

Trends Analysis: Workforce



OVERVIEW

'Workforce' can be generally thought of as those people currently working, or looking for work. Often it's discussed in relation to a certain sector (e.g., the skilled trades workforce) or geographic area (e.g., Columbia Basin-Boundary workforce). A skilled and engaged workforce is critical to the success of the economy.¹ Forecasts from the Kootenay Regional Workforce Table indicate 4,700 new jobs in the Kootenay Development Region by 2020, as well as 18,000 vacancies as a result of retiring workers.²

OVERVIEW CONTINUED

Provincially there are 291,900 new jobs forecasted between 2015 and 2025, with an additional 641,700 jobs opening due to replacement of retiring workers.³ Understanding the current characteristics and conditions of the workforce helps identify where action is needed and where targeted interventions (e.g., programs) can be made.

Indicators that shine a light on the conditions surrounding the workforce in the Columbia Basin-Boundary region include:

- Employment;
- Unemployment;
- Dependency;
- Workforce Education Levels;
- Wage by Employment Type;
- Income; and
- Labour Force Replacement Rate.

These indicators are presented in detail below, including a description of what is measured and its importance, as well as current data and trends where available.

EMPLOYMENT

WHAT DOES THIS MEASURE & WHY IS IT IMPORTANT?

This indicator tracks the total number of people employed by Development Region. There are two parts to this indicator. First, the number of people employed by sector are reported. Second, employment rates, the percentage of adults over age 15 that are engaged in the workforce, over time are reported. The employment rate measures the percentage of Canadian adults age 15 years of age and over working for pay. Data for this indicator were sourced from Statistics Canada's Labour Force Survey (LFS).⁴



Employment figures indicate whether there are increasing opportunities for the people of the region, and in which sectors they will find potential opportunities. Employment data can be used to help track economic diversity, resilience, and regional prosperity.

Three Development Regions are contained in whole or in part by the Columbia Basin-Boundary region. The Kootenay Development Region comprises the bulk of the Columbia Basin-Boundary, and includes the Regional Districts of Kootenay Boundary (RDKB), Central Kootenay (RDCK), and East Kootenay (RDEK). Our region also includes Revelstoke, Golden, Columbia Shuswap electoral areas A and B (Thompson-Okanagan Development Region), and the Village of Valemount (Cariboo Development Region).

WHAT ARE THE TRENDS & CURRENT CONDITIONS?

The Labour Force Survey shows overall job growth in Kootenay Development Region (+2.2% or 1,500) (see **Table 1**). Overall, the Services-producing sector has more jobs across all BC Development Regions. In the Kootenay Development Region, the Goods-producing sector experienced growth (+21.9%), while the Services-producing sector experienced losses (-5.1%). This is somewhat different from the province as a whole where both Goods and Services-producing sectors experienced growth. It is worth noting that the LFS data has a reliability threshold where if numbers are less than 1,500 the numbers cannot be published. As a result, the '0.0' numbers shown in **Table 1** are not necessarily zero in reality.

Sector	Kootenay Development Region			British Columbia		
	2014	2015	1 Year change	2014	2015	1 Year change
Total, All Industries	67.5	69.0	2.2%	2278.4	2306.2	1.2%
Goods-producing sector	18.3	22.3	21.9	449.9	459.1	2.0%
Agriculture	0.0	0.0	NA	24.3	22.2	-8.6%
Forestry, fishing, mining, quarrying, oil & gas	7.2	6.7	-6.9%	50.0	48.3	-3.4%
Utilities	0.0	0.0	NA	13.7	14.5	5.8%
Construction	4.6	8.4	82.6%	200.5	201.5	0.5%
Manufacturing	4.7	5.3	12.8%	161.4	172.5	6.9%
Services-producing sector	49.3	46.8	-5.1%	1828.5	1847.2	1.0%
Trade	11.8	11.3	-4.2%	358.0	352.9	-1.4%
Transportation & warehousing	3.3	2.5	-24.2%	133.8	140.0	4.6%
Finance, insurance, real estate & leasing	3.1	2.6	-16.1%	137.2	128.6	-6.3%
Professional, scientific & technical services	1.9	2.5	31.6%	182.3	188.1	3.2%
Business, building & other support services	1.7	1.7	0.0%	87.9	93.5	6.4%
Educational services	5.0	4.3	-14%	166.3	163.4	-1.7%
Health care & social assistance	9.5	9.2	-3.2%	269.8	287.4	6.5%
Information, culture & recreation	2.5	2.3	-8.0%	107.7	114.5	6.3%
Accommodation & food services	5.2	5.3	1.9%	185.3	177.5	-4.2%
Other services	3.3	3.2	-3.0%	102.4	105.1	2.6%
Public administration	1.9	2.0	5.3%	97.9	96.1	-1.8%

Table 1: Employment by sector (in thousands), 2014-2015⁴

It is important to understand that the LFS data are based on a survey of a sample of an area's residents. Statisticians take the answers from the sample and, based on this information, make estimations of how the whole population would answer the same questions.⁵ This process, or estimation, can be very accurate under favourable conditions. However, with smaller sample sizes, like those from rural places, variability and the likelihood of estimation error increase. Please refer to the Rural Development Institute (RDI) report, [Understanding Labour Force Survey Variability for the Basin-Boundary Region](#), for a complete discussion of this issue and recommendations.⁶

The LFS data also provides the employment rates for the province and the Development Regions.

Table 2 shows the total employment rates for the province and the development regions from 2010 to 2015, including percentage change for five years (2010 to 2015) and one year (2014 to 2015). Within the Columbia Basin-Boundary, the Cariboo has the highest employment rate (62.4%) and the only Development Region in the Columbia Basin-Boundary that was higher than the provincial average (59.5%) in 2015. Compared to the other Development Regions, the Cariboo has the third highest employment rate of the seven Development Regions, while the Thompson-Okanagan and Kootenay are fifth and sixth respectively.

Region	2010	2011	2012	2013	2014	2015	5 Year Change (2010-15)	1 Year Change (2014-15)
British Columbia	60.7	60.2	60.4	59.8	59.5	59.5	-2.0%	0.0%
Vancouver Island & Coast	59.4	56.0	55.8	56.1	54.2	54.6	-8.1%	0.7%
Lower Mainland/Southwest	61.2	61.3	61.4	60.6	60.8	60.7	-0.8%	-0.2%
Thompson/Okanagan	59.4	58.4	58.9	57.5	58.0	58.0	-2.4%	0.0%
Kootenay	54.7	56.8	58.7	62.1	55.2	56.6	3.5%	2.5%
Cariboo	62.8	64.0	67.0	64.5	67.2	62.4	-0.6%	-7.1%
North Coast & Nechako	60.7	64.2	59.1	60.8	58.7	63.5	4.6%	8.2%
Northeast	72.0	71.8	75.9	74.0	70.1	71.9	-0.1%	2.6%

Table 2: Employment Rate (%) for BC and by Development Region, 2010 to 2015⁴

UNEMPLOYMENT

WHAT DOES THIS MEASURE & WHY IS IT IMPORTANT?

This indicator tracks the unemployment rate by Development Region. The unemployment rate measures the percentage of individuals age 15 and older who are legally allowed to work in the labour force, that are actively seeking work, and that are not able to find work.^{4,7} This analysis also presents data for the youth component of the population. Data for this indicator were sourced from Statistics Canada's Labour Force Survey and are presented by Development Region.⁴

The unemployment rate is a strong indicator of economic health. If our economy's purpose is to allocate our resources to the best uses, then unemployment rates give us a good indication of how well the economy is using one of our most important resources—people. However, it is important to note that the unemployment rate does not capture factors like those who are no longer actively seeking work, or those who are forced to move elsewhere in search of employment.

WHAT ARE THE TRENDS & CURRENT CONDITIONS?

The impact of the 2008/2009 recession is clearly seen in the unemployment graphs (see **Figure 1**). Unemployment remains higher than pre-recession levels in all of BC's Development Regions, although numbers have fallen since the recession. The reported estimates typically show an increase in unemployment in 2015 compared to 2014. The Kootenay Development Region has an unemployment rate higher than the provincial and national rates.

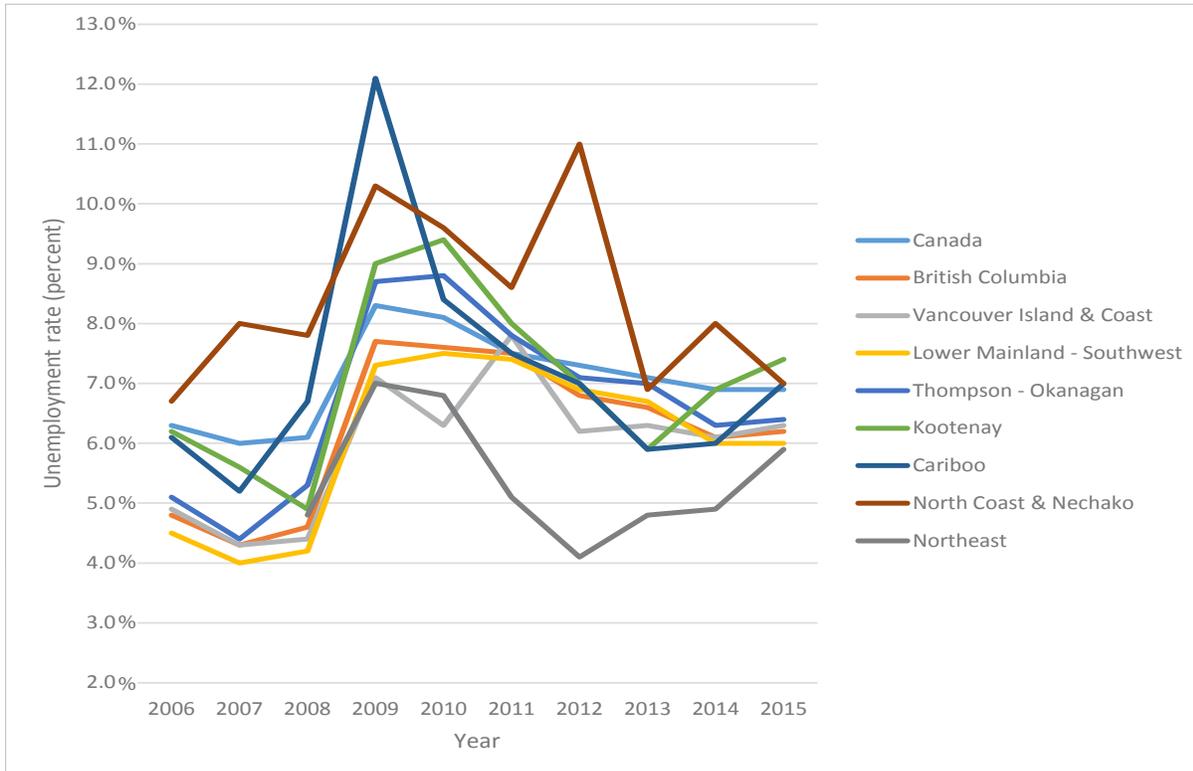


Figure 1: Total unemployment rate by Development Region (2006 to 2015)⁴

As with the employment numbers above, it is important to understand the limitations of the Labour Force Survey (LFS) data. The estimation used can be very accurate under favourable conditions. However, with smaller sample sizes, like those from rural places, variability and the likelihood of estimation error increase.

Youth unemployment refers to the unemployment rate for those individuals age 19 to 24 years. The youth unemployment rate is historically higher than the general unemployment rate reported above – something that is not unique to the Columbia Basin-Boundary, BC, or Canada.⁸ Several factors contribute to the gap between youth unemployment and the general unemployment rates, including that this is often the first entry into the workforce, and with limited experience, there is typically a period of unemployment before finding a job.⁸ Youth are also more likely to be laid off.⁸ However, youth who become unemployed are also typically quicker to find new employment than adults.⁸

In 2015, the youth unemployment rate for Canada was 10.9%, higher than the BC youth unemployment rate of 9.9%.⁴ Nationally and provincially the five year trend for youth unemployment shows 2015 levels have decreased from 2010 levels.⁴ The variability issues recognized above are more pronounced with youth unemployment given the small size of this demographic. Indeed, for the Kootenay Development Region the LFS data show many years as '0.0%', indicating that data have been suppressed because they are below reliability thresholds.⁴ Other sources estimate the 2015 youth unemployment rate for the Kootenay Development Region at 14.5%, which is higher than the provincial and national rates.⁹⁻¹¹

However, it is important to keep in mind that estimates on such a small sample size, likely have low reliability.

DEPENDENCY

WHAT DOES THIS MEASURE & WHY IS IT IMPORTANT?

This indicator compares the percentage of residents who are not in the workforce to those who are in the workforce. Data for this indicator are gathered from Statistics Canada (using census subdivisions) or BC Stats (using Regional Districts), depending on which data is more up-to-date. As the most recent census data is not available, BC Stats [Population Projections](#) are reported.¹²

Both child (under 15 years) and senior (over 65 years) dependencies are discussed. The workforce includes all residents age 15 to 64. The dependency level is calculated by dividing the dependent population (those under 15 and those over 64) by the workforce population (those age 15 to 64) to determine the percentage of the population that is 'dependent' on the workforce.

Many of the supports provided to children and seniors such as personal care, parenting, education, playgrounds, health care, activity programs, and facilities are supported by personal time and tax dollars contributed by those who are in the workforce. As dependency increases the greater the challenge may be for the workforce to maintain these supports and services.

WHAT ARE THE TRENDS & CURRENT CONDITIONS?

The Regional District of Fraser-Fort George has the highest child dependency ratio (24.4%) of the five regional districts within the Columbia Basin-Boundary, while the Regional District of Kootenay Boundary has the highest ratio for seniors (42.2%) and total dependency ratio (64.3%) (see **Figure 2**). The provincial dependency ratios are 21.4% for children, 25.7% for seniors, and 47.1% total, typically lower than the dependency rates found in the Columbia Basin-Boundary, with some exceptions.

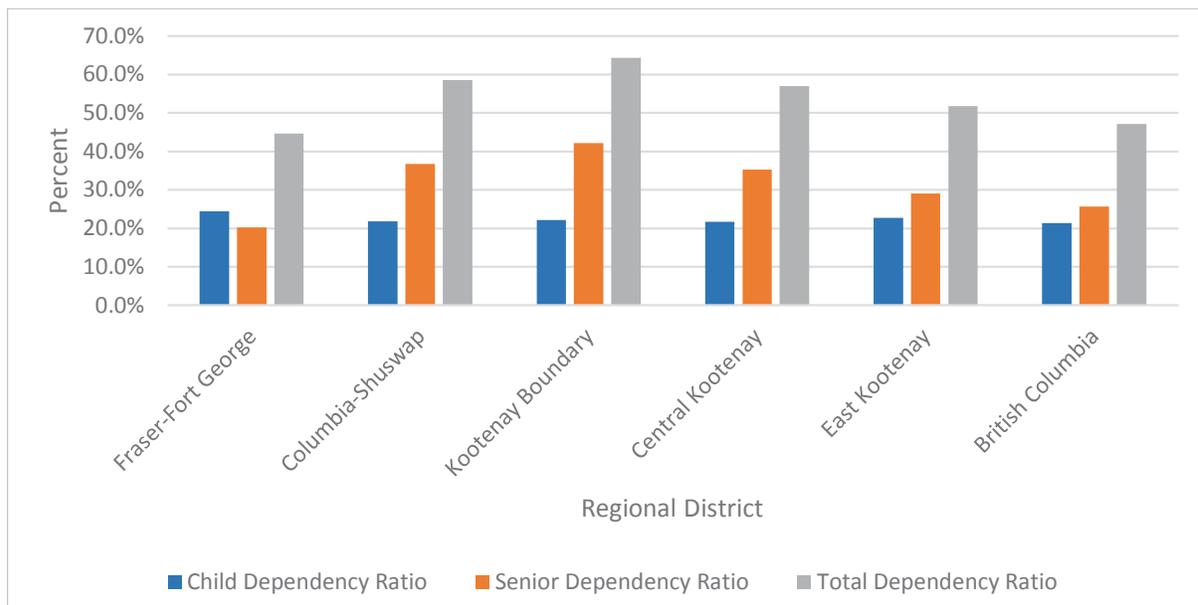


Figure 2: Dependency ratio by Regional District (2015)¹²

In terms of how the dependency ratio has changed, the total dependency ratio for all five Regional Districts and the Province have increased since 2010.¹² The provincial increase is the smallest at 8.5%, while the RDKB is the largest at 19.5%.¹²



WORKFORCE EDUCATION ATTAINMENT LEVELS

WHAT DOES THIS MEASURE & WHY IS IT IMPORTANT?

This indicator tracks the percentage of the labour force age 25 to 64 with a post-secondary education (i.e., a certificate, diploma or higher) by Development Region. Data for this indicator were sourced from Statistics Canada's Labour Force Survey (LFS).⁴

Education is a critical element of a region's workforce, and is important to economic growth, alongside other factors, like skills and productivity.¹³ The level of education achieved is one indicator of a skilled workforce. However, it is also important to note that while educational attainment is one indicator, the quality of education, particularly related to early education (e.g., pre-school and elementary school) is widely recognized as the most effective point of intervention, yielding more benefit than cost.^{14,15} Early childhood education as well as population level educational attainment is discussed in further detail in the [Education & Learning Trends Analysis](#).

WHAT ARE THE TRENDS & CURRENT CONDITIONS?

Analysis of the 2015 LFS data show that nationally 69.8% of the labour force has a post-secondary certificate, diploma, degree, or higher. This is slightly lower in BC (68.4%). The Kootenay Development Region has a higher percentage (69.3%) than the province (see **Figure 3**). While **Figure 3** shows variability between years, the trends for all Development Regions are upward.

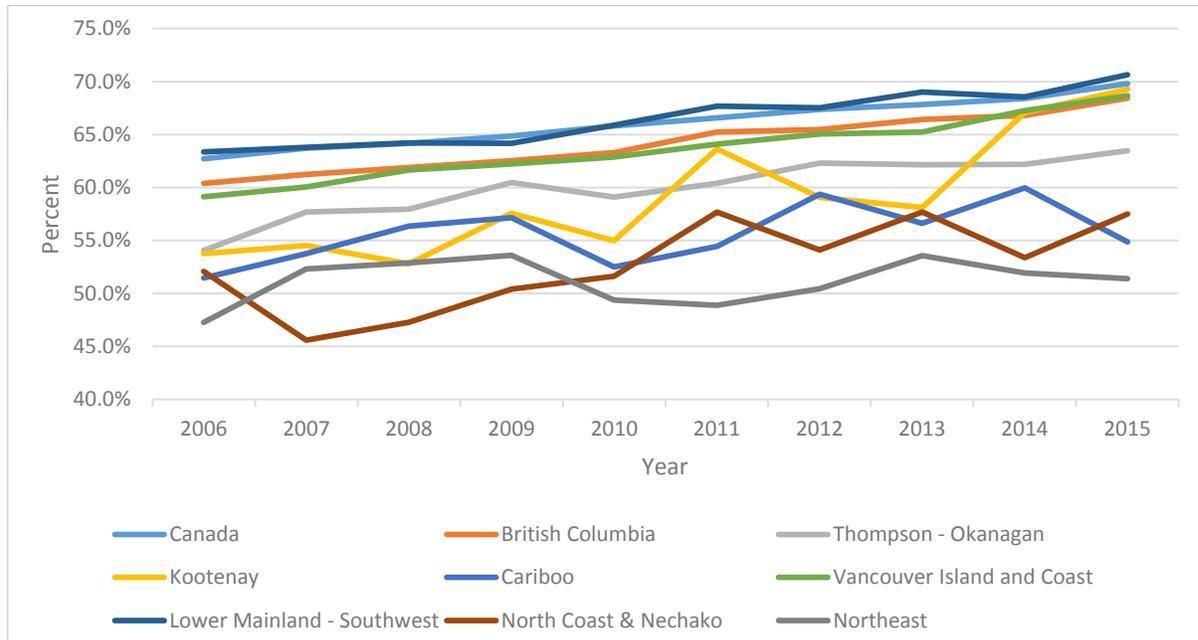


Figure 3: Percent of labour force (age 25-64) with a post-secondary certificate, diploma, degree, or higher (2006 to 2015)⁴

If only university degrees (bachelor or higher) are considered, the differences are more pronounced. The percentage of the Canadian labour force with a university degree is 31.6%, slightly lower than in BC (33%).⁴ However, both the national and provincial numbers are higher than the Kootenay Development Region where only 16.1% of the labour force have a university degree.⁴

WAGE BY EMPLOYMENT TYPE

WHAT DOES THIS MEASURE & WHY IS IT IMPORTANT?

This indicator measures the median hourly wage earned by employees age 15 years and over by Development Region. Results are presented for all, full-time, and part-time employed employees. Data for this indicator were sourced from Statistics Canada's Labour Force Survey. These statistics consider only wages for employees; self-employed workers are excluded.

Employment income constitutes the majority of most households' total income. Since income is a strong social determinant of health, trends in wages indicate trends in a region's [social](#) and [economic](#) well-being.

WHAT ARE THE TRENDS & CURRENT CONDITIONS?

Since 2006 wage rates have been on the rise in the Columbia Basin-Boundary, as well as provincially and nationally (see **Figure 4**). As of 2015, medianⁱ wage rates for all employees were higher in the Kootenay Development Region (\$23.90) than they were nationally (\$22.00) or provincially (\$22.60).

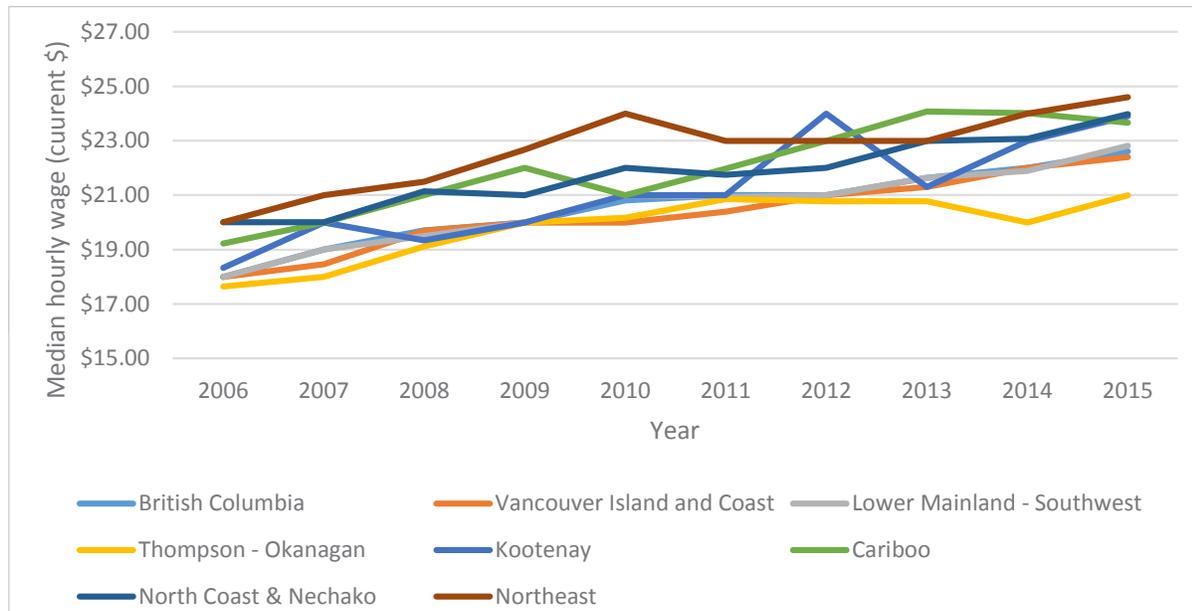


Figure 4: Median hourly wages for all employees, age 15+ (2006-2015)⁴

Full-time employees earn higher median hourly wages than part-time employees as shown in **Figure 5**. Hourly wages of part-time employees range between 54% and 62% of full-time wages. The difference in the Kootenay Development Region is 54.8%, lower than the provincial (62%), but higher than the national (54.5%). The average full time wage in the Kootenay Development Region (\$26.00) is higher than the national and provincial averages. Wage by employment type are also available on the [Digital Basin](#).¹⁶

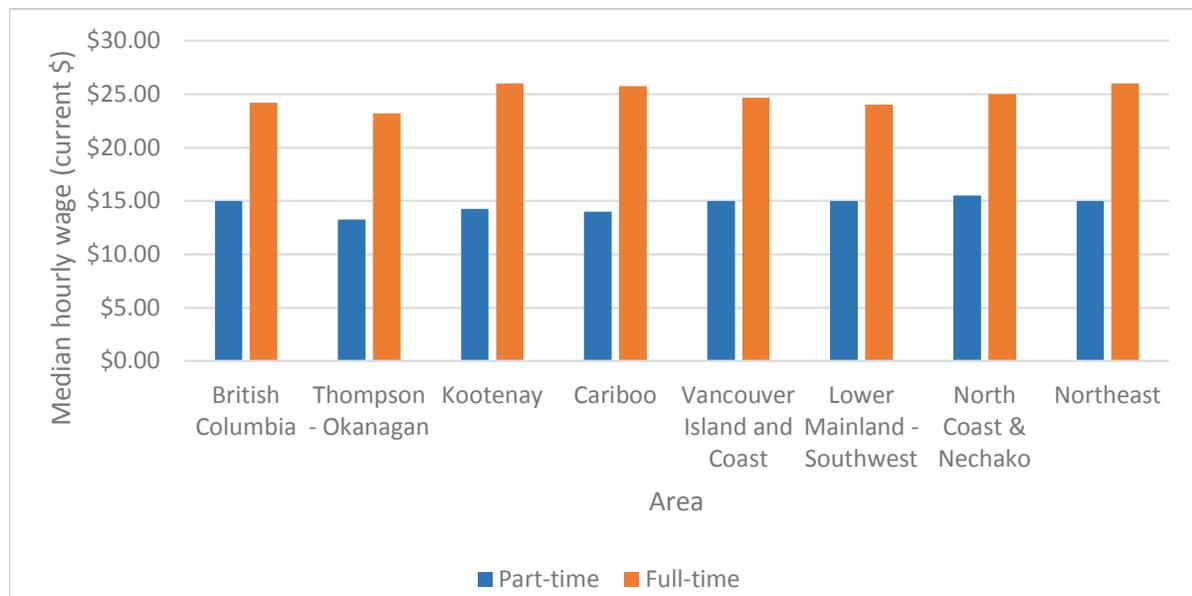


Figure 5: Median hourly wage for part-time versus full-time employees (2015)⁴

ⁱThe median is the value at the middle of the distribution that separates the higher half from the lower half.



INCOME

WHAT DOES THIS MEASURE & WHY IS IT IMPORTANT?

This indicator includes both the median and average income for all families within the Columbia Basin-Boundary population. Median income values differ from average income values in that they represent the mid-point in an income distribution, meaning half of the population has incomes above that point and half below. The average incomes presented are based on the average for a census familyⁱⁱ, while the median income presented is per individual. Data was sourced from the Statistics Canada Taxfiler data, and includes a comparison of the years 2010 to 2014. The data presented is based on postal geography, and therefore does not fully align with legal municipal boundaries, but rather includes the municipality as well as the general area surrounding that municipality. This data also does not differentiate between people who earn their income in the community versus someone who travels outside their community for work. For detailed information regarding boundaries, please [contact the RDI](#).

Income levels reflect relative opportunities in a local economy, and income is a substantial determinant of personal well-being. However, it is important to note that income does not include external supports that a family may have access to that are not represented in income tax data (e.g., inexpensive child care, education, medical costs), the family's ability to participate in the economy (e.g., seasonal employment, disability, unemployment), nor does it factor in regional differences in the cost of living (e.g., food, shelter, transportation).¹⁷ Looking at the [Market Basket Measure](#), [Low Income Measure](#), or other material deprivation measures can provide a more accurate measure of poverty.

ⁱⁱ**Census Family** is classified in the following manner: 1) couples (married or common-law) living in the same dwelling, with or without children; and 2) lone-parents (male or female) with one or more children.

WHAT ARE THE TRENDS & CURRENT CONDITIONS?

As shown in **Figure 6**, average income for families in 2014 is highest in the East Kootenay communities of Elkford (\$115,269) and Sparwood (\$101,085), along with Rossland (\$94,045) in the West Kootenay.

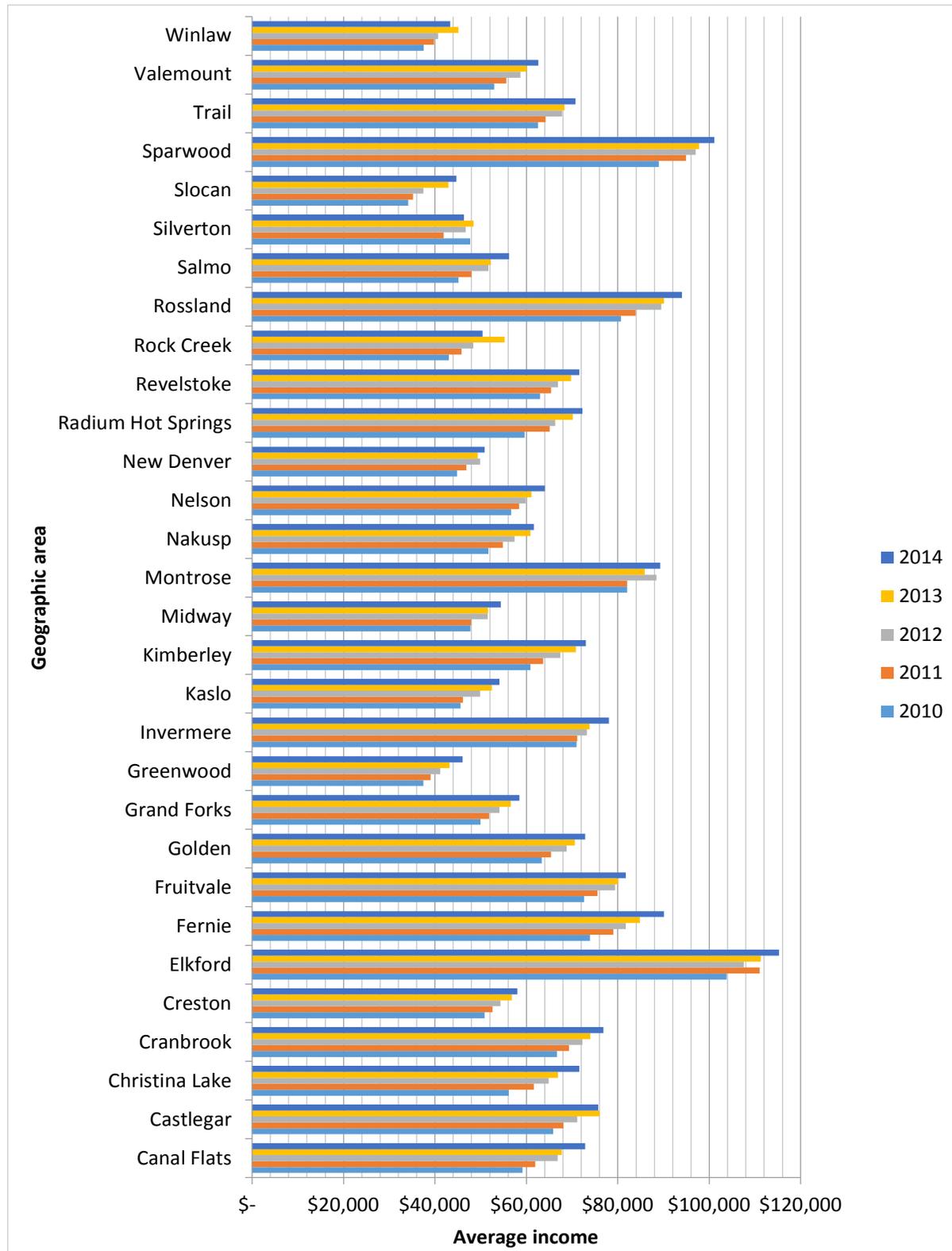


Figure 6: Average income for all families by geographic area, 2010 to 2014¹⁸

The lowest average incomes for families in 2014 were found in the West Kootenay communities of Winlaw (\$43,342), Slocan (\$44,671), and Silverton (\$46,324). The greatest increase in the average income between 2010 and 2014 was in Slocan, which saw a 31% increase and Christina Lake, which saw a 28% increase. The only community which saw a decrease between the average income in 2010 and 2014 was Silverton (-3%).

The provincial average income for families in 2014 was \$74,003, an increase of 12% from 2010. The average in 2014 for the Columbia Basin-Boundary was \$71,130, which is just below the provincial average. However, as shown in **Figure 7**, when looking at each regional district, the East Kootenay is above the provincial average (\$80,581), while both the Central Kootenay (\$62,573), and Kootenay Boundary (\$70,232.63) are below the provincial average.

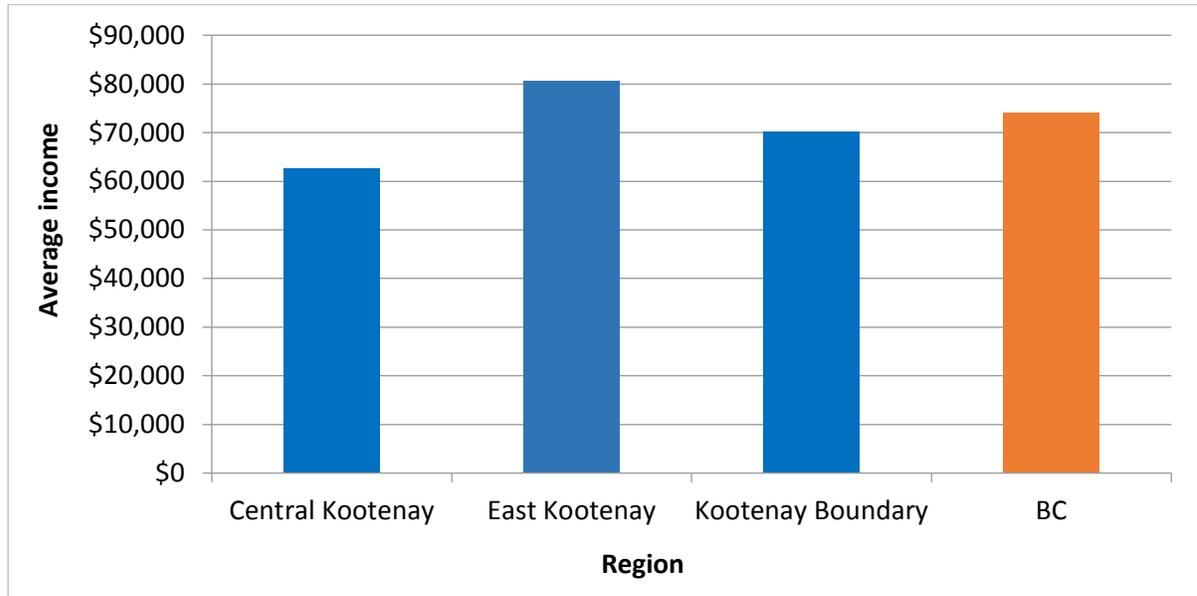


Figure 7: Average income for all families by regional district and BC for 2014¹⁸

Median income for individuals in 2014 mirrors the average income for families, with the highest median incomes in the communities of Elkford (\$50,470), Sparwood (\$39,660), and Rossland (\$36,070). The lowest median incomes in 2014 were found in the West Kootenay community of Winlaw (\$19,830), and the Kootenay Boundary communities of Greenwood (\$21,100) and Rock Creek (\$21,440). See **Figure 8** for details on individual median income for all communities between 2010 and 2014. The greatest increase in the average income between 2010 and 2014 was 20% in Christina Lake, Fernie, and Sparwood. New Denver and Montrose saw the smallest increases in median income between 2010 and 2014 of just 7%. The provincial median income in 2014 was \$29,290, an increase of 11% from 2010.

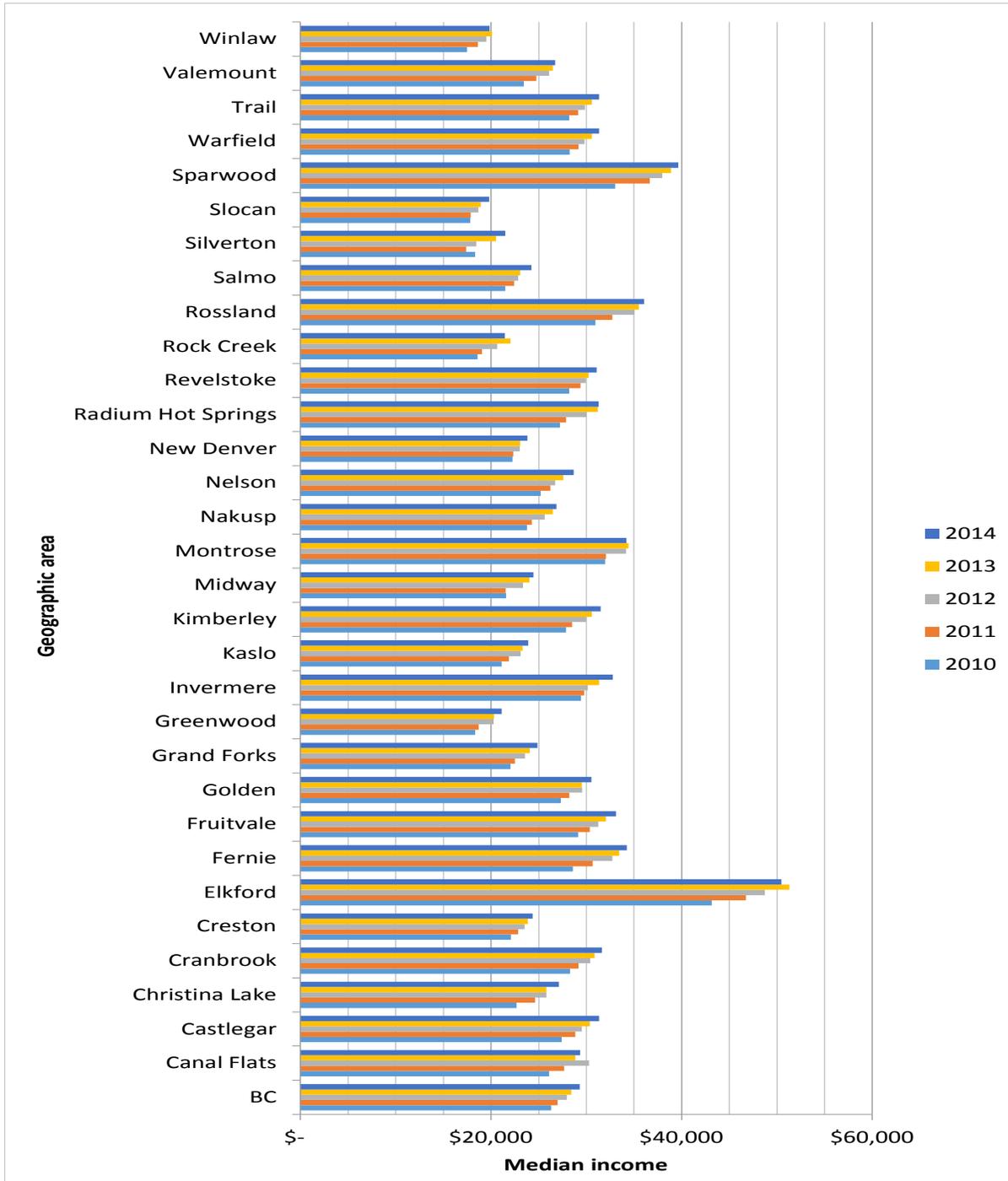


Figure 8: Median income for individuals by geographic area, 2010 to 2014¹⁹

LABOUR FORCE REPLACEMENT RATE

WHAT DOES THIS MEASURE & WHY IS IT IMPORTANT?

This indicator measures the ratio of the number of people age zero to 14 in 2015 who will be entering the workforce to the working population age 50 to 64 who will be leaving the workforce in the next 15 years. A ratio of 1.0 means the child and retiree populations are the same. The higher the ratio, the more young people there are relative to potential retirees. A ratio of less than 1.0 means an area is unable to maintain the current labour force with local replacement workers, and, as a result will either have to pursue solutions like encourage older workers to continue to work, bring in labour from other regions or countries, adopt technology to replace labour, or scale down the economy to fit the available labour force.

Data for this indicator are gathered from Statistics Canada (using census subdivisions) or BC Stats (using Regional Districts), depending on which data is more up-to-date. As the most recent census data is not available this year, BC Stats [Population Estimates](#) are being used.²⁰

WHAT ARE THE TRENDS & CURRENT CONDITIONS?

The provincial labour force replacement ratio for 2015 was 0.67, down from 0.7 in 2011, which provides another indicator of an aging demographic.²⁰ The ratios for four of the five Regional Districts within the Columbia Basin-Boundary are lower than the province (see **Figure 9**), which is not surprising given the demographic trends for the region. See the [Demographics Trends Analysis](#) for more information. The lowest replacement ratio is found in the RDKB (0.51), while the highest (0.76) is in the Regional District of Fraser-Fort George.

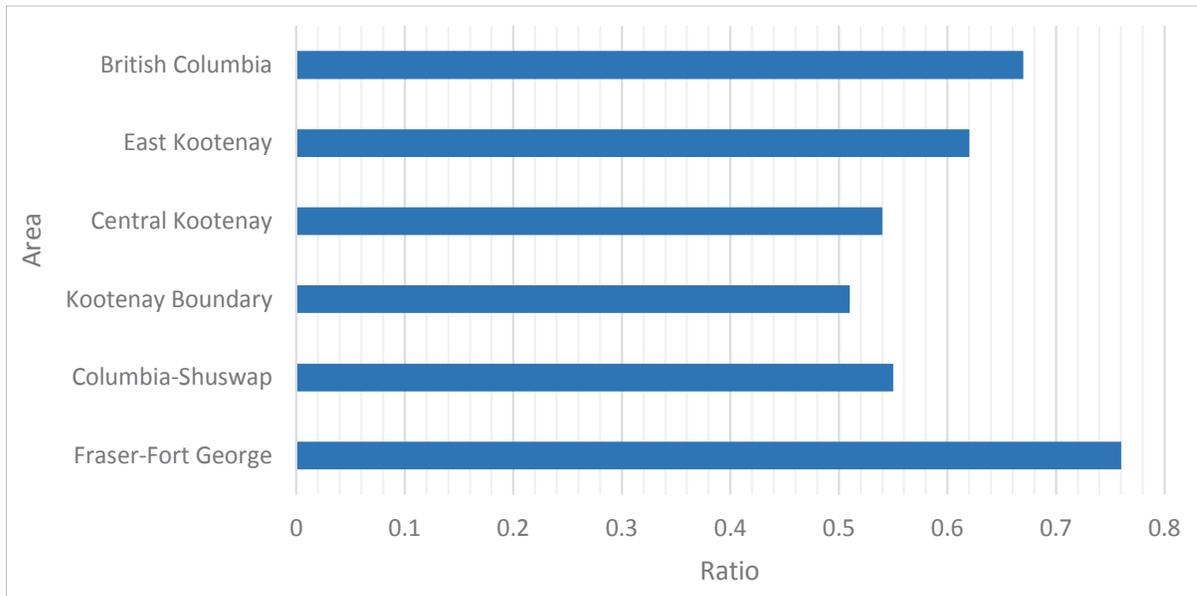


Figure 9: Labour force replacement ratio, by Regional District (2015)²⁰

Ratios below 1.0, both within the region and the province as a whole, are indicative of the need to attract youth, or pursue other options as noted above, in order to mitigate future labour shortages.



SUMMARY

This Trends Analysis highlights some of the indicators that begin to tell the story about our region's workforce. Over the last five years, employment rates have increased in the Kootenay Development region. Relative to other Development Regions, the Kootenay Development Region is sixth of seven, with the second lowest employment rate. In terms of unemployment, while unemployment rates have fallen in the Kootenay Development Region, rates remain higher than the provincial and national rates.

While we see median wage rates increasing over time, the average family income within the Columbia Basin-Boundary remains lower than the provincial average. General economic changes are discussed further in the [Economic Trends Analysis](#).

There has been an upward trend in educational attainment within the workforce across the region. However, university attainment levels remain below national and provincial numbers. For a more detailed discussion on education, see the [Education & Learning Trends Analysis](#).

Dependency ratios have increased since 2010 for all Regional Districts in the Columbia Basin-Boundary, as well as across the province. The labour force replacement rates are lower in the Columbia Basin-Boundary region than across the province. Both these indicators highlight the [aging demographics](#) of the Columbia Basin-Boundary region.

ECONOMIC TRENDS ANALYSIS DETAILS:

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The Columbia Basin Rural Development Institute, at Selkirk College, is a regional research centre with a mandate to support informed decision-making by Columbia Basin-Boundary communities through the provision of information, applied research and related outreach and extension support. Visit www.cbrdi.ca for more information.