children aged 0-18 receiving Benefits.

Residents older than 64 years are eligible for the Guaranteed Income Supplement (GIS) if their income from other sources is not adequate. The third indicator measures the portion of older residents receiving the maximum GIS.

Note: As there are eligibility criteria that restrict accessibility to BC Basic Benefits, this measure underestimates this portion of a local population.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	More people relying on social assistance
Decreases	Fewer people relying on social assistance

*Recommended for Consideration*

Continue tracking this indicator and include it in the **Labour Market Indicators**.

## GINI INDEX

### *What is it?*

The Gini Index is a measure of inequality. In this instance, it is a measure of income inequality<sup>7</sup>. Gini coefficients of income are calculated on market income as well as disposable income basis. The Gini coefficient on market income (pre-tax Gini index) is calculated on income before taxes and transfers, and it measures inequality in income without considering the effect of taxes and social spending. The Gini coefficient on disposable income (after-tax Gini index) is calculated on income after taxes and transfers, and it measures inequality in income after considering the effect of taxes and social spending.

### *What does it tell us?*

These indicators are highly relevant to the region's population. Understanding the level of inequality indicates how well society is providing for the middle and lower classes. Since most of the population resides in those classes, it is relevant in terms of the majority's ability to participate in the commercial economy.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	More income inequality
Decreases	Less income inequality

### *Recommended for Consideration*

This indicator (pre-tax & after-tax) should be included in the **Labour Market Indicators**.

## REPLACEMENT RATIO

### *What is it?*

The ratio of the number of people aged 0 to 14 in 2006 who will be entering the workforce to "replace" the working population aged 50 to 64 who will be leaving the workforce in the next 15 years.

### *What does it tell us?*

The higher the ratio, the more young people there are relative to potential retirees. A ratio of 1.0 would mean that for every person retiring from the workforce, one is joining it<sup>8</sup>.

### *How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Potential for the workforce to grow.

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<sup>7</sup> "Income distribution – Inequality: Income distribution – Inequality – Country tables". OECD. 2012.

<sup>8</sup> Canada 2001 ~ 1.4, Canada 2011 ~ 0.99

<http://www12.statcan.gc.ca/census-recensement/2011/as-sa/98-311-x/98-311-x2011001-eng.cfm>

Decreases      Potential for the workforce to shrink.

*Recommended for Consideration*

Continue tracking this indicator and include it in the **Labour Market Indicators**.

## DEPENDENCY RATIO

*What is it?*

The dependent population (those under 15, and those over 65) divided by the workforce population<sup>9</sup>. This is (essentially) a ratio of those not working to those working.

*What does it tell us?*

This figure tells us how much of a support load is being placed on those in the workforce.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	Regional incomes being stretched further
Decreases	Regional incomes being stretched less

*Recommended for Consideration*

Continue tracking this indicator and include it in the **Labour Market Indicators**.

## EDUCATION LEVELS OF WORKFORCE

*What is it?*

The portion of the workforce aged 15 to 64 in 2006 who do not have high school graduation or some other certificate, diploma or degree and the portion that have some level of advanced education (trades, college, or university level).

*What does it tell us?*

This measure tells us what kinds of work our Labour Force is prepared to support. This is another measurement of human capital.

*How do we interpret it?*

<b>Indicator</b>	<b>Indication</b>
Increases	An increasing supply of labour with the indicated level of education.
Decreases	A decreasing supply of labour with the indicated level of education.

*Recommended for Consideration*

Continue tracking this indicator and include it in the **Labour Market Indicators**.

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<sup>9</sup> Global weighted average 66%, low UAE 36, highest Uganda 111, Canada 45  
[http://www.nationmaster.com/graph/hea\\_dep\\_rat\\_per\\_100-health-dependency-ratio-per-100](http://www.nationmaster.com/graph/hea_dep_rat_per_100-health-dependency-ratio-per-100)

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