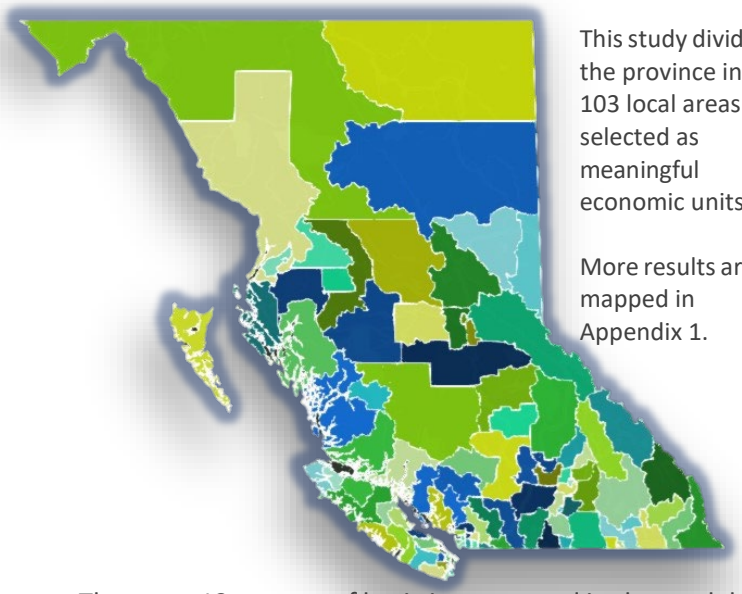
Local Area Economic Profiles

Reference dates: 2015 and 2020 Issue: #23-01 By: Jeff Dean Released: July 18, 2023

What makes up the economic base of British Columbia's regions? What is the most important industry in Port Hardy? How many jobs might be created if a new hotel opened in Golden? Many people want a better understanding of British Columbia's local economies – especially rural ones – and the local area economic profiles answer these questions and more.

Using detailed Census data and macroeconomic modelling, BC Stats studied the economic well-being of communities within the province. This overview provides key insights from the results published in a Microsoft Excel workbook on BC Stats' website.



This study divides the province into 103 local areas selected as meaningful economic units.

More results are mapped in Appendix 1.

Analytical Approach

This work assumes that a community's economy can be understood through two types of income flows:

- **Basic income** flows into the community from the outside world and forms its economic base. This is typically in the form of employment income for jobs in export-oriented sectors, but public sector jobs and non-employment investment income are also major sources.
- **Non-basic income** is generated from jobs that provide goods and services to the people who live there. Examples include much of retail trade, local transportation services, financial services and personal services.

There are 12 sources of basic income used in the model to represent the components of the economic base: 10 industrial sectors and two types of non-employment income. These include:

1. Forestry & associated manufacturing
2. Mining, Oil & Gas
3. Fishing & Trapping
4. Agriculture & Food Processing
5. Tourism
6. High Technology
7. Public Sector
8. Construction
9. Film Production & Sound Recording
10. Other industries
11. Government transfer payments
12. Other non-employment market income

Non-basic activities, and the people engaged in them, are just as important. Basic activities generate the income which circulates locally and pays for the many imports needed in a modern economy, while non-basic activities provide goods and services that local people need to make it a place they want to live. A balance is needed between the two.

BC Stats used this information to calculate a suite of indicators that make up each community's economic profile. The sections that follow provide general takeaways about six indicators making up these profiles:

- Income Dependencies
- Economic Diversity
- Forest Sector Vulnerability
- Employment Specialization
- Employment Impact Ratios
- Regional Service Centres

A note about the 2015 and 2020 reference years

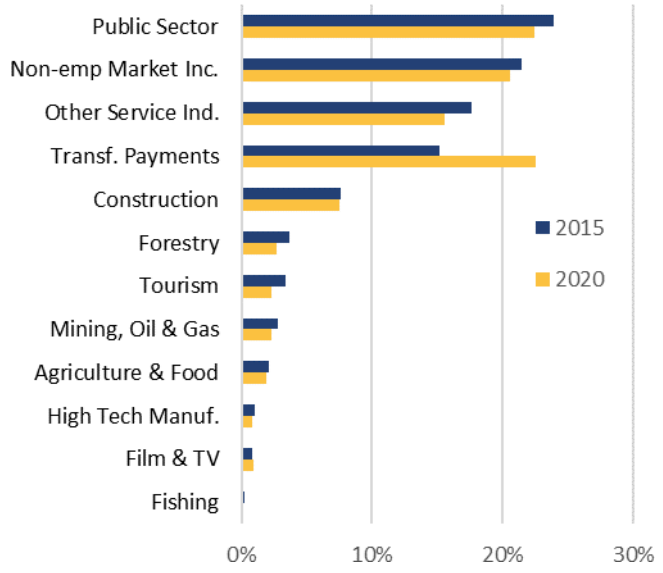
The model uses data from the 2016 and 2021 Censuses. The reference years are for 2015 and 2020, respectively, as those are deemed the most appropriate by Statistics Canada because of how people respond to the Census. The 2020 reference year presents multiple problems that readers should be aware of. First, in a normal year most people's employment status is not expected to change much. Between 2020 and 2021, however, many people lost jobs, worked reduced hours and lost income, and/or changed jobs due to impacts related to the COVID-19 pandemic. Second, at the time of publication, the 2020 input-output tables had not been released by Statistics Canada, so this study uses the 2019 tables to represent the macroeconomic structure of B.C.'s economy.

Despite these known problems, BC Stats has decided to publish the 2020 results for readers' interest. Some indicators should not be affected – for example, the Location Quotients and dominant basic income sources – while some will be impacted more. Results for the 2015 reference year are considered more reliable, though both reference years are available in the detailed results workbook. Additionally, we have decided not to publish statistics that use the "rest of province" geographical impact variable, available for the Income Dependence and Employment Impact Ratio indicators because the model calculates unreasonably high demand for many service sectors, and BC Stats needs to address how those excesses get reallocated by the model. BC Stats will work to address these issues in future updates of the model.

Income Dependencies

Income dependencies measure the economic base of a local area. They show what sources a local area depends on for its external income, whether through employment in the 10 basic industrial sectors or the two sources of basic non-employment income. The following figure shows British Columbia's income dependency for each of the 12 defined basic income sources.

Components of B.C.'s Economic Base
Income Dependencies for British Columbia
2015 and 2020



The public sector is the largest share of external income for many local areas

The public sector was the largest basic income source in 40 of the 103 local areas in 2015 and in 20 in 2020. Its share of the overall economic base declined from 24 to 23%. While this may seem high, public sector includes jobs in all levels of government and in the health and education sectors. Health and education are large in any economy and make up over two-thirds of the public sector total, about 10% and 7% of the overall economic base, respectively.

Public sector jobs are considered a basic income source because, while they are not entirely external income from the perspective of the province as a whole, for local areas they are.

Non-employment market income was also a large source

Other non-employment market income is the second- or third-largest source of basic income at about 21% province-wide and was the largest source for 24 local areas in 2015. In 2020 it was the largest source in just 13 local areas. This represents investment and private retirement income, as well as sources such as alimony and child support.

Government transfer income increased in 2020

Government transfer income was the largest single source of basic income in 20 local areas in 2015 and represented 15% of the economic base in that year. In part due to pandemic-related government supports, by 2020 it was largest in 63 local areas and the share had risen to almost 23%, overtaking private investment income and the public sector to take the top spot.

The size of the economic base in B.C. that was due to government transfers, as measured by the Census, rose from $24.6 billion in 2015 to $31.4 billion in 2020, a 28% increase.

The major part of government transfer income is for Canada Pension Plan (CPP) and Old Age Security (OAS) payments. According to tax filer data CPP and OAS made up 65% of those transfers in 2015. By 2020, other kinds of government transfers had risen by about 90% and CPP and OAS made up 55% of the total.

Construction was prominent within the private sector

When looking at private sector employment only – that is, excluding the public sector and both kinds of non-employment income – construction is the largest basic income source.

Construction typically represents about 7% of a local area's economic base and was the largest private sector basic income source for 39 local areas in 2015 and 43 in 2020. It represents a relatively larger share in some places like Mission, the North Peace and Kitimat.

While one could consider construction a local service industry, in the LAEP model it is considered mostly basic. In 2015, about 45% of construction-related employment income was for residential structures, 38% was for non-residential construction, and 17% was for government buildings and infrastructure. As there is no economic function to relate capital investment decisions to current economic conditions, demand for construction is considered external to the model and is treated as a basic income source.

High tech business services are important in some areas

The other service industries represents a portion of all non-basic industrial sectors, and results for these can be disaggregated into 12 non-basic sectors.

There are five local areas in 2015 and six in 2020, led by Burnaby-New Westminster and Vancouver, where employment in High Tech Business Services – largely for exports of information technology services – is the dominant basic income source from private sector employment.

The natural resource sector was the top source of private sector employment income in more than half of the local areas

Natural resource sectors represented 9% of the province's economic base in 2015 and 7% in 2020. In 2015, 54 local areas had a natural resource sector as the largest part of the private sector economic base. Taken together to mean the following four sectors, forestry was largest in 39 areas in 2015; mining, oil and gas was largest in 12; and agriculture and food was largest in three local areas. Fishing and trapping, the last of the four natural resource sectors, wasn't the largest part of the private sector economic base in any local area, though it did form about 8% in Port Hardy and Clayoquot.

What are *Other Service Industries*?

There are 12 non-basic industry sectors in the LAEP model: communications; FIRE (finance, insurance and real estate); high tech business services; low-tech business services; truck transport; rail transport; water transport; other transport; utilities; small manufacturing; retail; and wholesale trade.

These sectors are considered to primarily provide service to the local area in two ways: as intermediate suppliers to basic industries through the indirect effect; and as suppliers to households through the induced effect.

However, each non-basic sector is treated as partially basic, and in this respect forms part of the area's economic base. This study takes the portion of these which are used for certain types of final demand in the province's input-output tables: international and interprovincial exports, capital formation, and several others. That portion is called other industries or other service industries.

For example, the sector *high tech business services* includes the industry software publishers (NAICS 5112). In B.C.'s 2015 input-output tables, 42% of that industry's total output is exported and 26% is used for investment in intellectual property. Therefore 68% of that industry in each area is considered basic and contributes to the *other industries* category of the economic base.

Some local areas have a unique economic base

Rounding out the 12 basic income sources are tourism, high tech manufacturing, and film and TV production.

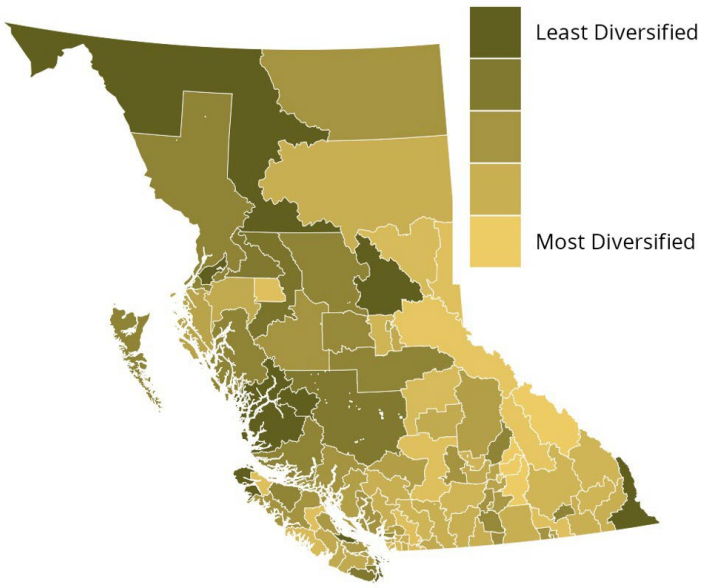
Tourism was the dominant part of the private sector economic base of three local areas in 2015, led by the

Whistler-Pemberton area at 16% and followed by Clayoquot (i.e., Tofino and Ucluelet) and the Central Coast (primarily Bella Bella). For the province as a whole, tourism represented about 3.4% of the economic base in 2015.[1]

High tech manufacturing and film and TV production were not the dominant source in any area, but Richmond had the largest income dependency from high tech at 2.5% of its economic base in 2015, and Vancouver had the highest dependency on film and TV production at 2.9% of its economic base.

Detailed results for this indicator are provided in the companion Microsoft Excel workbook.

Diversity Index, 2015



Economic Diversity

Though a community with one dominant industry may be better off than one with a number of smaller industries, a diversified economic base will provide more community stability in uncertain economic times. This is what the Diversity Index measures. It would be zero if the area were entirely dependent on one sector, and at the other extreme it would be 100 if a local area were equally dependent on each of the defined sectors. In practice, it tends to be between 50 and 80 in B.C.

Employment Specialization

An area's Location Quotient (LQ) is a measure of its industrial specialization. It measures the share of local employment in a given industry relative to the provincial average. A location quotient of 2 indicates that an area has twice as many jobs in a given industry relative to the size of the economy, while an LQ of 0.5 means there are half as many jobs.

Most Specialized Local Areas by Industry
Top 3 Areas by Location Quotients for Select Industry Sectors, 2020

Logging		Mining, Oil & Gas		Fishing, Hunting & Trapping	
Alert Bay - Port McNeill	23.9	Fernie	24.3	Port Hardy	38.2
Mackenzie	21.8	Princeton	18.3	Haida Nation	29.5
Strathcona	17.1	Kitimat	17.9	Mount Waddington	28.5
Farming, Greenhouses & Aquaculture		**High Tech Manufacturing**		**High Tech Business Services**		**Film & TV**	
Keremeos	13.7		2.0	Greater Vancouver	1.7	Greater Vancouver	2.9
Chilcotin	12.6		1.9	North Shore	1.7	North Shore	2.2
Oliver-Osoyoos	7.2		1.8	Burnaby - New Westminster	1.5	Burnaby - New Westminster	1.7
Construction		**Small Manufacturing**		**Rail Transport**		**Utilities**	
Cassiar Corridor	2.0	Sicamous	2.0	Revelstoke	20.9	Trail	4.3
Columbia - Shuswap	2.0	Chilliwack	1.9	Golden	15.6	Rossland	4.1
Stikine	1.9	Matsqui-Abbottsford	1.8	Telkwa - Smithers	11.5	North Peace	3.5
Federal Government		**Provincial Government**		**Tourism - Accommodation**		**Tourism - Recreation & entertainment**	
Comox	3.7	Greater Victoria	4.9	Clayoquot	13.1	Haida Nation	4.0
Westshore Communities	3.7	Saanich	4.2	Whistler - Pemberton	10.3	Kimberley	3.3
Bella Coola	3.2	Westshore Communities	3.6	Revelstoke	8.9	Whistler - Pemberton	3.0

[1] Tourism results for the 2020 reference year are not reliable for the reasons identified on page 2.

The table above shows the areas of the province which were most specialized in a variety of industries in 2020, according to their location quotients. They are not necessarily the biggest or most important industries in those areas, but the table shows where a given industry has a high concentration of employment.

Employment Impact Ratios

The Employment Impact Ratio (EIR) is a type of economic multiplier that estimates how many additional jobs are supported for each job in a basic industrial sector. An EIR of 1.5 would mean that 100 forestry sector jobs would support an additional 50 jobs in other sectors.

There are two variables and four types of Employment Impact Ratios that are reported in the LAEP study. An area's EIR can be reported as either indirect or induced, and the geographical impact of the sector can be described as affecting the local area only, or including impacts on the rest of the province.

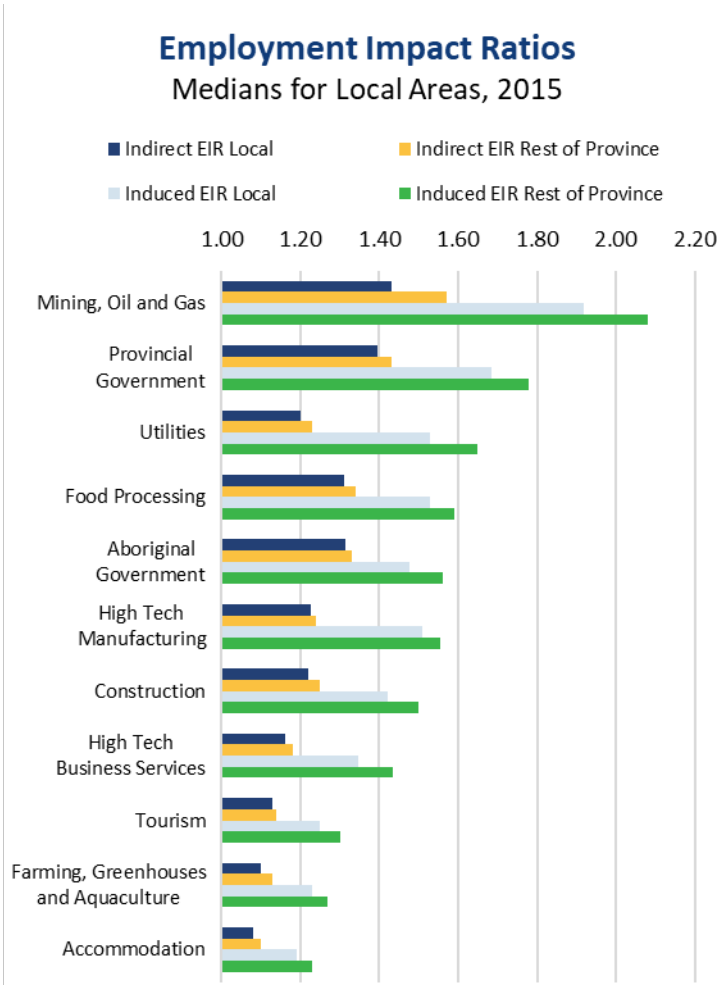
The Indirect EIR estimates the number of jobs supported in non-basic sectors which supply intermediate inputs to the sector in question. In other words, it counts the partners and suppliers that help produce the sector's output. The formula is

$$\frac{\text{DDDDDDDDDDD jjjjjjj + DDiiiiDDDDDDDDD jjjjjjj}}{\text{DDDDDDDDDDD jjjjjjj.}}$$

The Induced EIR includes the direct and indirect jobs, as above, and adds the induced effect, or jobs resulting from household spending by workers. The formula is

$$\frac{\text{DDDDDDDDDDD jjjjjjj + DDiiiiDDDDDDDDD jjjjjjj + liiiiiiiiiii jjjjjjj}}{\text{DDDDDDDDDDD jjjjjjj.}}$$

The local geographic impact means it only counts jobs in the local area. For example, if the Census data show that an area has a large agriculture sector but a small wholesale sector which serves agriculture, the jobs counted in the local indirect ratio are limited.



Rest of province assumes those jobs are created or impacted elsewhere and counts them too. A large difference between the local and rest of province indirect EIRs indicates that many of the industries which act as suppliers are not present in the the local area, according to the census data.

The chart above shows Employment Impact Ratios for various industrial sectors, shown as the median or typical value across the 103 local areas studied. Sectors with a higher indirect EIR could be said to have more interactions with other businesses in British Columbia. A higher induced effect typically indicates that workers in the sector (and its indirect suppliers) are paid more, have higher household spending, and thus support more jobs through that method.

Working through an example of Employment Impact Ratios

Salmon Arm's high tech manufacturing sector employed 110 people in 2015 and made up 1.8% of its economic base which, while small, is the highest share outside Greater Vancouver.

With a *local indirect EIR* of 1.24, there are about 26 additional jobs in Salmon Arm in industries which supply its high-tech manufacturing sector and which depend on that sector's demand for their business and jobs. These are primarily in the low-tech business service sector (e.g., legal, accounting, and administrative services), high tech business services (e.g., architectural and engineering services) and in finance, insurance and real estate.

The indirect EIR including the *rest of the province* is 1.26, suggesting that Salmon Arm's high-tech manufacturers need to look to other areas of the province for services which support an additional two jobs.

The *local induced EIR* is 1.62. This figure includes the 110 direct local jobs, the 26 indirect local jobs, and 42 induced jobs. Induced jobs are in local service sectors which are supported by the household spending that comes from the after-tax employment income of those direct and indirect high tech manufacturing jobs.

The induced EIR including the *rest of the province* is 1.69. This figure includes 110 direct jobs, 28 indirect jobs (26 in Salmon Arm and two in the rest of the province), plus 47 induced jobs – 42 in Salmon Arm and five in the rest of the province.

Actually, Salmon Arm's high-tech manufacturers may or may not contract their inputs locally. This is a model of Salmon Arm's industry as if it was a microcosm of the provincial industry, limited by the size of Salmon Arm's non-basic sectors. There are additional imports from other provinces and other countries which are not modelled here.

Regional Service Centres

This measure helps identify which local areas have strong non-basic service sectors that supply services to the rest of the province. It is a measure of the interregional linkages modeled in this study.

The Local Supply Share for a given non-basic sector is the share of local demand that is met by local supply. If the share is over 100, the area could be considered a regional service centre for that sector and a net exporter to the rest of the province. If it is under 100, it relies on other areas of the province for those services and could be considered a net importer.[2]

Areas with Non-Basic Sector Surpluses
Top 3 Areas by Local Supply Shares, 2015

Upper Squamish - Lillooet Reg	109%	Salmon Arm	136%
Rossland	108%	North Shore	134%
Sunshine Coast	107%	Greater Vancouver	121%
Central Coast	115%	Whistler - Pemberton	114%
Burnaby - New Westminster	111%	Clayoquot	110%
North Shore	110%	Richmond	109%
Cassiar Corridor	235%	Prince George rural (southeas	120%
Hazelton	134%	Langley	119%
Clayoquot	133%	Haida Nation	118%
Princeton	130%	Haida Nation	251%
Stikine	129%	Northern Rockies	239%
Grand Forks-Greenwood	120%	Bella Coola	235%
Chilcotin	149%	Cassiar Corridor	186%
Upper Squamish - Lillooet Reg	125%	Northern Rockies	178%
Revelstoke	124%	Dawson Creek	162%

[2] Note that this only measures links with the rest of the province and not interprovincial or international imports or exports. Interprovincial and international exports are already counted because they are the main component of demand for the "other basic industries" category. Imports are not modelled at present.

Using the Information

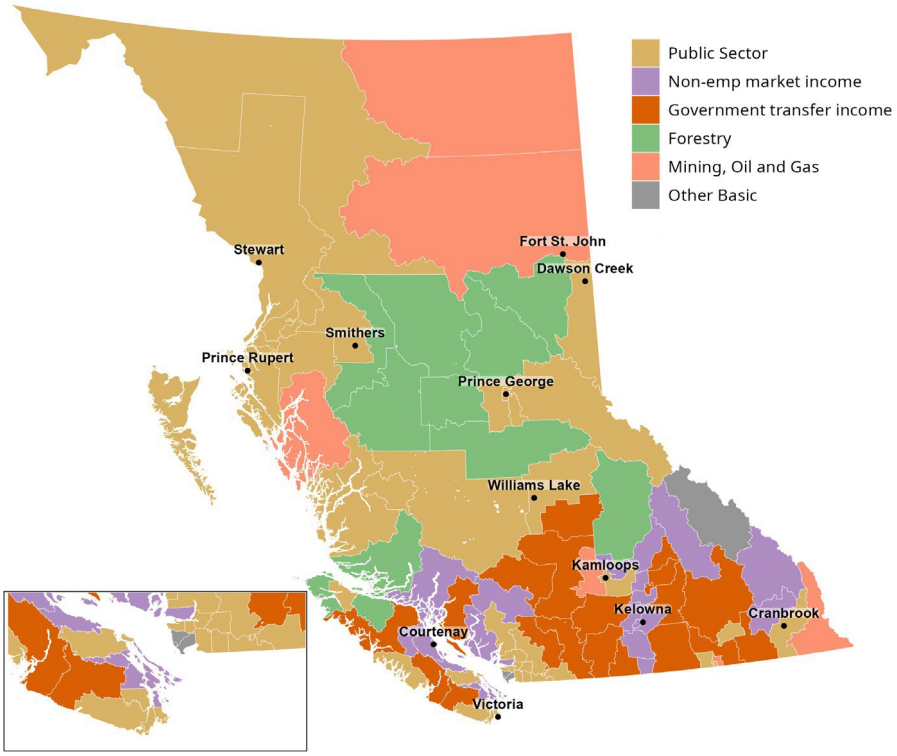
Detailed results from the LAEP model are published in Microsoft Excel format and are available on BC Stats' website. The file contains additional definitions and other features designed to help users dig deeper into the results.

BC Stats will be updating and improving the LAEP model over time and the current results should be considered preliminary. Readers are encouraged to provide feedback. In addition to your feedback, we'd love to know:

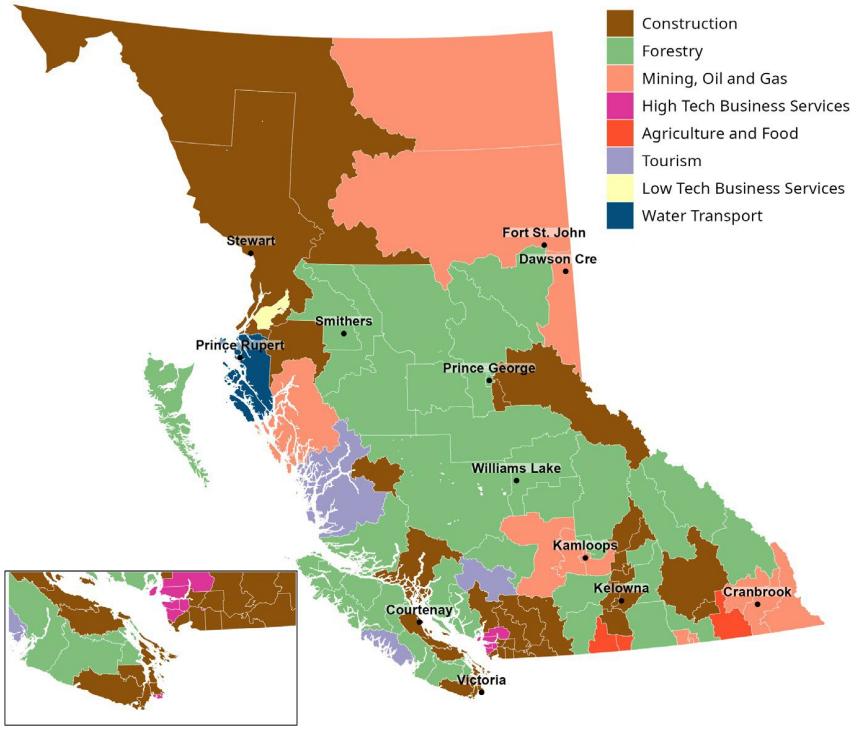
- Are there different industry aggregations or disaggregation that you would like to see?
- What is a research problem you have and how do you think this model might help?

Contact us at https://www.gov.bc.ca/BCStatsRequests with your suggestions and feedback.

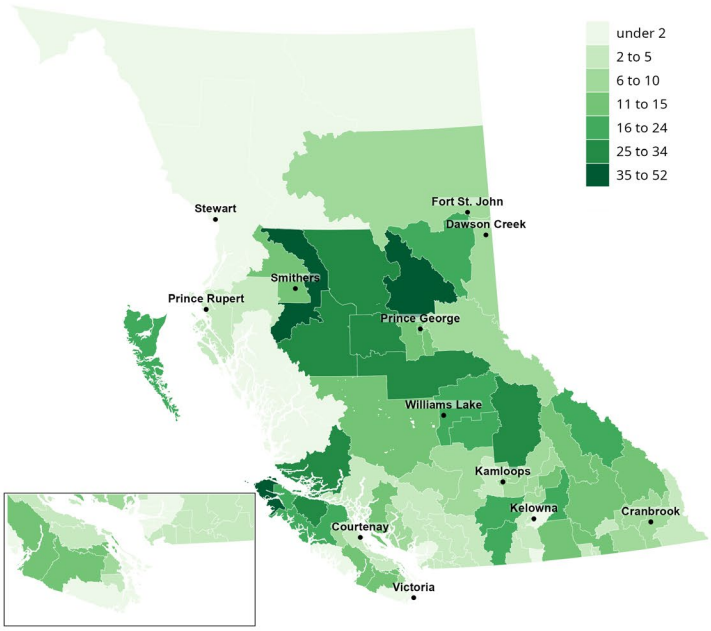
Economic Base
Dominant Basic Income Source
2015



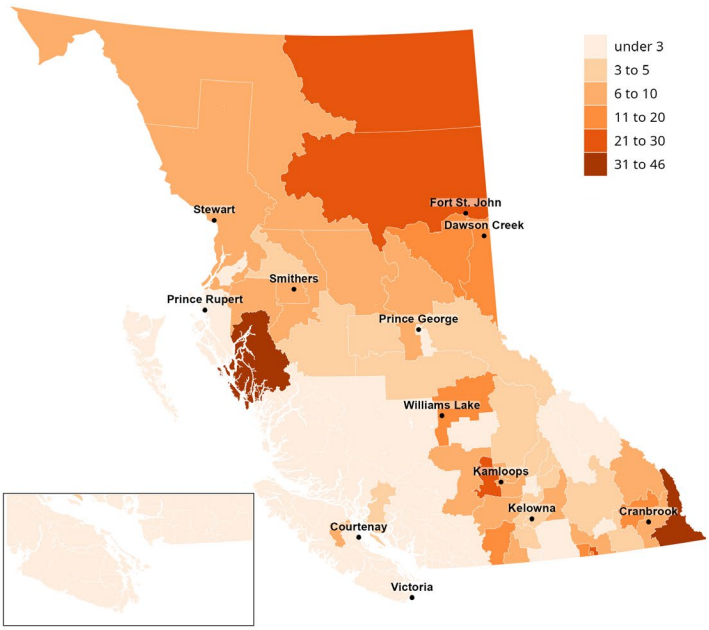
Economic Base
Dominant Private Sector Employment Source
2015



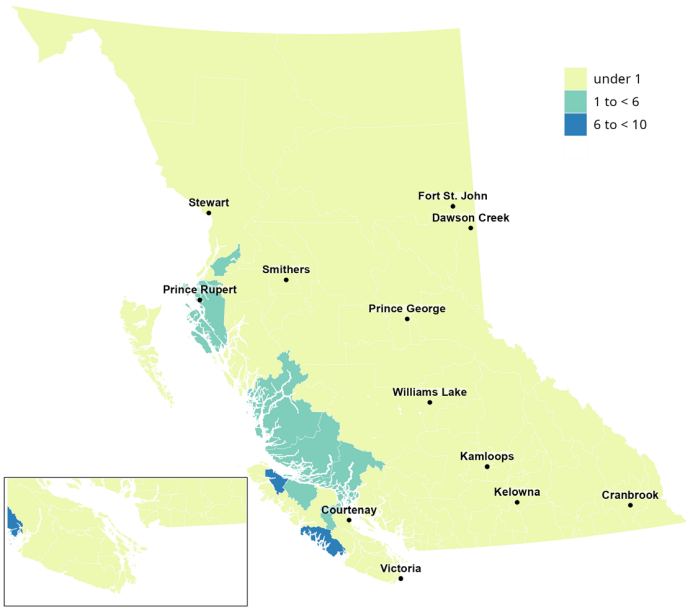
Forestry and Wood Processing Percent of Economic Base 2015



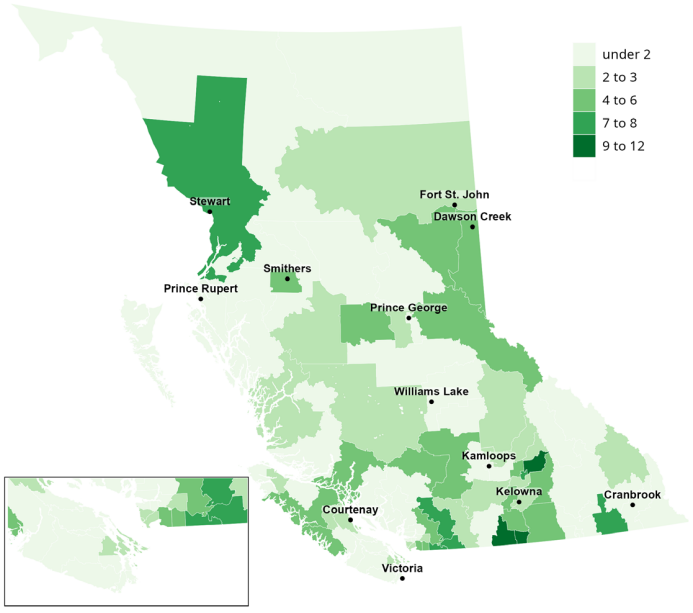
Mining, Oil and Gas Percent of Economic Base 2015



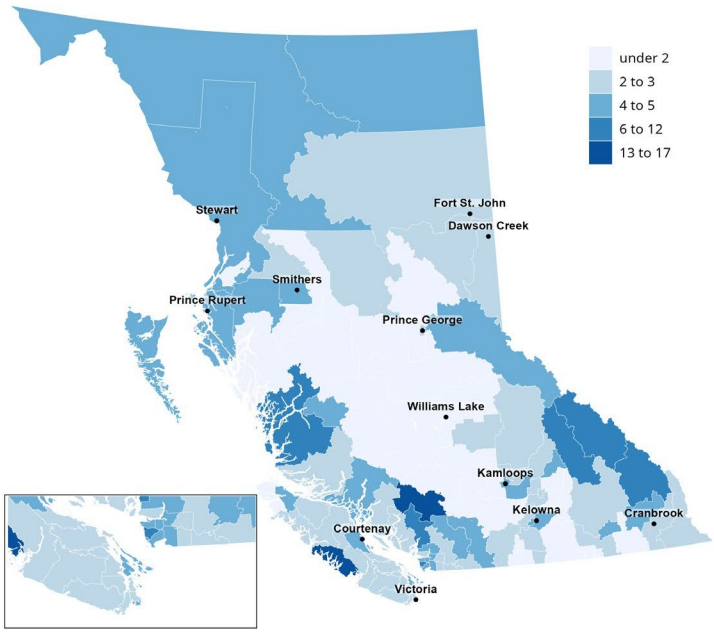
Fishing, Hunting and Trapping Percent of Economic Base 2015



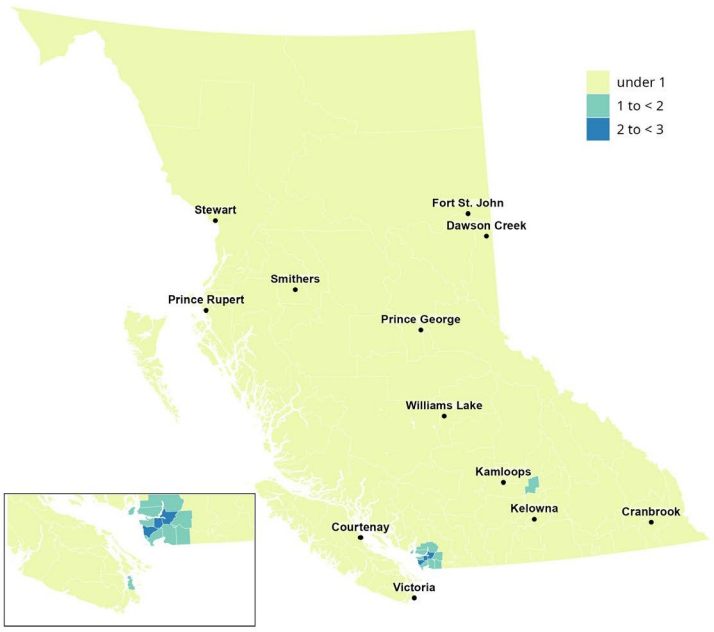
Agriculture and Food Processing Percent of Economic Base 2015



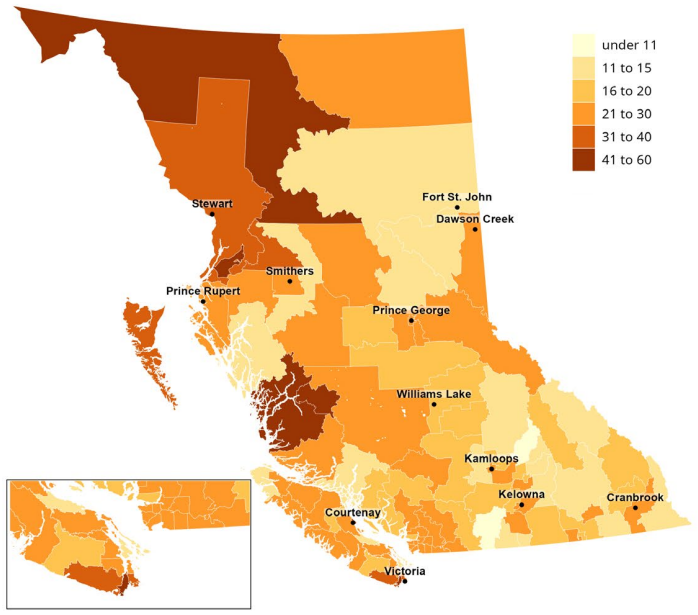
Tourism
Percent of Economic Base
2015



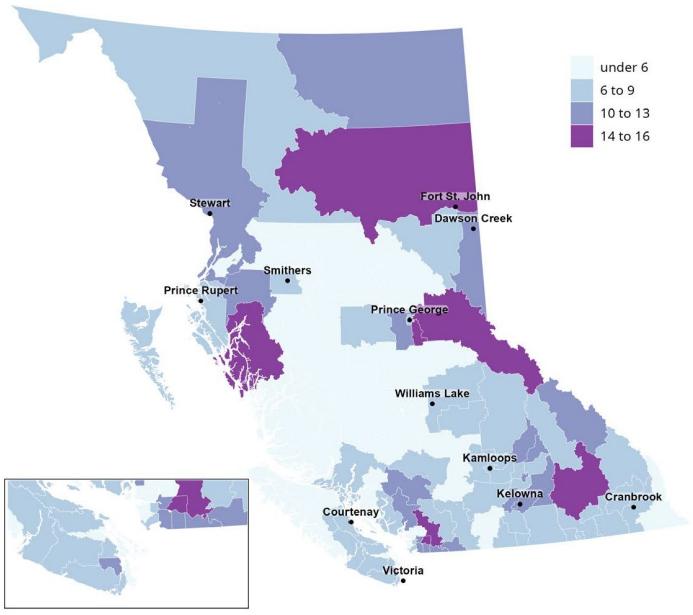
High Tech Manufacturing
Percent of Economic Base
2015



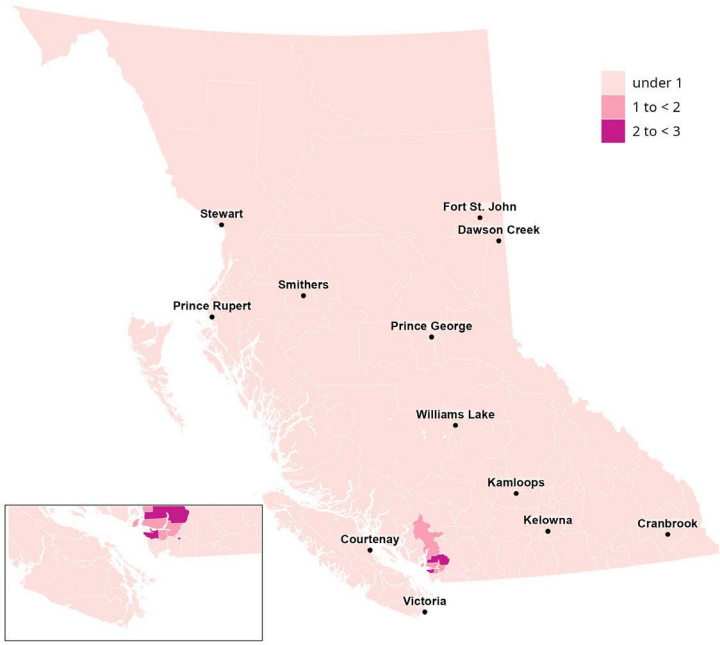
Public Sector
Percent of Economic Base
2015



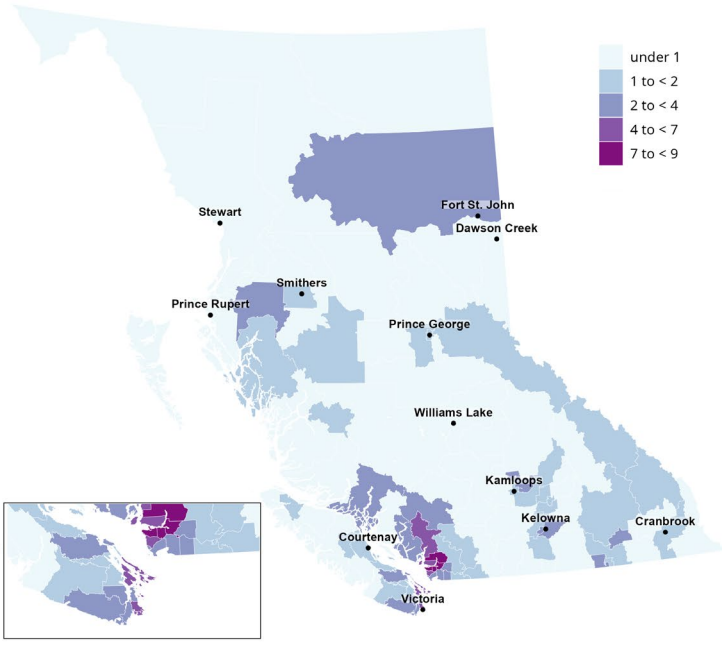
Construction
Percent of Economic Base
2015



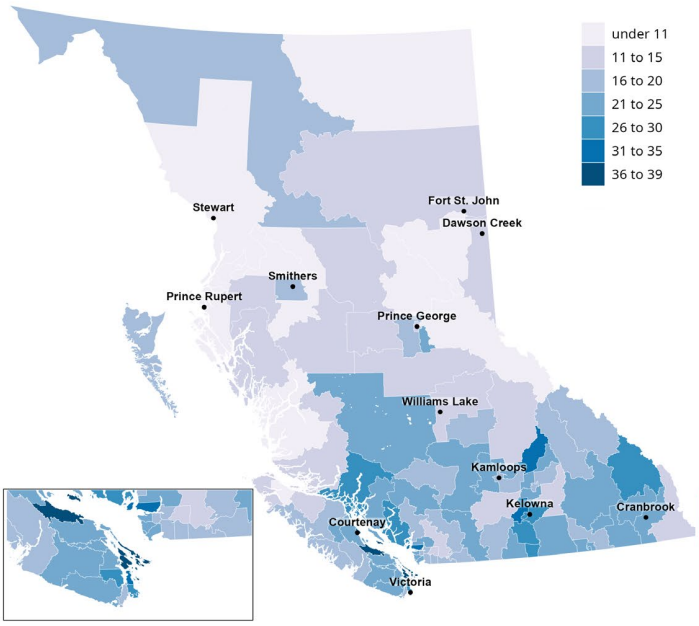
Film and TV
Percent of Economic Base
2015



HiTech Business Services
Percent of Economic Base
2015



Non-employment Market Income
Percent of Economic Base
2015



Government Transfers
Percent of Economic Base
2015