COASTAL B.C. CONNECTIVITY BENEFITS STUDY

PREPARED FOR MINISTRY OF CITIZENS' SERVICES
BY BC STATS

BRITISH COLUMBIA | BCStats

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EXECUTIVE SUMMARY

The Coastal B.C. Connectivity Benefits Study analyzes the anticipated economic impact of provincial investment in connectivity for the coastal region of British Columbia (see page 8 for a profile of the study area). This report analyzes the short- and long-term economic impact of provincially funded connectivity projects in communities along the coast using economic modelling to estimate the anticipated benefits to the region and province. This study is the fourth in a series of economic benefits studies on rural connectivity. The previous reports on Northern B.C., the Kootenays and the Interior are available on the Connectivity in B.C. web pages.

Overall results in this study are similar to findings of the previous studies: funding to support the expansion of high-speed internet to underserved rural areas is expected to have positive short- and long-term impacts to B.C.'s Gross Domestic Product (GDP) for the region and province. A breakdown of the investment and economic benefits of high-speed internet expansion for the coastal region and the province are as follows:

- The Province's Connecting British Columbia program allocated **$67.4 million** for connectivity infrastructure in the area between 2017 and 2022. This supported 48 connectivity projects[1] (some complete or in progress at time of report publication) which will benefit an estimated 11,600[2] households.
- This $67.4 million in provincial funding leveraged approximately $145.6 million from other sources, which equals **$213 million** in total funding for broadband internet projects in the region.
- The leveraged funding is from private sector internet service providers who build and operate the infrastructure, as well as public sector organizations, including the federal government. This equates to a funding ratio of **$1** of provincial funds, to **$3.20** of total private and public sector investment leveraged to support rural connectivity expansion for the region.

[1]Projects selected for the study are part funded by the Province and deliver speeds of a minimum 50 megabits per second upload and 10 megabits per second download (50/10 Mbps).

[2]Estimated households benefitting is calculated as 95 percent of households served by provincially funded high-speed internet projects in the study area. This reflects the estimated number that will subscribe to the new services.

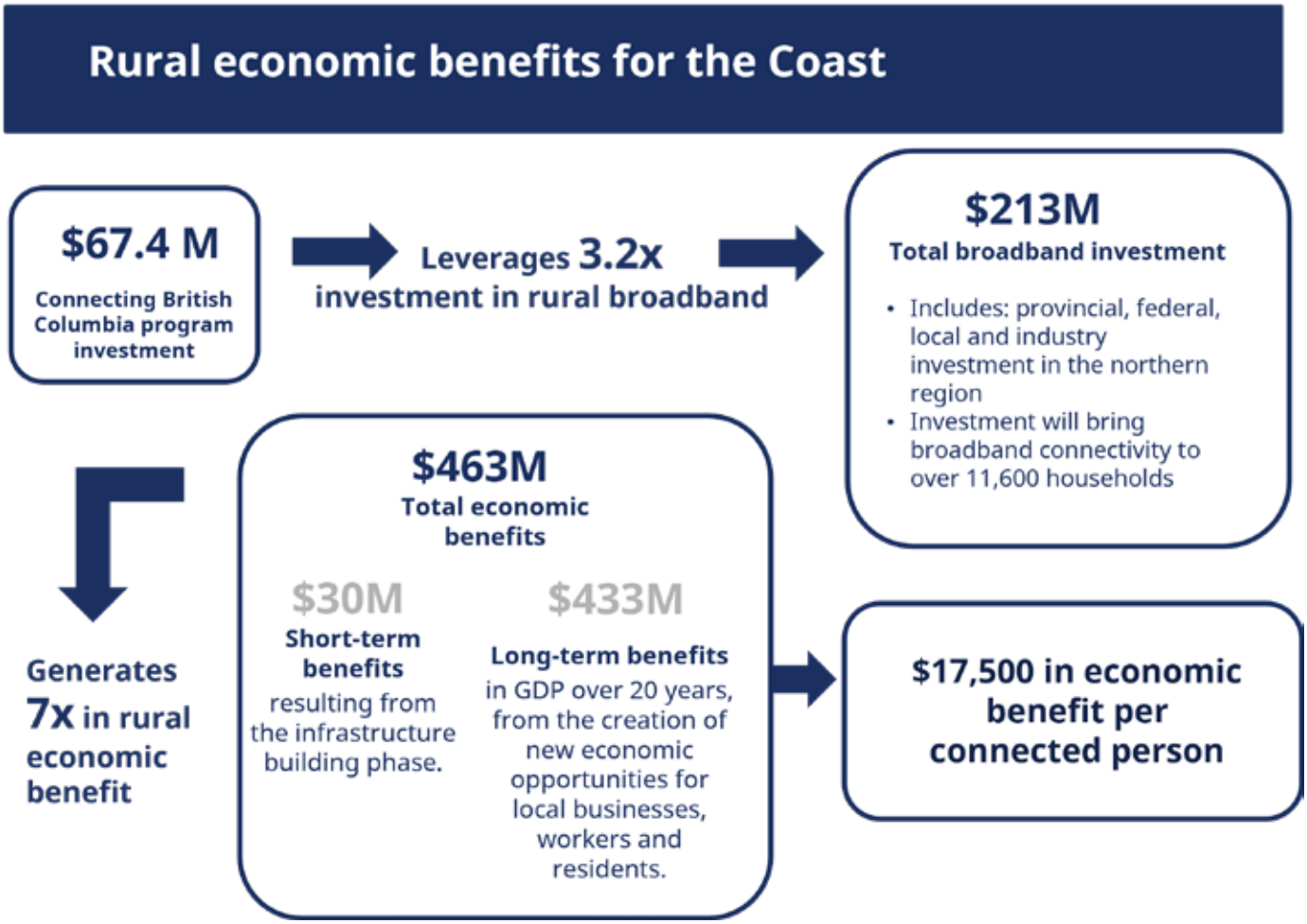


Figure 1: Summary of rural economic benefits of connectivity for the B.C. coast

- Short-term economic benefits (defined here as the construction phase and the building of the infrastructure) are summarized as follows:
  - For the Coast:
    - **$19.1 million** increase in GDP
    - **140 new jobs**[3]
    - **$1 million** in municipal and regional district tax revenue
  - For B.C. (including the Coast):
    - **$30 million** increase in GDP
    - **240 jobs**
    - **$9.6 million** in provincial tax revenue
- Long-term impacts (defined here as increased GDP because of productivity from improved access to high-speed internet services) are estimated at **$432.6 million** in increased GDP over 20 years for B.C.

In total, it is estimated that the initial provincial investment of $67.4 million in connectivity in the coastal region will generate **$463 million** in short- and long-term economic benefits to the area and the province. This translates into:

- **7 times** the initial provincial investment; and
- A **$17,500 benefit per connected person** for newly subscribed households within a 20-year time span (Figure 1).

[3]The jobs number is a measure of total full-time, part-time and seasonal jobs and should not be conflated with full-time equivalent jobs, which combines part-time and seasonal jobs into full time equivalents.

BACKGROUND

Access to high-speed internet in rural communities in B.C. is foundational to economic and social equity and prosperity. However, the cost of bringing these services to rural and remote communities and First Nation reserves can be prohibitively high for private sector service providers.

In March 2022, the provincial and federal governments announced a joint investment of up to $830 million to support expanding high-speed internet services to every household in B.C. by 2027. This funding builds on prior investments, and supports the current provincial funding program, Connecting Communities BC.

To better understand the economic impact of this investment into connectivity, a model was created to estimate the short- and long-term impacts of connectivity funding for rural communities. While academic literature provided some frameworks to analyze connectivity benefits, many existing studies took a whole economy approach and aggregated rural and urban results.

In 2021, the Province hired Deloitte to develop an economic framework through which the value of rural broadband connectivity could be measured, understood, and included in future evaluation of project benefits. In 2022 and 2023, BC Stats built on Deloitte's framework with the Kootenay Connectivity Benefits Study, the Northern Connectivity Benefits Study, and the Interior Connectivity Benefits Study which examined the short- and long-term economic impacts of rural connectivity infrastructure spending in those regions.

This report is the fourth in a five-part series that examines the economic benefit of provincial connectivity spending in rural areas of B.C. The results of this report are focused on the coastal region of the province. A fifth and final report will look at benefits to the province as a whole. This will be released later in 2024.

PROFILE OF THE B.C. COAST

The British Columbia coast stretches south from Vancouver Island and the southern mainland to the north coast of the province. The area features small and large islands, coastal mountain ranges, and vast stretches of unpopulated lands. It is home to many small communities, some with ferry access only, as well as a few larger population centres on Vancouver Island, the mainland and the north coast region. Its population is just over one half million and the area is home to many First Nation communities.

For this study, we define the coastal region as the area from Vancouver Island in the south to Kitimat-Stikine in the north. The area spans four economic regions, over 60 First Nations, and 11 regional districts that border the coast.

The data for the study was analyzed by regional district area. The regional districts are: North Coast, Central Coast, Kitimat-Stikine, Mount Waddington, Comox Valley, Cowichan Valley, qathet, Alberni-Clayoquot, Nanaimo, Strathcona and Sunshine Coast. In addition, for this study, three islands with provincially funded projects in the Metro Vancouver regional district and the Capital regional district were included, though those regions as a whole are not in order to capture rural impacts to connectivity spending.

A map of the study area is shown in Figure 2. A comparison of land mass and population density within the regional district study areas is in Figure 3. These population and land totals do not reflect population served or area served by the projects studied, but rather the whole area and population of the regional districts.

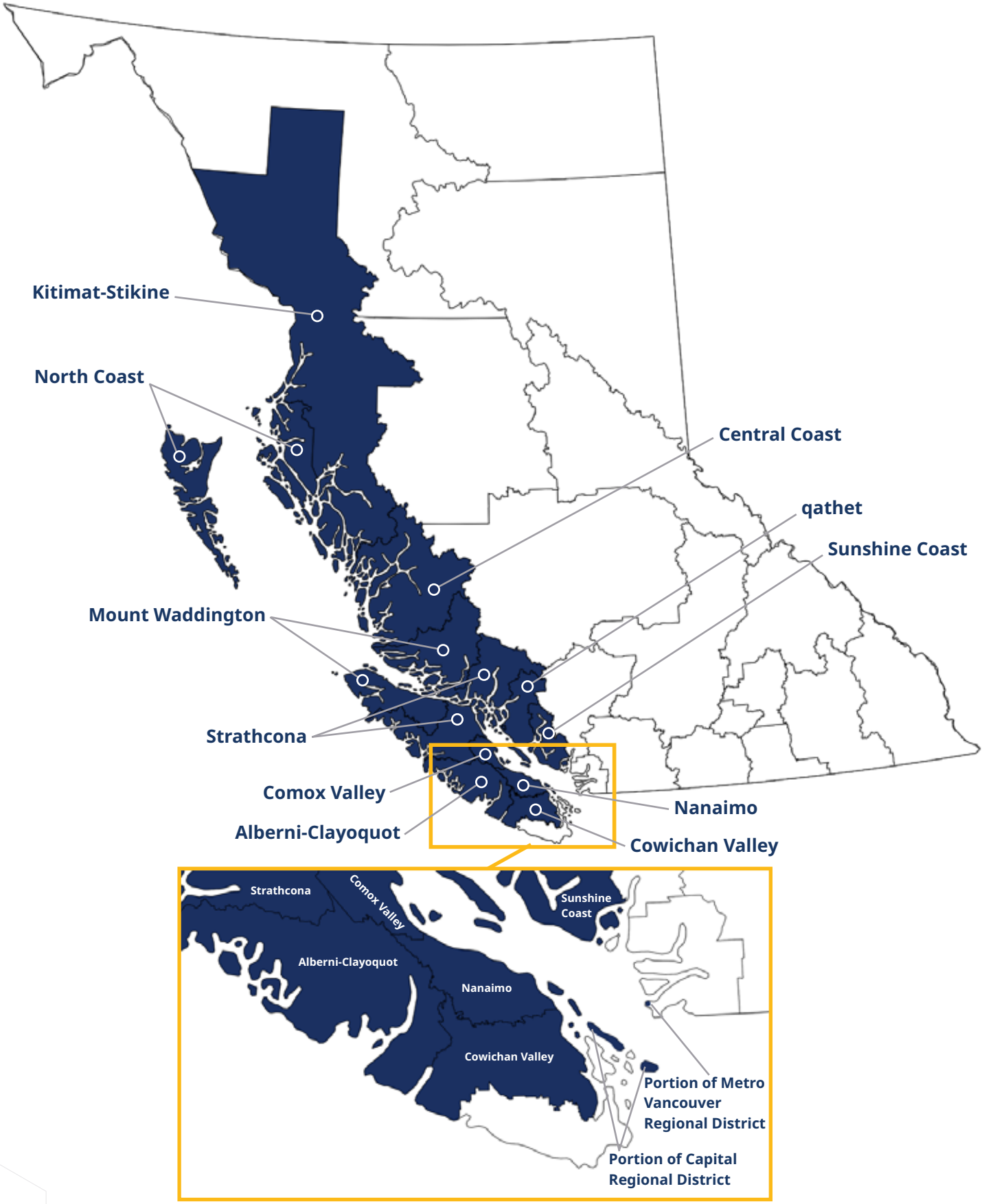


Figure 2: Coastal region (with area of study in dark blue)

Regional districts	Total population[2]	Land area in square km[2]	Population density per square km[2]	Total private dwellings per square km[2]
Alberni-Clayoquot	33,521	6,577	5.1	2.5
Capital* (Saturna and Galliano Islands)	1,852	91	20.4	5.3
Central Coast	3,582	24,434	0.1	0.1
Comox Valley	72,445	1,697	42.7	20.3
Cowichan Valley	89,013	3,472	25.6	11.6
Metro Vancouver* (Westham Island only)	272	17	16.0	8.0
Kitimat-Stikine	37,790	104,307	0.4	0.2
Mount Waddington	10,839	20,186	0.5	0.3
Nanaimo	170,367	2,036	83.7	39.3
qathet	21,496	5,068	4.2	2.4
North Coast	18,181	19,710	0.9	0.5
Strathcona	48,150	18,244	2.6	1.3
Sunshine Coast	32,170	3,767	8.5	4.8
Coast (area of study)	**539,678**	**209,607**	**2.6**	**1.2**

*Data for Capital Regional District and Metro Vancouver Regional District reflects only a portion of total population associated with the islands served by the projects in the study.

Source: Statistics Canada. Census Profiles. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E.

Figure 3: Coastal region population density by regional district[4]

[4]Statistics Canada 2021 Census Data

METHODOLOGY

This study examines the economic impact of high-speed internet projects funded by the Province along coastal region of B.C. since 2017. The analysis is based on 48 connectivity projects throughout the area, and includes both transport and last-mile internet projects to the home.[5] The projects in the analysis were scheduled to begin construction between 2018 and 2023. Project construction spending data was used to estimate economic impacts of the work in the short term during the years that projects are being built.

To increase the validity of the findings, this study narrows its geographical focus to the regional district level to exclude the major urban centres of Victoria and Greater Vancouver. Note that Nanaimo, Courtenay-Comox and Kitimat-Prince Rupert are within the study area and included in the analysis as there are some provincially funded projects in outlying areas of these urban areas.

The analysis of economic impacts was completed using project spending data, local economic data, and existing empirical relationships between spending and economic impact, to establish measurement frameworks and estimates of short- and long-term impacts.[6]

The Connected Coast project

The Connected Coast project is an important transport project for British Columbia, increasing internet capacity for many small and remote communities along the coast, some of which are accessible only by water.

The project is the largest coastal festooned fibre project in the world, and will lay approximately 3,500 kilometres of subsea fibre-optic cable from Prince Rupert south to Vancouver and around Vancouver Island to bring new or improved high-speed internet accessibility to 139 rural and remote coastal communities, including 48 Indigenous communities – representing 44 First Nations.

The Connected Coast project is a partnership of service provider CityWest, and the Strathcona Regional District. This $45.4 million project is jointly funded is 100% funded by BC, Innovation, Science and Economic Development (ISED) and Indigenous Services Canada (ISC). The Connecting British Columbia program provided $11.3 million toward the $45.4 million project, with Canada contributing $34 million.

[5]All projects in the analysis occurred in the study area. Transport (or backbone) infrastructure consists of high-capacity lines (generally fibre optic lines) that can transmit large amounts of data from Internet Exchange Points in major cities, such as Vancouver, Calgary or Seattle, to community points.
Last-mile infrastructure connects from the service provider's community point of presence to households. Last mile can be achieved using multiple technologies including both wired and wireless methods, such as fibre, digital subscriber lines (DSL), coaxial cable and fixed wireless.

[6]Project spending data includes the commodities and services that will be purchased to complete the project in each year of construction. Local economic data includes labour force, population, tax, immigration, business and other available data. Existing empirical relationships are derived from the BC Input Output Model (BCIOM) and the supply use tables from Statistics Canada.

Assessing short-term impacts

High-speed internet expansion projects, like any infrastructure project, contribute to the local economy in the short term by creating demand for products and services required to deliver the project during the initial build phase.

BC Stats worked with the Connectivity Division in the Ministry of Citizens' Services to identify 48 high-speed internet projects throughout the coastal region to use for the analysis. The projects were selected based on criteria that they:

- received Connecting British Columbia funding between 2017 and 2022; and
- take place in the area defined for the study.

Some projects span multiple regional districts, including outside of the coastal region. The Connectivity Division provided ratios to support BC Stats in proportioning the expected amount of spending for each project in the defined study area.

BC Stats used the BC Input-Output Model (BCIOM – see Appendix B) to estimate short-term impacts for the local economy and the province. The BCIOM is designed based on Statistics Canada supply use tables.[7] It is a macroeconomic modeling tool that allows economists to estimate the impacts of increased industry spending on the economy of the region, and province.

The model estimates these impacts at three levels: direct, indirect, and induced as detailed below:

- **Direct impacts** are related to the direct spending on the project. These impacts occur because of purchasing material inputs for the project and paying wages to the employees that are building the infrastructure or doing the engineering design if they are employed directly by the company.
- **Indirect impacts** include money that is spent by contractors on wages and the goods they purchase. This would include an external firm contracted to design or build a piece of infrastructure.
- **Induced impacts** come from the spending of the employees building the project in the local economy. For example, if a construction employee takes a break and buys something from a local establishment, the money spent is an induced impact from the project.

[7]More information about Statistics Canada supply use tables is available at this link: https://www150.statcan.gc.ca/n1/pub/13-607-x/2016001/1067-eng.htm

Assessing long-term impacts

By creating new economic opportunities for local businesses, workers and residents, the provision of new high-speed internet services can contribute to stronger economic growth for years after the construction phase is complete and internet services are live. To describe this impact, BC Stats uses empirical relationships established in economic literature, to develop an approach to estimate the long-term economic impacts of the projects in scope of this study. Four different studies were analyzed to inform the impact on GDP of increased high-speed internet availability (listed in Appendix A).

BC Stats estimates:

- An increase of 10 percentage points in the number of broadband subscriptions would contribute 1.23 percent to GDP per capita growth.[8] This formula is then applied to the increase in households with access to high-speed internet, resulting from projects funded by the Connecting British Columbia program.
- The calculation is done in terms of net present value of resultant GDP Growth.[9] For this approach, a social discount rate of three percent was used based on Government of Canada data.[10] A social discount[11] is used to adjust future costs and benefits to values in current terms.

A key assumption for this approach, based on data from the Connectivity Division, is that 95 percent of the households benefitting from the projects would subscribe to the new service once available.

GDP data produced by Statistics Canada for sub-provincial geographies[12] was not available at a detailed enough level to use in this analysis but suggests that GDP growth happens in B.C. at a rate relatively in line with population share. Figure 4 shows the productivity impact of high-speed internet services over a 20-year time frame.

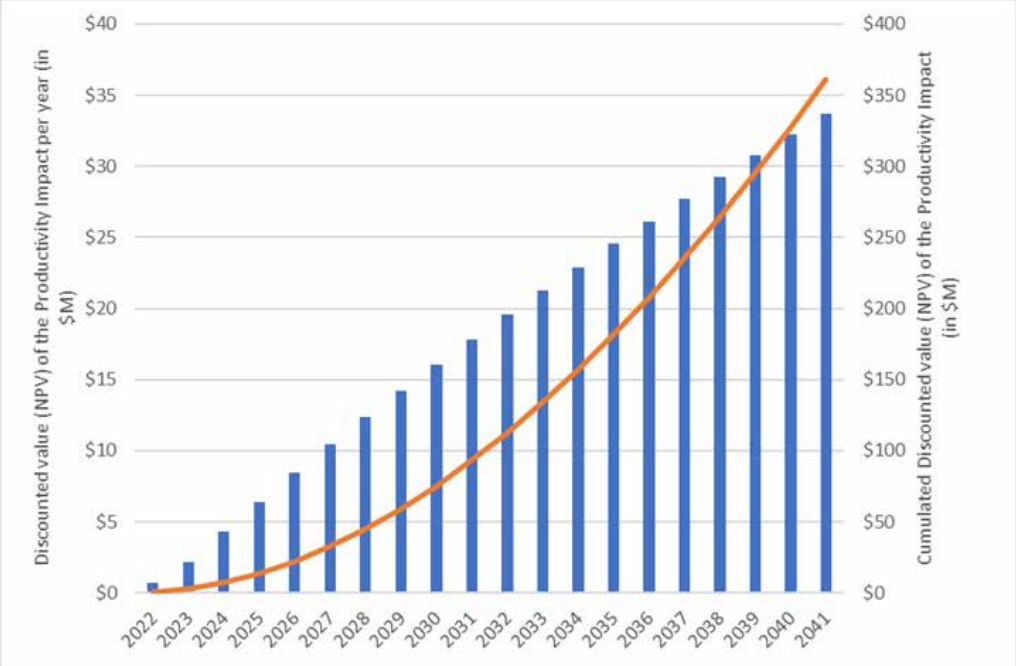


Figure 4: Productivity impact from the increase in access to high-speed internet services

[8]This estimate is developed by BC Stats based on the studies listed in Appendix A.

[9]Net present value is a calculation of the value of future dollars in the current year. This is derived by applying a social discount rate to future productivity increases to reflect the value of those increases as a current value.

[10]Government of Canada. https://www.canada.ca/en/government/system/laws/developing-improving-federal-regulations/requirements-developing-managing-reviewing-regulations/guidelines-tools/cost-benefit-analysis-guide-regulatory-proposals.html

[11]The social discount rate is applied to understand the social value of spending now as more impactful than spending in the future. Based on current literature a social discount rate of 3 percent was used for the analysis.

[12]Statistics Canada. Table 36-10-0468-01 Gross domestic product (GDP) at basic prices, by census metropolitan area (CMA) (x 1,000,000)

RESULTS

The study concludes that from an initial provincial investment of **$67.4 million**, a total economic benefit to GDP over a 20-year timespan is estimated at **$463 million**. This initial provincial investment is thus multiplied **7 times** in long-term returns for the rural economy and for B.C.

A breakdown of the investment and economic benefits of high-speed internet expansion for the coastal region and the province is as follows:

- The region received **$67.4 million** for connectivity infrastructure between 2017 and 2022 from the Province through the Connecting British Columbia program. This funded 48 connectivity projects (some complete or still in progress at report publication) which will benefit over 11,600 households.
- This $67.4 million in provincial funding, leveraged approximately $145.6 million from other sources, which totals **$213 million** for internet projects in the region.
- This leveraged funding is from private sector internet service providers who build and operate the infrastructure, as well as public sector organizations, including the federal government. It equates to a funding ratio of **$1** of provincial funds, to **$3.2** of total private and public sector investment leveraged to support rural connectivity expansion for the region.
- In total, it is estimated that the initial provincial investment of $67.4 million in connectivity in the Coastal region will generate **$463 million** in short- and long-term economic benefits to the province and the region.

Short-term economic benefits

As a result of the construction phase of the projects, BC Stats estimates short-term impacts will increase GDP in the province by $30 million. These short-term impacts (defined here as benefits during the construction phase and the building of the infrastructure) also increase income earned by workers (labour income), add jobs to the economy, and increase tax revenue both locally and provincially. For the coast region impacts are estimated to be:

- **$19.1 million** increase in GDP
- **$10.6 million** increased labour income
- **140 new** jobs
- **$1 million** in municipal and regional district tax revenue

For B.C. (including the Coast) impacts are estimated to be:

- **$30 million** increase in GDP
- **$17.1 million** increase in labour income
- **240 new jobs**
- **$9.6 million** in provincial tax revenue

A further breakdown of short-term economic impacts is in Figure 5.

	Estimated economic contribution in the Coast region			Estimated economic contribution to the rest of B.C.		
	Direct	Indirect	Induced	Indirect	Induced	TOTAL including the Coast
Business expenditure	**$97.6M**	**$4.0M**	**$3.4M**	**$17.5M**	**$6.6M**	**$129.2M**
GDP	**$15.4M**	**$1.9M**	**$1.8M**	**$7.9M**	**$2.9M**	**$30M**
Labour income	**$9.1M**	**$1.0M**	**$0.4M**	**$4.6M**	**$2.0M**	**$17.1M**
Employment – Full Time Equivalent (FTEs)[13]	**110** FTEs	**10** FTEs	**10** FTEs	**60** FTEs	**20** FTEs	**210** FTEs
Employment – number of jobs	**120** Jobs	**10** Jobs	**10** Jobs	**70** Jobs	**30** Jobs	**240** Jobs
Gov't revenues – provincial taxes	**$8.3M**	**$159,100**	**$181,900**	**$641,000**	**$305,500**	**$9.6M**
Gov't revenues – municipal and regional taxes	**$900,000**	**$34,200**	**$69,600**	**$156,000**	**$136,000**	**$1.3M**

Figure 5: Short-term economic impacts[14]

[13]Full time equivalent (FTE) is a translation of all part-time and seasonal jobs to a full year, full-time job. The number of jobs above will be total roles that need to be filled, some of which will be part-time or seasonal.

[14]Numbers in the table are rounded. Direct impact in rest of B.C. is negligible and thus not included in the table.

Long-term economic benefits

Long-term economic impacts of new connectivity infrastructure for the Coast are estimated over a 20-year period using methodology outlined in Section 4.2.

Based on new high-speed internet services available in the region, BC Stats estimates that productivity growth over 20 years after project completion will result in a **$463 million total increase in GDP**. This estimate describes a net present value of the impact on GDP growth in the coastal region and the province combined. This is:

- **7 times** the return on initial provincial investment in the region of **$67.4 million**.
- A **$17,500 benefit per connected person** for newly connected households within a 20-year time span.

Assumptions and limitations to the study

The assumptions and limitations behind this analysis include the following:

- Some budget items such as GST are not included in the expenditure data used for the model.
- This analysis is based on an input-output methodology and therefore estimates "gross" contribution to the economy, which does not account for the opportunity cost of employing capital and labour in alternative ways. It is subject to the standard assumptions and limitations applicable to Statistics Canada's Input-Output multipliers and BC Stats Input-Output model (see Appendix B).
- Given that expenditures are for infrastructure deployment in the region, direct economic contributions are considered to largely benefit the region in the short term. The input-output analysis then allocates indirect and induced impacts in the short term for the rest of the province.
- The number of households benefitting (subscribing to services) is calculated as 95 percent of households that will have access to new provincially funded internet services.
- Some under counting may have occurred in indirect and induced impacts attributed to the coastal region because of the model limitations related to regional analysis.
- Some data availability limitations also exist, such as lack of GDP data at the sub-provincial level. Therefore, the GDP per capita and the GDP per capita growth rates for the coastal region are assumed to be the same as at the provincial level.

REGIONAL STUDY COMPARISONS

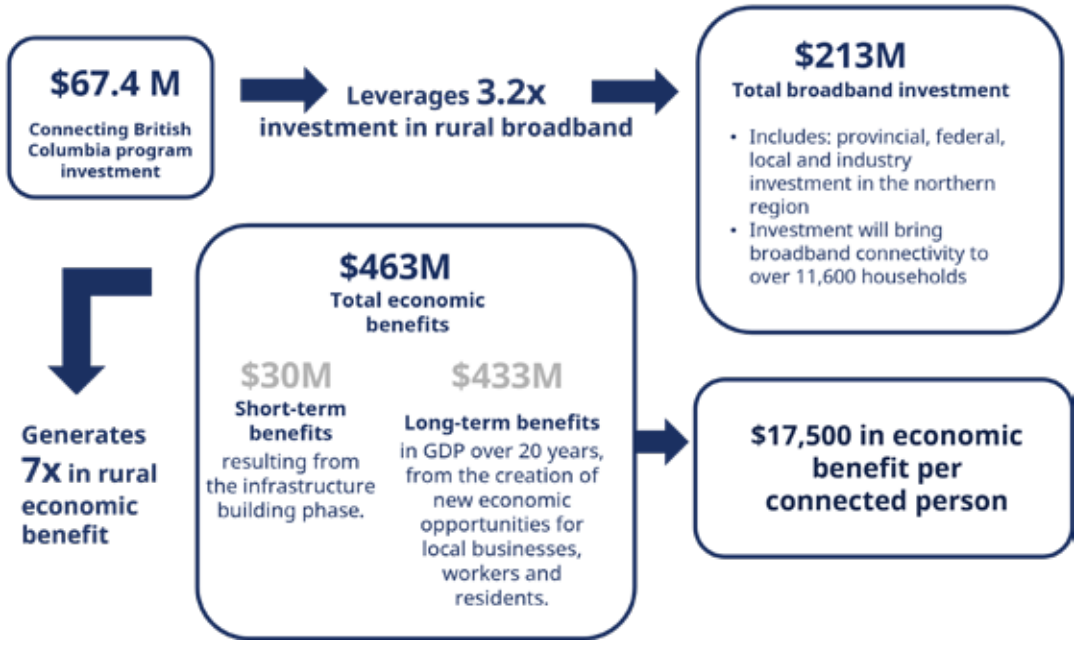
The B.C. Coastal Connectivity Benefits Study shows both similarities and divergences compared to the previous studies in this series. This section examines these and explores some reasons why the studies may differ.

A primary similarity between the studies is that the Province's connectivity investment delivers substantial returns for the regions and the rest of B.C. For the coast, this return is **7 times** the initial provincial investment in the long-term, creating significant economic impacts for the local economy and provincial GDP. For the Interior this return was **4.25 times**, in the North it was also **7 times** and for the Kootenay region, this return was **14 times** the initial investment in the long term. Some of the key metrics from the studies are outlined in Figure 6. A graphic representation of the findings for all studies is in Figure 7.

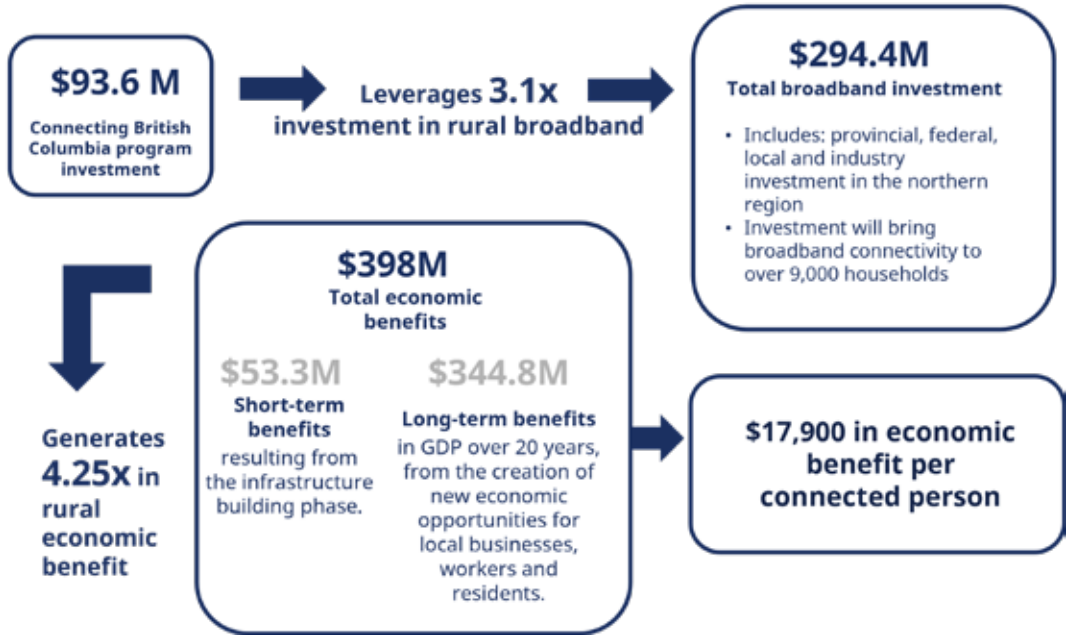
	Coastal region	Interior region	Northern region	Kootenay region
BC investment ($million)	**67.4**	**93.6**	**38.4**	**19.4**
Total investment ($million)	**213**	**294.4**	**133.6**	**105.1**
Investment leveraged per dollar of provincial investment	**3.16**	**3.14**	**3.48**	**5.43**
Total multiplied return on initial investment	**7x**	**4.25 x**	**7 x**	**14 x**
Total population	**539,678**	**592,895**	**160,401**	**161,557**
Total land area (km^2)	**209,607**	**238,388**	**527,705**	**57,673**
Population density (per km^2)	**2.6**	**2.5**	**0.3**	**2.8**
Private dwellings (per km^2)	**1.2**	**1.2**	**0.1**	**1.5**
Regional increase in GDP short term ($million)	**19.1**	**21.4**	**22.2**	**56.2**
Total increase in GDP short term ($million)	**30**	**53.3**	**44.1**	**66.5**
Total increase in GDP long term ($million)	**432.6**	**344.8**	**225.3**	**214.3**
GDP as ratio of investment short term	**0.14**	**0.18**	**0.33**	**0.63**
GDP as ratio of investment long term	**2.03**	**1.17**	**1.69**	**2.04**
Total economic benefit from initial investment ($million)	**463**	**398**	**269**	**281**
Households with new access	**11,600**	**9,930**	**7,688**	**10,574**
Economic benefit per newly connected person ($)	**17,500**	**17,900**	**16,150**	**14,800**

Figure 6: Comparison of Coast and previous studies features and impacts

Rural economic benefits for the Coast



Rural economic benefits for the Interior



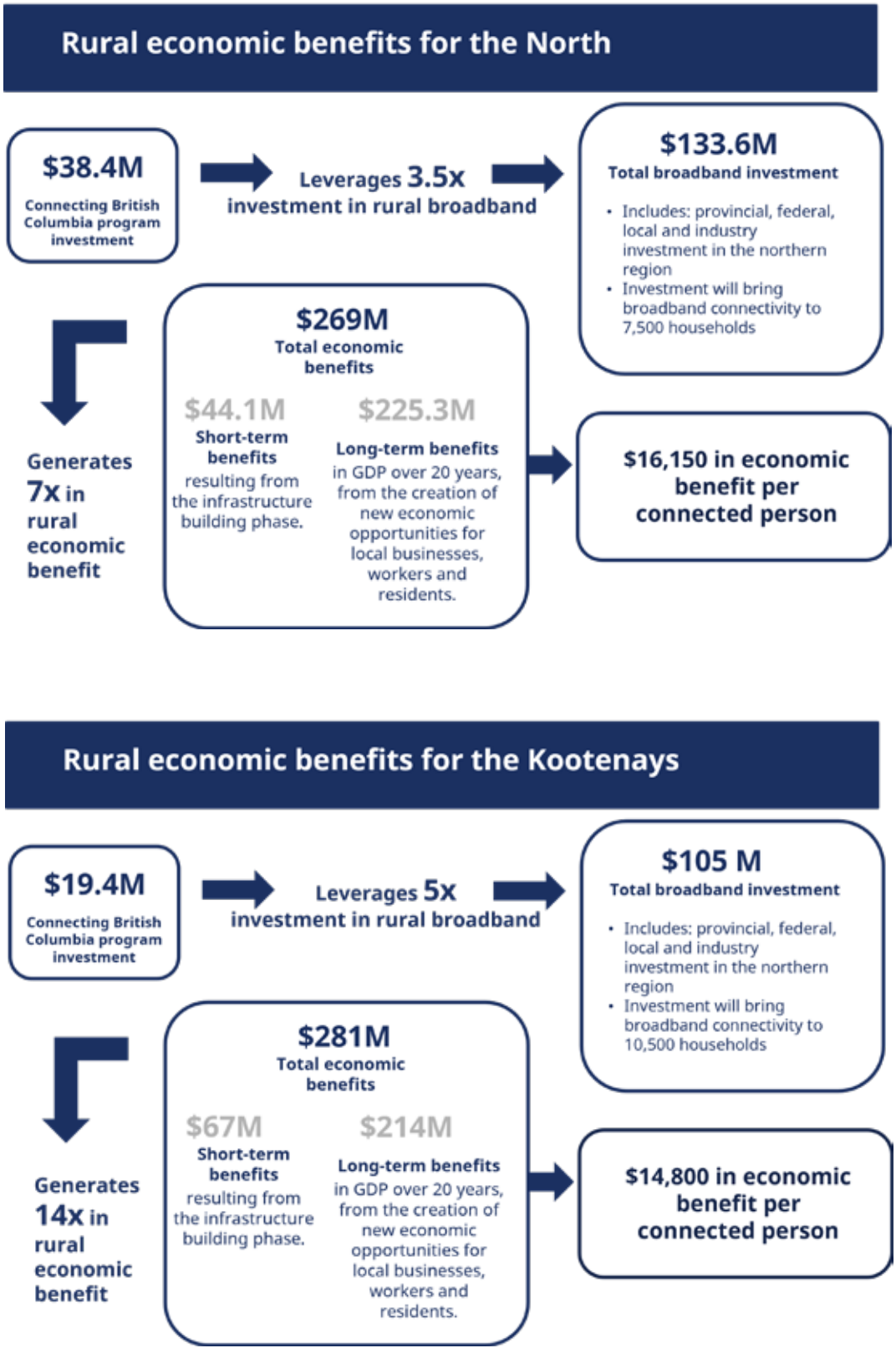


Figure 7: Graphic comparison of Coastal B.C., Interior B.C., Northern B.C., and Kootenay Connectivity Benefit Studies

Study comparison conclusions

The study finds the return on provincial investment in the coastal region is in line with results for the northern region, and lower than in the study on the Kootenay region. This can be attributed to:

- **Need for both transport and last-mile infrastructure** — Like the analysis on the northern region of the province, the coastal region of British Columbia requires transport and last-mile projects to bring high-speed internet services to rural and remote households in the area. Large transport projects, like Connected Coast, are essential to bring high-speed internet capacity from Exchange Points in Vancouver to communities all along the route. Many of these communities also require last-mile projects to connect high-speed services from the transport networks to homes. This investment in transport infrastructure is a vital component to the telecommunications network, but the need for multiple projects to serve multiple households increases the overall cost. The Kootenay region requires less transport projects to be served as existing backbone infrastructure was in place to support new last-mile projects, and so the cost was lower and the return on investment for this area was higher.
- **The power and value of high-speed transport projects** — Fibre transport networks are required to bring high-speed internet services to remote and rural communities across the province. While economic modelling in this study measures estimated benefits to the households that receive new internet services to the home, new transport projects can also provide additional resiliency to the network, as well as improve internet speeds to existing infrastructure already in place. Economic benefits such as increased resiliency to the network, new households served by existing infrastructure, or private sector providers accessing provincially funded transport projects, would not be captured in this model.

APPENDIX A: ACADEMIC STUDIES

Ericsson, Arthur D. Little, Chalmers University of Technology. (2013). *Socioeconomic effects of broadband speed*. Retrieved from Arthur Little.

Katz, R., & Jung, J. (2021). *The economic impact of broadband and digitization through the COVID-19 pandemic*. Geneva: International Telecommunications Union.

Minges, M. (2016). *Exploring the relationship between broadband and economic growth*. World Development Report 2016.

Toader, E., Firtescu, B. N., Roman, A., & Anton, S. G. (2018). Impact of information and communication technology infrastructure on economic growth: an empirical Assessment for the EU countries. *Sustainability*, 1-22.

APPENDIX B: B.C. INPUT-OUTPUT MODEL

Overview of the B.C. Input-Output Model

BC Stats maintains an input-output (IO) model based on the structure employed by Statistics Canada. The IO model is updated annually by BC Stats using the most up-to-date data from Statistics Canada. Starting in 1996, Statistics Canada began releasing updated IO information on an annual basis. The most recent release in December of 2022 was incorporated into the BC Stats IO (BCIOM) in summer 2023. Each report in the series uses the most up to date BCIOM at time of study, which results in slight differences in the model calculations from report to report. The final connectivity benefits study will look again at all areas of the province using the same model and factors to end the series, which will allow for a like-for-like comparison between regions.

The 2019 BCIOM was the first to incorporate data sets with post pandemic data in them. As a result, estimates may be structurally different from previous model iterations. The final report in this series will use the same model base year for all regions to provide outputs that are more accurately comparable.

The BCIOM is a structural model of the B.C. economy. The core of the BCIOM is a set of three tables (supply, use and final demand) that present the most detailed accounting of the provincial economy available. The tables together detail the supply and disposition of commodities, industries output delineated by commodity composition, and the complete costs of production of B.C. industries. The tables comprise detailed information obtained from administrative data, and Statistics Canada's surveys of establishments and enterprises. In essence, the supply use tables (SUT) provide a snapshot of the complete economy and all its industrial interconnections at a specific point in time.

SUT are produced at various levels of aggregation: the least detailed set of tables are presented at the "summary level" of aggregation, representing 35 industry groupings and 74 commodity groupings. The most detailed aggregation represents 240 industries and 501 commodities. The detailed-level SUT information is shared with the BC Stats by Statistics Canada, and is the information used in the BCIOM.

Purpose and uses

The purpose of a BCIOM is to estimate the total economic impact of a project, or economic shock, by presenting estimates of direct, indirect and induced impacts associated with the project or shock (meaning any change or departure from the status quo). Based on the observed inter-connection between industries in the economy, the multiplying of demand is traced through these industrial linkages to yield a set of aggregate impacts.

One of the most common uses of the IO model is to simulate the impact of a demand shock on the economy. Any increase in consumption of goods and services will generate direct, indirect and induced economic production.

Limitations of the input-output model

Although the BCIOM can be a very useful tool in the decision-making process, users should be aware of the limitations of input-output analysis. Some of the limitations that should be taken into consideration when using IO models are:

- Technical coefficients are assumed to be fixed. That is, the amount of each input necessary to produce one unit of each output is constant. The amount of input purchased by a sector is determined solely on the level of output. No consideration is made to price effects, substitution, changing technology or economies of scale.
- It is assumed that there are no constraints on resources — supply is infinite and perfectly elastic.
- It is assumed that all local employment resources are efficiently used and at full capacity, there is no underemployment of resources.
- IO models are flow models. Stocks are not explicitly represented, which implicitly assumes that goods can be produced without additions to capital stock.
- The industrial structure and linkages of the represented economy are based on information that lags the current economy — typically a three to four-year time lag in Canada.

When estimating economic impacts, it is preferable to use economic multipliers to make relative, rather than absolute, comparisons. Economic multiplier analysis is more properly used to determine which of several activities would have the largest economic impact rather than to estimate the absolute level of economic impact for a single activity. Where economic multipliers are used to estimate the impacts of a single activity, the results should be treated as general estimates only, indicating the order of magnitude of the impacts rather than exact levels.

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