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Economic Contribution Analysis of Mining Operations in the Elk Valley

Prepared for the BC Chamber of Commerce

January 2022

Note to Reader

The estimates presented within this document have been provided by Deloitte LLP ("Deloitte") to the BC Chamber of Commerce ("BCCC") for the purpose of analyzing the economic contribution of the steelmaking coal mining operations of Teck Resources Limited ("Teck") in British Columbia's Elk Valley during a representative year (based on 2019 financial data). This report was prepared with input from Teck, BCCC, and the United Steelworkers ("USW"). Photographs presented in this document have been provided by Teck and/or by BCCC.

This study does not represent a cost-benefit analysis for BCCC, Teck, or any other stakeholder, and does not represent a comparison of the potential economic impact of Teck's activities to the potential impact of an alternative use of resources. In particular, the study does not examine the potential costs of pursuing the capital investments or operational activities, including the opportunity costs for BCCC, Teck, or other stakeholders.

Deloitte does not assume any responsibility or liability for losses incurred by any party as a result of the circulation, publication, reproduction or use of this initial analysis contrary to its intended purpose. This analysis has been made only for the purpose stated and shall not be used for any other purpose. No party other than BCCC and Teck is entitled to rely on this analysis for any purpose whatsoever and Deloitte accepts no responsibility, liability, or duty of care to any party other than BCCC and Teck.

The analysis is provided as of January 28, 2022, and we disclaim any undertaking or obligation to advise any person of any change in any fact or matter affecting this analysis, which may come or be brought to our attention after the date hereof. In preparing this report, we have relied on historic financial, operational and other information provided to us by Teck. The estimates presented in this report are subject to the general qualification that the information and data provided to us are accurate and reliable and are also subject to the accuracy of the various assumptions described within the report. We reserve the right to amend any part of our report, or the conclusions expressed herein, in the event new or amended information is provided to us after the date of this report.

Without limiting the foregoing, in the event that there is any material change in any fact or matter affecting the analyses after the date hereof, we reserve the right to change or modify the analysis but are under no obligation to do so. Observations are made on the basis of economic, industrial, competitive and general business conditions prevailing as at the date hereof. In the analyses, we may have made assumptions with respect to the industry performance, general business, and economic conditions and other matters, many of which are beyond our control, including government and industry regulation.

The full extent of the ongoing COVID-19 pandemic's impact on the economic outlook remains uncertain. It is, therefore, important for readers to consider that the analysis is based on third-party data (e.g., economic and industry data) up to December 2019¹ and does not include any consideration of the likely economic impact of either COVID events or the related fiscal stimulus measures.

No opinion, counsel, or interpretation is intended in matters that require legal or other appropriate professional advice. It is assumed that such opinion, counsel, or interpretations have been, or will be, obtained from the appropriate professional sources. To the extent that there are legal issues relating to compliance with applicable laws, regulations, and policies, we assume no responsibility therefore.

We believe that our analyses must be considered as a whole and that selecting portions of the analyses or the factors considered by them, without considering all factors and analyses together, could create a misleading view of the issues related to the report. Amendment of any of the assumptions identified throughout this report could have a material impact on our analysis contained herein. Should any of the major assumptions not be accurate or should any of the information provided to us not be factual or correct, our analyses, as expressed in this report, could be significantly different.

^{1.} It should be noted that more recent information (from 2020-2021) was relied on in our qualitative analysis of socio-economic benefits.

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Executive Summary



About this Study

Study Background and Objective

Canada is internationally recognized as one of the leading hubs for mining companies.¹ The mining sector, which includes mining and related support activities, primary processing, downstream product manufacturing, and exploration, is a significant contributor to the Canadian economy and supports economic activity and employment across the country. Canada is the world's fourth largest exporter of steelmaking coal – also known as metallurgical coal – an essential ingredient in the production of steel.² Teck Resources Limited ("Teck") operates four steelmaking coal mine sites in British Columbia's Elk Valley.

Deloitte LLP ("Deloitte") has been engaged by the BC Chamber of Commerce ("BCCC") to assess the **economic contribution of Teck's steelmaking coal operations in the Elk Valley³ during a representative year⁴**, at the national, provincial, and local community levels.

This study uses an input-output (I-O) methodology to measure the economic contribution of Teck's Elk Valley operations in terms of **gross domestic product ("GDP")**, **labour income**, **employment⁵**, **and government revenue**. This methodology traces how the expenditures and revenues associated with the Elk Valley operations ripple through the economy and captures not only the **direct** economic impacts, but also the **indirect** impacts, which arise from generating demand for goods and services provided by Teck's suppliers, and the **induced** impacts, which arise from the spending of salaries and wages earned as a result of the Elk Valley operations.

In addition to the economic contribution analysis, this study also examines four socioeconomic benefits that Teck's Elk Valley operations bring to communities across Canada, including: **stimulated investment across the supply chain, local Indigenous community engagement, local community contribution, and supporting women in the workforce.** Each of these benefits is illustrated through a corresponding case study.

- 1. Minerals and the economy. Natural Resources Canada. Accessed October 2021.
- 2. Coal facts. Natural Resources Canada. Accessed October 2021.
- 3. The operations of Teck's four steelmaking coal mine sites in the Elk Valley, together with its supporting shared services sites and corporate offices, including offices in Vancouver, British Columbia, and Calgary, Alberta, are hereinafter collectively referred to as Teck's "Elk Valley operations". In 2019 (see footnote 5), Teck operated one additional steelmaking coal mine site in Alberta which subsequently ceased operations in 2020. This mine site is not considered within the scope of this study.
- 4. Representative year economic contributions were estimated based on Teck financial and operational data for 2019. Accordingly, throughout this report, where economic contribution estimates, expenditure amounts, or other financial or operational metrics are reported, they correspond to 2019 (hereinafter also referred to as "the representative year"), unless otherwise stated.
- 5. Throughout this report, where economic contribution estimates relating to employment are reported, use of the term "jobs" refers to full-time equivalent jobs ("FTEs").
- 6. The communities of Elkford, Sparwood, Fernie, Cranbrook, and Crowsnest Pass are hereinafter collectively referred to as the "local communities".

Regions in Scope of the Study

This study examines the economic contribution of Teck's Elk Valley operations to the following regions: (i) each of five communities located in the Elk Valley and surrounding area:⁶ Elkford, Sparwood, Fernie, Cranbrook, and Crowsnest Pass; (ii) the province of British Columbia; and (iii) Canada, at the national level.



At a Glance: Economic Contribution of Teck's Elk Valley Operations

Accounting for the direct, indirect, and induced effects, the economic contribution of Teck's Elk Valley operations included...







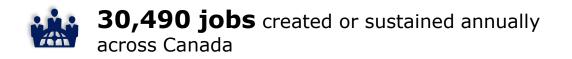
\$6.3B to Canada's Gross Domestic Product



2.3B to Labour Income in Canada



\$1.5B to Canada's Government Revenues





Economic Contribution to British Columbia



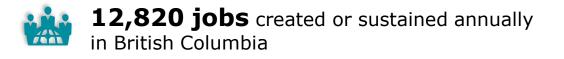
\$4.6B to British Columbia's **Gross Domestic Product**



\$1.3B to **Labour Income** in British Columbia



\$0.6B to British Columbia's **Government Revenues**



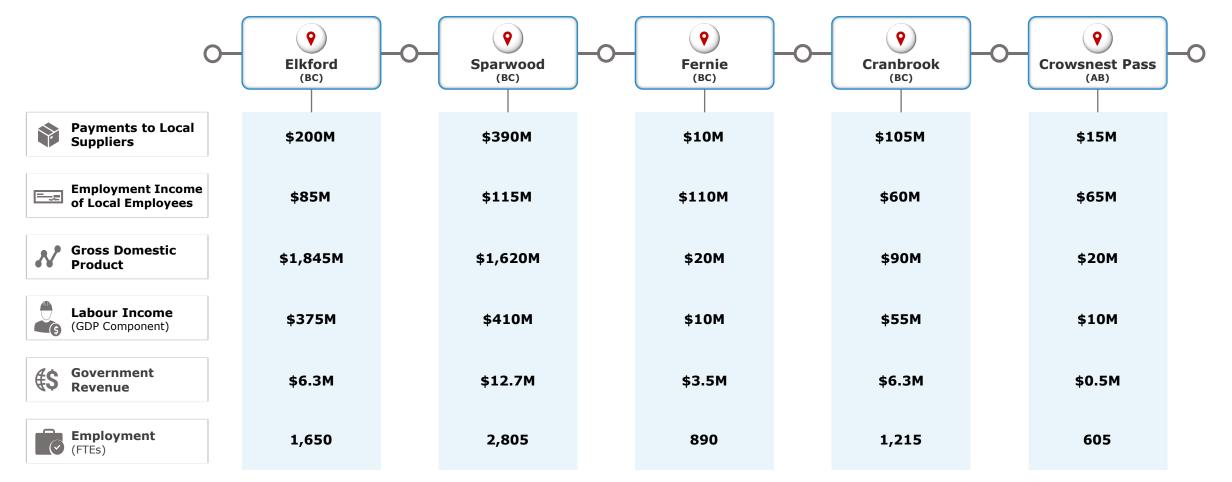
Note 1: Representative year economic contributions were estimated based on Teck's financial and operational data for 2019.

Note 2: Employment is rounded to the nearest ten full-time equivalent jobs. All other figures are rounded to the nearest hundred million dollars.

Note 3: The estimated contribution to Canada's government revenues captures total federal, provincial, and municipal revenues generated due to spending in the country. The estimated contribution to British Columbia's government revenues captures total provincial and municipal revenues generated due to spending in the country. The estimated contribution to British Columbia's government revenues captures total provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the provincial and municipal revenues generated due to spending in the province.

At a Glance: Economic Contribution of Teck's Elk Valley Operations

Accounting for the direct, indirect, and induced effects, the economic contribution of Teck's Elk Valley operations included...



Note 1: Representative year economic contributions were estimated based on Teck's financial and operational data for 2019.

Note 2: Government revenue is rounded to the nearest five million dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

Note 3: The estimated contribution to each local community's government revenue captures the total municipal revenues generated due to spending in that community.

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Elk Valley Operations' Activities and Expenditures

About the Elk Valley Operations

Teck's Elk Valley operations include four mine sites in the Elk Valley: Fording River Operations, Elkview Operations, Greenhills Operations, and Line Creek Operations, as well as supporting corporate offices in Vancouver, British Columbia, and Calgary, Alberta. The mine sites are supported by employees and vendors located in five local communities: Elkford, Sparwood, Fernie, Cranbrook, and Crowsnest Pass.

 During the representative year, Teck produced 25.7 million tonnes of steelmaking coal, representing approximately 85% of Canada's total production.¹

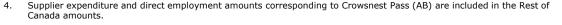
Elk Valley Operations' Expenditures

The economic contribution estimates included in this study are based on supplier expenditures (operating and capital), employment, tax, and other operational data provided by Teck for 2019 (i.e., the representative year). The operating expenditures include spending to support mining, milling, processing, and related operational activities. The capital expenditures include spending related to mine development, construction of facilities, exploration, and related sustaining and growth capital projects, including sustainability initiatives.

During the representative year, Teck's Elk Valley operations:

- Made payments of \$2.9 billion to roughly 1,800 suppliers across Canada, of which \$1.4 billion were to roughly 900 suppliers in British Columbia.²
- Directly employed 4,610 full-time equivalent employees across Canada, of which 3,230 resided in British Columbia.
- Compensated its direct employees \$137,000 per year on average 87% higher than the average national compensation.³

- 2. Unless otherwise stated, all dollar figures in this document are expressed in 2019 Canadian dollars.
- 3. Deloitte Analysis; Statistics Canada Table 36-10-0489-01. Employee compensation comprises salaries, bonuses, and benefits.



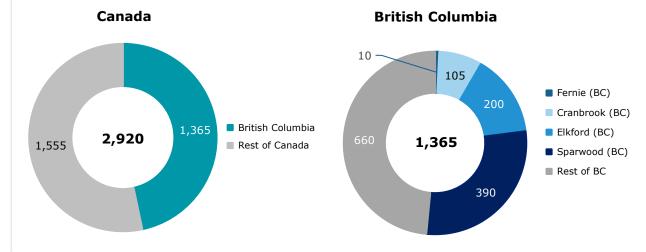
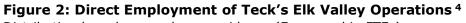
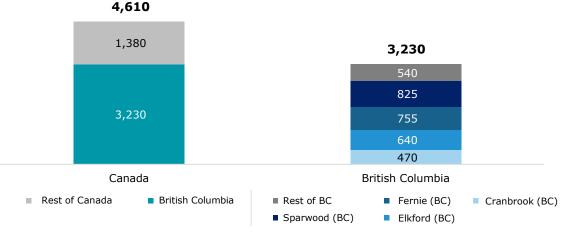


Figure 1: Supplier Expenditures of Teck's Elk Valley Operations⁴ Distribution based on supplier location (Expressed in \$M)



Distribution based on employee residence (Expressed in FTEs)



^{1.} Coal facts. Natural Resources Canada. Accessed October 2021.

Economic Contribution to Canada and British Columbia

Summary of the Elk Valley Operations' Economic Contribution

The economic contribution analysis finds that Teck's Elk Valley operations have made significant **direct** contribution to the economies of Canada and British Columbia, as well as **indirect** contribution arising from generating demand for services and products provided by Teck's suppliers and **induced** contribution arising from the spending of salaries and wages earned as a result of the Elk Valley operations. Accounting for the direct, indirect, and induced effects, it is estimated that, during the representative year, Teck's Elk Valley operations contributed approximately **\$6.3 billion to Canadian GDP**, of which **\$2.3 billion** was in contributions to **labour income**, sustained approximately **30,490 jobs**, and generated approximately **\$1.5 billion in government revenues** across Canada.

To put these estimates in perspective, during the representative year:

- Teck's Elk Valley operations' direct GDP contributions are estimated to have accounted for roughly **59% of British Columbia's mining sector GDP**.¹
- Teck's Elk Valley operations' direct GDP contributions are estimated to have accounted for roughly **9% of Canada's entire mining sector GDP**.²
- It is estimated that Teck's Elk Valley operations' direct employees accounted for roughly **23% of British Columbia's mining sector employment**.³
- It is estimated that Teck's Elk Valley operations' direct employees accounted for roughly **6% of Canada's mining sector employment.**⁴
- The average compensation paid by Teck to its direct employees was approximately \$137,000 per employee, 87% higher than the average national compensation.⁵

Figure 3: Summary of Estimated Direct, Indirect, and Induced Economic Contribution to Canada and British Columbia ⁶

	Canada	British Columbia			
→★ Gross domestic product ☐☐☐ (GDP)	Direct:\$3,320MIndirect:\$2,260MInduced:\$730MTotal:\$6,310M	Direct: \$3,320M Indirect: \$960M Induced: \$280M Total: \$4,560M			
(GDP component)	Direct: \$630M Indirect: \$1,360M Induced: \$340M Total: \$2,330M	Direct: \$630M Indirect: \$590M Induced: \$110M Total: \$1,330M			
Local government	Direct: \$610M Indirect: \$530M Induced: \$400M Total: \$1,540M	Direct: \$450M Indirect: \$90M Induced: \$80M Total: \$610M			
Employment (average annual full-time equivalent jobs created or sustained)	Direct: 4,610 jobs Indirect: 19,820 jobs Induced: 6,060 jobs Total: 30,490 jobs	Direct: 3,230 jobs Indirect: 7,580 jobs Induced: 2,010 jobs Total: 12,820 jobs			

Deloitte Analysis; Statistics Canada Table 36-10-0402-01.

- 2. Deloitte Analysis; Statistics Canada Table 36-10-0402-01.
- 3. Deloitte Analysis; Statistics Canada Table 36-10-0489-01.
- 4. Deloitte Analysis; Statistics Canada Table 36-10-0489-01.
- 5. Deloitte Analysis; Statistics Canada Table 36-10-0489-01.
- 6. Totals may not align due to rounding. Employment is rounded to the nearest ten full-time equivalent jobs. All other figures are rounded to the nearest ten million dollars.
- At the federal level, the estimated contribution to government revenue captures revenues to federal, provincial, and municipal governments across the country. At the provincial level, the estimated contribution to government revenue captures revenues to the provincial and municipal governments in British Columbia.

Teck's Expenditure and Employment Footprint in Local Communities

Summary of Teck's Footprint in Local Communities

The analysis of Teck's economic contribution to local communities in the Elk Valley and surrounding area is based on its payments to suppliers located in those communities, the employment opportunities created for residents of those communities, and its tax payments to the local governments of those communities.

Accounting for the direct, indirect, and induced effects, it is estimated that, in the representative year, the Elk Valley operations' economic contribution reflected roughly **80% of the** total GDP and 40% of all jobs in Southeast BC (Elkford, Sparwood, Fernie, Cranbrook)¹, as well as created or sustained roughly **1 in 5 of all jobs in the Regional District of** East Kootenay. Please refer to page 25 for further information (including important notes around these estimates).

Local Communities in Scope

- Elkford Located in southeastern British Columbia, Elkford has a population of approximately 2,500. During the
 representative year, Teck's Elk Valley operations made payments of \$200 million to roughly 50 vendors located in the
 community and directly employed 640 local residents who were compensated \$137,000 annually on average
 (approximately \$85M in total employment income).
- Sparwood Located in southeastern British Columbia, Sparwood has a population of approximately 3,800. During the representative year, Teck's Elk Valley operations made payments of \$390 million to roughly 100 vendors located in the community and directly employed 825 local residents who were compensated \$140,000 annually on average (approximately \$115M in total employment income).
- Fernie Located 30 kilometres southwest of Sparwood in southeastern British Columbia, Fernie has a population of approximately 5,200. During the representative year, Teck's Elk Valley operations made payments of \$10 million to roughly 100 vendors located in the community and directly employed 755 local residents who were compensated \$143,000 annually on average (approximately \$110M in total employment income).
- Cranbrook Located 100 kilometres west of Fernie in southeastern British Columbia, Cranbrook has a population of approximately 20,000. During the representative year, Teck's Elk Valley operations made payments of \$105 million to roughly 125 vendors located in the community and directly employed 470 local residents who were compensated \$129,000 annually on average (approximately \$60M in total employment income).
- Crowsnest Pass Located 20 kilometres southeast of Sparwood in southwestern Alberta, Crowsnest Pass has a population of approximately 5,600. During the representative year, Teck's Elk Valley operations made payments of \$15 million to roughly 50 vendors located in the community and directly employed 475 local residents who are compensated \$142,000 annually on average (approximately \$65M in total employment income).

1. Southeast BC is defined as the aggregate of Elkford, Sparwood, Fernie, and Cranbrook. This definition may not align to how the four communities are geographically categorized by Statistics Canada or other government agencies.



Economic Contribution to Local Communities

Many of the Elk Valley operations' suppliers and employees are based in local communities in the Elk Valley and surrounding area. Accordingly, Teck generates significant indirect and induced economic contribution in these communities through payments made to local suppliers and the spending of salaries and wages earned as a result of the Elk Valley operations. It also generates direct economic contribution through local tax payments and direct employment in the communities. Teck's direct employees residing in these communities are compensated approximately between \$129,000 and \$143,000 per year on average.

Figure 4: Summary of Estimated Direct, Indirect, and Induced Economic Contribution to Local Communities¹

		Elkford (E	BC)	Sparwoo	od (BC)	Fernie (I	BC)	Cranbro	ok (BC)	Crowsnes	t Pass (AB)
Ŷ	Local supplier payments by community	\$200M		\$390M		\$10M		\$105M		\$15M	
	Employment income of Teck's employees by community ²	\$85M		\$115M		\$110M		\$60M		\$65M	
	Gross domestic product (GDP) ³	Indirect: Induced:	\$1,715M \$105M \$25M \$1,845M	Direct: Indirect: Induced: Total:	\$1,365M \$210M \$45M \$1,620M	Direct: Indirect: Induced: Total:	- \$5M \$10M \$20M	Direct: Indirect: Induced: Total:	- \$70M \$20M \$90M	Direct: Indirect: Induced: Total:	- \$10M \$10M \$20M
	Labour income ⁴ (GDP component)	Direct: Indirect: Induced:	\$295M \$70M \$10M \$375M	Direct: Indirect: Induced: Total:	\$260M \$135M \$20M \$410M	Direct: Indirect: Induced: Total:	\$5M \$5M \$10M	Direct: Indirect: Induced: Total:	\$45M \$10M \$55M	Direct: Indirect: Induced: Total:	\$5M \$5M \$10M
() () () () () () () () () () () () () (Local government revenues ⁵	Indirect: Induced:	\$4.3M \$1.1M \$0.9M \$6.3M	Direct: Indirect: Induced: Total:	\$8.8M \$2.2M \$1.7M \$12.7M	Direct: Indirect: Induced: Total:	\$3.0M \$0.1M \$0.4M \$3.5M	Direct: Indirect: Induced: Total:	\$4.9M \$0.6M \$0.8M \$6.3M	Direct: Indirect: Induced: Total:	\$0.0M \$0.1M \$0.4M \$0.5M
	Employment ⁶ (average annual full-time equivalent jobs created or sustained)	Indirect: Induced:	640 jobs 845 jobs 165 jobs 1,650 jobs	Direct: Indirect: Induced: Total:	825 jobs 1,650 jobs 330 jobs 2,805 jobs	Direct: Indirect: Induced: Total:	755 jobs 55 jobs 85 jobs 890 jobs	Direct: Indirect: Induced: Total:	470 jobs 590 jobs 150 jobs 1,215 jobs	Direct: Indirect: Induced: Total:	475 jobs 65 jobs 60 jobs 605 jobs

1. Totals may not align due to rounding. Local government revenues are rounded to the nearest one hundred thousand dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

2. Payments made to Teck's Elk Valley operations' employees comprise wages, salaries, and benefits.

3. There are no direct impacts to GDP at the community level for Fernie, Cranbrook, and Crowsnest Pass because the mining activities of Teck's Elk Valley operations are located solely within the municipal boundaries of Elkford and Sparwood.

4. It is important to note that, consistent with Statistics Canada's definitional approach, labour income (as presented in this table) refers to the wages, salaries, and benefits realized as per the geographic location of labourers' activity (i.e., place of employment). Hence, while there are no direct impacts to labour income at the community level for Fernie, Cranbrook, and Crowsnest Pass, it should be noted that Teck's employees who reside in these communities are compensated well relative to the communities' average employment income (see page 25).

5. Local government revenues refer to taxes on products and taxes on production (e.g., property tax, permits, and fees) paid to local community governments.

6. The estimates of jobs supported by Teck's Elk Valley operations are based on the community of residence of the employees. For example, the direct employment contribution to Elkford is 640 jobs (FTEs), which comprise direct employees who reside in the community.

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Summary of Additional Socio-Economic Benefits

Beyond stimulating the economy through its operations and capital investments, Teck's Elk Valley operations create and enable a range of additional socio-economic benefits.

Stimulated Investment Across the Supply Chain

- In the representative year, Teck's Elk Valley operations spent \$1.4 billion on products and services procured from roughly 900 suppliers located across British Columbia including in the British Columbian Interior, Lower Mainland, and Vancouver Island, and including many Indigenousled businesses.
- Partnership with Teck can offer suppliers longterm, stable business opportunities – which can enable them to make significant investments on their own, such as investments in infrastructure to scale up operations, technology to improve productivity or new products and services to expand their market footprint.
- These investments drive economic benefits to British Columbia and Canada on their own right, above and beyond the economic contributions quantified in this report.

Case Study: Neptune Terminals Investment

Participation with Local Indigenous Peoples

- Teck has prioritized relationships with local Indigenous communities, via an Impact Management and Benefit Agreement (IMBA) with the Ktunaxa Nation Council.
- In 2021, Teck has significantly grown procurement from Indigenous businesses, spending approximately \$52 million on KNC business entities (an increase of over \$20 million from the nearly \$30 million spent in 2020).
- Feedback provided has noted that the partnership with Teck has significantly improved the ability of local Indigenous-owned businesses to generate and diversify revenue.
- Further, it was noted that Indigenous-owned, managed and led companies within Teck's supply chain benefit from exposure to new approaches to procurement, safety programming, and business reporting – which can enhance the competitiveness of those firms.
- Teck's relationship with the Ktunaxa Nation Council includes specific commitments to conserve land on Ktunaxa territory and actively protect wildlife and the environment.
- **Case Study**: Nupqu Limited Partnership & Kettle River Contracting's Business Growth

Teck has made a range of direct investments in local community infrastructure, including financial support for the construction of seniors housing in Elkford, providing \$1 million to the College of the Rockies to construct new facilities in Cranbrook and Fernie along with a scholarship fund for trades students, and the maintenance of parks and trails throughout the Elk Valley.

Local Community Contributions

- Teck's philanthropic commitments in the province, include financial supports for floods in 2021, and wildfires in 2020 and 2021, providing financial assistance to the Canadian Red Cross, the British Columbia Society to Prevent Cruelty to Animals, with Teck also matching employee donations.
- Teck's conservation investments include a partnership with the Elk River Alliance, which focuses on the health of the local watershed.
- Teck has partnered with local educational institutions to help encourage youth to consider careers in mining and participates in co-operative education programming. Over the last five years, Teck has hired over 568 co-op students and 147 summer students.

Case Study: Community Investments by Teck's Suppliers - Bearspaw Contracting

Supporting Women in the Workforce

- Teck has made a number of commitments aimed at increasing gender representation in the mining industry, including recruitment campaigns across the country focused on diversifying the workforce.
- In 2020, 32% of Teck's new hires for the roles of operators and general labourers were women (roles which represent a large proportion of Teck's overall workforce and which were historically underrepresented by women).
- Teck has invested in upgrades to its sites that create a more inclusive experience for all gender identities, such as size inclusivity in equipment and uniforms, and the use of gender-inclusive language in operational materials and executive communications, including a gender-neutral approach to job titles and descriptions.

Case Study: Teck's Inclusion and Diversity Committee

Note: This study does not include an analysis of any environmental impacts associated with mining operations in the Elk Valley.

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Introduction



About Teck's Elk Valley Operations

About Teck and the Elk Valley Operations

Teck is a diversified resource company with global headquarters in Vancouver, British Columbia. Teck is engaged in mining and mineral development in Canada, the US, Peru, and Chile, and has business units focused on copper, zinc, energy, and steelmaking coal – also known as metallurgical coal, an essential ingredient in the production of steel.

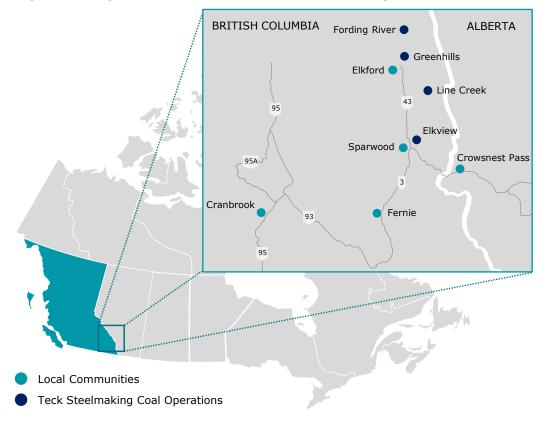
Teck is the world's second-largest seaborne exporter of steelmaking coal and is Canada's leading producer of the material.¹ Teck's Elk Valley operations comprise four steelmaking coal mine sites in the Elk Valley and supporting offices in Vancouver, British Columbia, and Calgary, Alberta. The Elk Valley mine sites, all of which are considered within the scope of this study, are:

- Fording River Annual production capacities of the mine and preparation plant are approximately 9.0 million and 9.5 million tonnes of coal, respectively. Fording River is located within the municipal boundaries of Elkford.
- Elkview Annual production capacities of the mine and preparation plant are approximately 9.0 million tonnes of coal each. Elkview is located within the municipal boundaries of Sparwood.
- **Greenhills** Annual production capacities of the mine and preparation plant are 5.9 million and 5.4 million tonnes of coal, respectively. Greenhills is located within the municipal boundaries of Elkford.
- **Line Creek** Annual production capacities of the mine and preparation plant are approximately 4.0 million tonnes of coal each. Line Creek is located within the municipal boundaries of Sparwood.
 - During the representative year, Teck produced 25.7 million tonnes of steelmaking coal, representing approximately 85% of Canada's total production.²
 - In that same year, Teck's Elk Valley operations incurred \$2,920M in total supplier expenditures (operating and capital) across Canada.
- 1. Teck 2019 Annual Report; Coal facts. Natural Resources Canada. Accessed October 2021.
- 2. Deloitte Analysis; *Coal facts.* Natural Resources Canada. Accessed October 2021.

Overview of the Elk Valley and Local Communities

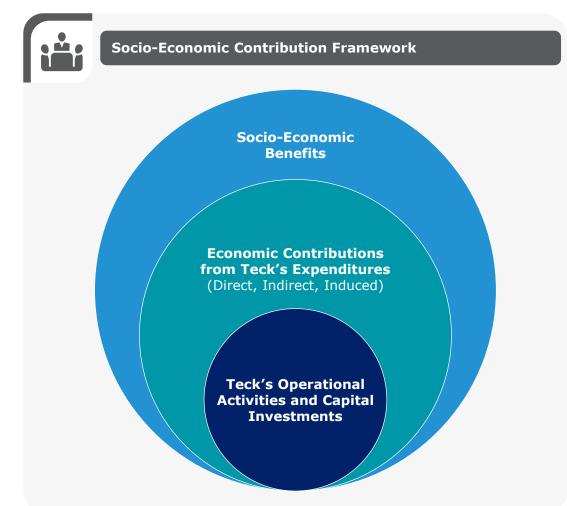
Located in the East Kootenay region of British Columbia, the Elk Valley has played an important role in the coal mining history of Canada for over 100 years. Today, most of Teck's steelmaking coal employees and suppliers are based in local communities in the Elk Valley and surrounding area. Of the five local communities within the scope of this study, **Elkford**, **Sparwood**, **Fernie**, and **Cranbrook** are located in British Columbia, and **Crowsnest Pass** is located in Alberta.

Figure 5: Map of Local Communities and Elk Valley Mine Sites



Analytical Framework

Deloitte employed a holistic framework to assess the socio-economic footprint of Teck's Elk Valley operations by examining the economic contribution from its operational activities and expenditures, as well as additional socio-economic benefits associated with the Elk Valley operations.



Study Approach

This study uses an input-output (I-O) methodology to measure the economic contribution of Teck's Elk Valley operations in terms of GDP, labour income, employment, and government revenue. This methodology traces how the expenditures and revenues associated with the Elk Valley operations ripple through the economy and captures not only the **direct** economic impacts, but also the **indirect** impacts (which arise from generating demand for goods and services provided by Teck's suppliers) and the **induced** impacts (which arise from the spending of salaries and wages earned as a result of the Elk Valley operations).

The economic contribution estimates included in this study are based on Teck's Elk Valley operations' supplier expenditure data, as well as its employment and other operational data, provided by the company for 2019 (i.e., the representative year).

In addition to the economic contribution analysis, this study also examines **four socio-economic benefits** that the Elk Valley operations yield to communities across Canada, including:

- Stimulated investment across the supply chain
- ✤ Local Indigenous community engagement
- Local community contributions
- Supporting women in the workforce

The above socio-economic benefits were selected by BCCC, USW, and Teck in consultation with Deloitte. To illustrate these benefits, Deloitte conducted a number of stakeholder interviews and prepared four case studies, one corresponding to each benefit, which are presented in this report (pages 31-42).

Economic Contribution Analysis Methodology

This study employs an input-output methodology to estimate the economic contribution, at three levels of impact, of Teck's Elk Valley operations.

> Associated with the economic contribution of suppliers due to the demand for goods and services generated by Teck's

> Elk Valley operations. For example, this includes economic

activity stimulated in the professional services,

01

Direct contribution

Directly associated with Teck's Elk Valley operations. For example, this includes the employment and income of employees directly involved in the Elk Valley operations, as well as the economic value-added that arises from those operations.

We measure the economic contribution in terms of:



Gross Domestic Product (GDP) or Value Added is a measure of the total unduplicated value of goods and services produced in the economic territory of a country or region during a given period. GDP includes household income from current productive activities (e.g., wages, salaries, and unincorporated business income), as well as profits and other income earned by corporations.

02

Indirect contribution



Labour income represents the total earnings of employees (including employees of suppliers), consisting of wages and salaries, as well as supplementary labour income (e.g., employers' contribution to pension funds, employee welfare funds, the Unemployment Insurance Fund, and Workers Compensation Fund).

Employment is estimated in terms of full-time equivalent ("FTE") positions for ongoing employment. This measure represents employment contribution associated with Teck's operational activities.

Government revenue refers to federal, provincial, and municipal taxes on products and taxes on production, such as sales tax (e.g., GST), payroll taxes, and excise duty. This study also includes royalties, corporate income taxes and personal income taxes associated with Teck's operational activities.²

03

Induced contribution¹

Associated with the spending of wages and salaries earned as a result of Teck's Elk Valley operations and the associated stimulated activity of suppliers. For example, this includes purchases of goods and services at the manufacturing, and transportation sectors, amongst others. household level.

The economic contribution is assessed with respect to the following geographic areas:



- Statistics Canada makes an important note on induced economic contribution: not taking into account induced economic effects underestimates economic contributions because household spending is absent from the model: including induced effects, however, tends to overestimate economic contributions because of the rigid assumptions about consumption (such as fixed expenditure shares relative to incomes). Therefore, economic contribution based on direct and indirect effects alone and economic contribution based on direct, and induced effects are generally considered as lower and upper bounds of total economic contribution estimates, respectively.
- At the federal level, the estimated contribution to government revenue captures revenues to federal, provincial, and municipal governments across the country. At the provincial level, the estimated contribution to government revenue captures revenues to the corresponding provincial government and municipal governments located in that province. At the community level, the estimated contribution to government revenue captures revenue to the local government of the community.
- Elkford, Sparwood, Fernie, and Cranbrook are in British Columbia. Crowsnest Pass is in Alberta. The approach to estimate community-level economic contribution is consistent across all five communities, but for each community relies on the corresponding provincial input- output 3. multipliers from Statistics Canada and location quotients. For example, the approach to estimate the economic contribution to Elkford relies on the input-output multipliers for British Columbia and the location quotients specific to Elkford (derived from Statistics Canada's census data).

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Economic Contribution to Canada and British Columbia



Operational Profile in Canada and British Columbia

Summary of Operational Profile

During the representative year, Teck produced 25.7 million tonnes of steelmaking coal and recorded sales of 25.0 million tonnes. This activity generated approximately \$5.5 billion in revenues and was supported by \$2.9 billion in payments to suppliers across Canada. These expenditures ripple through the provincial and national economies to generate significant economic contribution, including contribution to GDP, employment, labour income, and government revenue.

The economic contribution estimates in this study are based on supplier expenditure data (operating and capital), as well as employment, tax, and business income data, associated with the Elk Valley operations as provided by Teck for the 2019 fiscal year (i.e., the representative year). The operating expenditures include spending to support mining, grinding, processing, and related operational activities. The capital expenditures include spending related to mine development, construction of facilities, exploration, and related sustaining and growth capital investments, including sustainability initiatives.

During the representative year, Teck's Elk Valley operations:

- Made payments of \$2.9 billion to roughly 1,800 suppliers across Canada, of which \$1.4 billion were to roughly 900 suppliers located in British Columbia.
- Directly employed 4,610 employees (FTEs) across Canada, of which 3,230 resided in British Columbia.
- Compensated its direct employees \$137,000 per year on average 87% higher than the average national compensation.¹

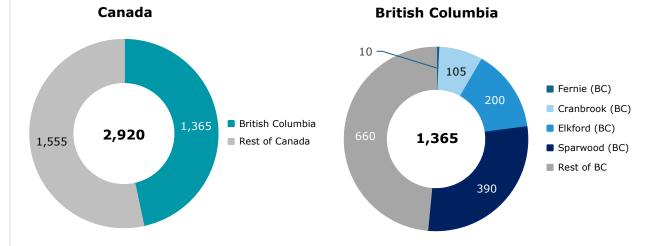
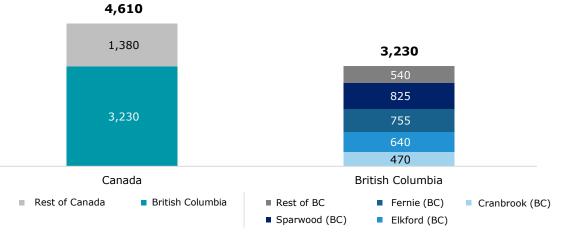


Figure 6: Supplier Expenditures of Teck's Elk Valley Operations² Distribution based on supplier location (Expressed in \$M)





- 1. Deloitte Analysis; Statistics Canada Table 36-10-0489-01.
- 2. Supplier expenditure and direct employment amounts corresponding to Crowsnest Pass (AB) are included in the Rest of Canada amounts.

Economic Contribution to Canada and British Columbia

Summary of the Elk Valley Operations' Economic Contribution

The economic contribution analysis finds that Teck's Elk Valley operations have made significant **direct** contribution to the economies of Canada and British Columbia, as well as **indirect** contribution arising from generating demand for services and products provided by Teck's suppliers and **induced** contribution arising from the spending of salaries and wages earned as a result of the Elk Valley operations. Accounting for the direct, indirect, and induced effects, it is estimated that, during the representative year, Teck's Elk Valley operations contributed approximately **\$6.3 billion to Canadian GDP**, of which **\$2.3 billion** was in contributions to **labour income**, sustained approximately **30,490 jobs**, and generated approximately **\$1.5 billion in government revenues** across Canada.

To put these estimates in perspective, during the representative year:

- Teck's Elk Valley operations' direct GDP contributions are estimated to have accounted for roughly **59% of British Columbia's mining sector GDP**.¹
- Teck's Elk Valley operations' direct GDP contributions are estimated to have accounted for roughly **9% of Canada's entire mining sector GDP**.²
- It is estimated that Teck's Elk Valley operations' direct employees accounted for roughly **23% of British Columbia's mining sector employment**.³
- It is estimated that Teck's Elk Valley operations' direct employees accounted for roughly **6% of Canada's mining sector employment.**⁴
- The average compensation paid by Teck to its direct employees was approximately \$137,000 per employee, 87% higher than the average national compensation.⁵

Figure 3: Summary of Estimated Direct, Indirect, and Induced Economic Contribution to Canada and British Columbia ⁶

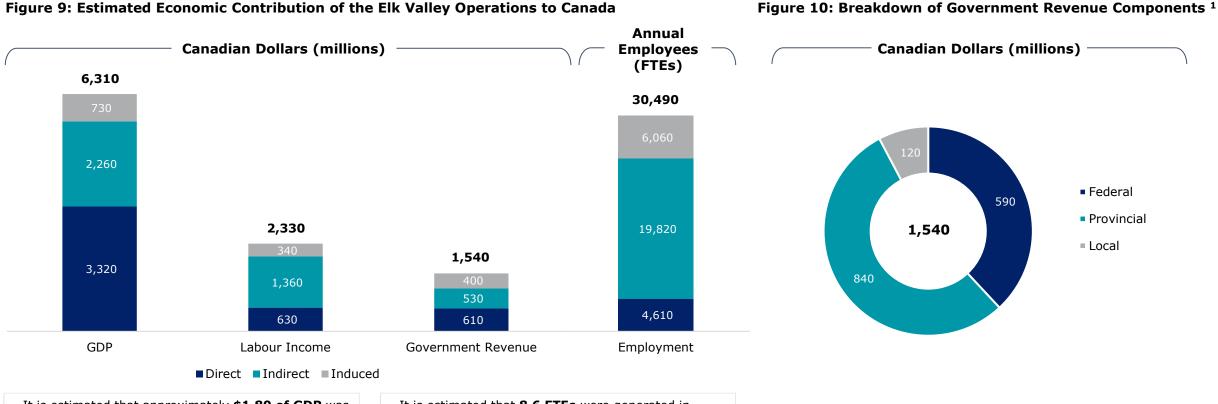
	Canada	British Columbia
→* Gross domestic product □□□ (GDP)	Direct: \$3,320M Indirect: \$2,260M Induced: \$730M Total: \$6,310M	Direct: \$3,320M Indirect: \$960M Induced: \$280M Total: \$4,560M
(GDP component)	Direct: \$630M Indirect: \$1,360M Induced: \$340M Total: \$2,330M	Direct: \$630M Indirect: \$590M Induced: \$110M Total: \$1,330M
Local government revenues ⁷	Direct: \$610M Indirect: \$530M Induced: \$400M Total: \$1,540M	Direct: \$450M Indirect: \$90M Induced: \$80M Total: \$610M
Employment (average annual full-time equivalent jobs created or sustained)	Direct: 4,610 jobs Indirect: 19,820 jobs Induced: 6,060 jobs Total: 30,490 jobs	Direct: 3,230 jobs Indirect: 7,580 jobs Induced: 2,010 jobs Total: 12,820 jobs

Deloitte Analysis; Statistics Canada Table 36-10-0402-01.

- 2. Deloitte Analysis; Statistics Canada Table 36-10-0402-01.
- 3. Deloitte Analysis; Statistics Canada Table 36-10-0489-01.
- 4. Deloitte Analysis; Statistics Canada Table 36-10-0489-01.
- 5. Deloitte Analysis; Statistics Canada Table 36-10-0489-01.
- 6. Totals may not align due to rounding. Employment is rounded to the nearest ten full-time equivalent jobs. All other figures are rounded to the nearest ten million dollars.
- At the federal level, the estimated contribution to government revenue captures revenues to federal, provincial, and municipal governments across the country. At the provincial level, the estimated contribution to government revenue captures revenues to the provincial and municipal governments in British Columbia.

Detailed Summary: Economic Contribution to Canada

Accounting for the direct, indirect, and induced impacts, it is estimated that Teck's Elk Valley operations contributed **\$6.3 billion to Canada's GDP**, of which **\$2.3 billion** was contribution to **labour income**, and created or sustained approximately **30,490 FTEs across Canada** during the representative year. It is also estimated that the economic activity stimulated by Teck's Elk Valley operations generated **\$1.5 billion in taxes and government revenues** annually to federal, provincial, and municipal governments across Canada, at the direct, indirect, and induced levels.



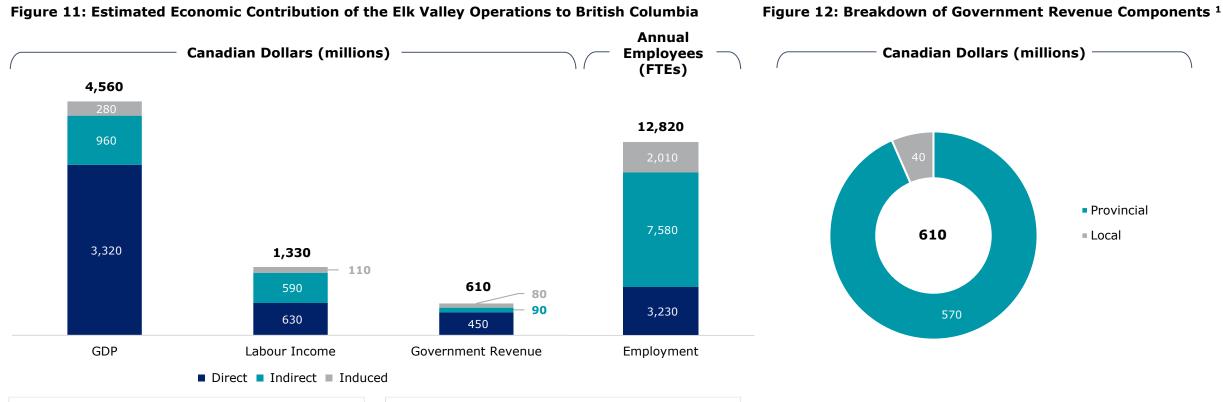
It is estimated that approximately **\$1.80 of GDP** was generated for the Canadian economy for **every dollar spent** by Teck's Elk Valley operations, accounting for direct, indirect, and induced impacts. It is estimated that **8.6 FTEs** were generated in Canada for **every million dollars spent** by Teck's Elk Valley operations, accounting for the direct, indirect, and induced impacts.

. The estimated contribution to Canada's government revenue captures revenues to federal, provincial, and municipal governments across the country.

Note: Totals reported on this page may not align due to rounding. Employment is rounded to the nearest ten full-time equivalent jobs. All other figures are rounded to the nearest ten million dollars.

Detailed Summary: Economic Contribution to British Columbia

Accounting for the direct, indirect, and induced impacts, it is estimated that Teck's Elk Valley operations contributed **\$4.6 billion to British Columbia's GDP**, of which **\$1.3 billion** was contribution to **labour income**, and created or sustained approximately **12,820 FTEs across the province** during the representative year. It is also estimated that the economic activity stimulated by Teck's Elk Valley operations generated **\$0.6 billion in taxes and government revenues** annually to the provincial and municipal governments in British Columbia, at the direct, indirect, and induced levels.



It is estimated that approximately **\$1.30 of GDP** was generated for British Columbia's economy for **every dollar spent** by Teck's Elk Valley operations, accounting for direct, indirect, and induced impacts. It is estimated that **3.6 FTEs** were generated in British Columbia for **every million dollars spent** by Teck's Elk Valley operations, accounting for the direct, indirect, and induced impacts.

The estimated contribution to British Columbia's government revenues captures revenues to the provincial government and municipal governments in British Columbia.

Note: Totals reported on this page may not align due to rounding. Employment is rounded to the nearest ten full-time equivalent jobs. All other figures are rounded to the nearest ten million dollars.

Economic Contribution to Local Communities



Teck's Expenditure and Employment Footprint in Local Communities

Summary of Teck's Footprint in Local Communities

The analysis of Teck's economic contribution to local communities in the Elk Valley and surrounding area is based on its payments to suppliers located in those communities, the employment opportunities created for residents of those communities, and its tax payments to the local governments of those communities.

Accounting for the direct, indirect, and induced effects, it is estimated that, in the representative year, the Elk Valley operations' economic contribution reflected roughly **80% of the** total GDP and 40% of all jobs in Southeast BC (Elkford, Sparwood, Fernie, Cranbrook)¹, as well as created or sustained roughly **1 in 5 of all jobs in the Regional District of** East Kootenay. Please refer to page 25 for further information (including important notes around these estimates).

Local Communities in Scope

- Elkford Located in southeastern British Columbia, Elkford has a population of approximately 2,500. During the representative year, Teck's Elk Valley operations made payments of \$200 million to roughly 50 vendors located in the community and directly employed 640 local residents who were compensated \$137,000 annually on average (approximately \$85M in total employment income).
- Sparwood Located in southeastern British Columbia, Sparwood has a population of approximately 3,800. During the representative year, Teck's Elk Valley operations made payments of \$390 million to roughly 100 vendors located in the community and directly employed 825 local residents who were compensated \$140,000 annually on average (approximately \$115M in total employment income).
- Fernie Located 30 kilometres southwest of Sparwood in southeastern British Columbia, Fernie has a population of approximately 5,200. During the representative year, Teck's Elk Valley operations made payments of \$10 million to roughly 100 vendors located in the community and directly employed 755 local residents who were compensated \$143,000 annually on average (approximately \$110M in total employment income).
- Cranbrook Located 100 kilometres west of Fernie in southeastern British Columbia, Cranbrook has a population of approximately 20,000. During the representative year, Teck's Elk Valley operations made payments of \$105 million to roughly 125 vendors located in the community and directly employed 470 local residents who were compensated \$129,000 annually on average (approximately \$60M in total employment income).
- Crowsnest Pass Located 20 kilometres southeast of Sparwood in southwestern Alberta, Crowsnest Pass has a population of approximately 5,600. During the representative year, Teck's Elk Valley operations made payments of \$15 million to roughly 50 vendors located in the community and directly employed 475 local residents who are compensated \$142,000 annually on average (approximately \$65M in total employment income).

^{1.} Southeast BC is defined as the aggregate of Elkford, Sparwood, Fernie, and Cranbrook. This definition may not align to how the four communities are geographically categorized by Statistics Canada or other government agencies.



Economic Contribution to Local Communities

Many of the Elk Valley operations' suppliers and employees are based in local communities in the Elk Valley and surrounding area. Accordingly, Teck generates significant indirect and induced economic contribution in these communities through payments made to local suppliers and the spending of salaries and wages earned as a result of the Elk Valley operations. It also generates direct economic contribution through local tax payments and direct employment in the communities. Teck's direct employees residing in these communities are compensated approximately between \$129,000 and \$143,000 per year on average.

Figure 13: Summary of Estimated Direct, Indirect, and Induced Economic Contribution to Local Communities¹

		Elkford (BC) Sparwood (BC)		Fernie (BC)		Cranbrook (BC)		Crowsnest Pass (AB)		
Ŷ	Local supplier payments by community	\$200M		\$390M		\$10M		\$105M		\$15M	
	Employment income of Teck's employees by community ²	\$85M		\$115M		\$110M		\$60M		\$65M	
	Gross domestic product (GDP) ³	Direct: Indirect: Induced: Total:	\$1,715M \$105M \$25M \$1,845M	Direct: Indirect: Induced: Total:	\$1,365M \$210M \$45M \$1,620M	Direct: Indirect: Induced: Total:	- \$5M \$10M \$20M	Direct: Indirect: Induced: Total:	- \$70M \$20M \$90M	Direct: Indirect: Induced: Total:	- \$10M \$10M \$20M
	Labour income ⁴ (GDP component)	Direct: Indirect: Induced: Total:	\$295M \$70M \$10M \$375M	Direct: Indirect: Induced: Total:	\$260M \$135M \$20M \$410M	Direct: Indirect: Induced: Total:	+ \$5M \$5M \$10M	Direct: Indirect: Induced: Total:	\$45M \$10M \$55M	Direct: Indirect: Induced: Total:	\$5M \$5M \$10M
	Local government revenues ⁵	Direct: Indirect: Induced: Total:	\$4.3M \$1.1M \$0.9M \$6.3M	Direct: Indirect: Induced: Total:	\$8.8M \$2.2M \$1.7M \$12.7M	Direct: Indirect: Induced: Total:	\$3.0M \$0.1M \$0.4M \$3.5M	Direct: Indirect: Induced: Total:	\$4.9M \$0.6M \$0.8M \$6.3M	Direct: Indirect: Induced: Total:	\$0.0M \$0.1M \$0.4M \$0.5M
	Employment ⁶ (average annual full-time equivalent jobs created or sustained)	Direct: Indirect: Induced: Total:	640 jobs 845 jobs 165 jobs 1,650 jobs	Direct: Indirect: Induced: Total:	825 jobs 1,650 jobs 330 jobs 2,805 jobs	Direct: Indirect: Induced: Total:	755 jobs 55 jobs 85 jobs 890 jobs	Direct: Indirect: Induced: Total:	470 jobs 590 jobs 150 jobs 1,215 jobs	Direct: Indirect: Induced: Total:	475 jobs 65 jobs 60 jobs 605 jobs

1. Totals may not align due to rounding. Local government revenues are rounded to the nearest one hundred thousand dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

2. Payments made to Teck's Elk Valley operations' employees comprise wages, salaries, and benefits.

3. There are no direct impacts to GDP at the community level for Fernie, Cranbrook, and Crowsnest Pass because the mining activities of Teck's Elk Valley operations are located solely within the municipal boundaries of Elkford and Sparwood.

4. It is important to note that, consistent with Statistics Canada's definitional approach, labour income (as presented in this table) refers to the wages, salaries, and benefits realized as per the geographic location of labourers' activity (i.e., place of employment). Hence, while there are no direct impacts to labour income at the community level for Fernie, Cranbrook, and Crowsnest Pass, it should be noted that Teck's employees who reside in these communities are compensated well relative to the communities' average employment income (see page 25).

5. Local government revenues refer to taxes on products and taxes on production (e.g., property tax, permits, and fees) paid to local community governments.

6. The estimates of jobs supported by Teck's Elk Valley operations are based on the community of residence of the employees. For example, the direct employment contribution to Elkford is 640 jobs (FTEs), which comprise direct employees who reside in the community.

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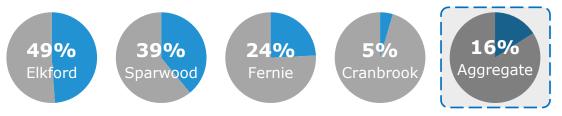
Economic Contribution to Local Communities: Southeast BC

The economic contributions of Teck's Elk Valley operations to local communities in **Southeast BC (Elkford, Sparwood, Fernie, Cranbrook)**¹ are significant. We provide below further context to these contributions.

Regional Employment Contribution

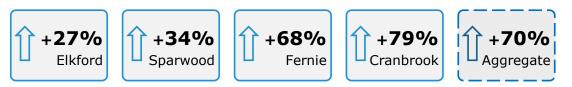
It is estimated that, in the representative year, the Elk Valley operations' direct employees who reside in the local communities of Southeast BC accounted for roughly 16% of the four local communities' total labour force.

Figure 14: Estimated Share of Direct Employment Contribution to Total Labour Force by Local Community ²



In the representative year, the average employment income received by Teck's direct employees is estimated to be roughly 70% higher than the average employment income of the four local communities.

Figure 15: Comparison of Teck Employees' Income to Average Employment Income in the Local Communities ^{3,4}



- 1. Southeast BC is defined as the aggregate of Elkford, Sparwood, Fernie, and Cranbrook. This definition may not align to how the four communities are geographically categorized by Statistics Canada or other government agencies.
- These estimates are based on (i) Teck's employment data for 2019 and (ii) Statistics Canada's community-level labour force data for 2016 (i.e., the latest available year of official data). It is important to note that it is possible for these estimates to shift if community-level labour force data for 2019 were available and used.
- 3. These estimates above are based on (i) Teck's payroll data for 2019 and (ii) Statistics Canada's community-level employment income data for 2016 (i.e., the latest available year of official data). The employment income data from Statistics Canada was adjusted to 2019 dollars, based on the consumer price index for BC. It is important to note that it is possible for the estimates to shift if community-level employment income data for 2019 were available and used.

Regional Employment Contribution (continued)

Accounting for the direct, indirect and induced effects, it is estimated that, in the representative year, Teck's Elk Valley operations sustained employment comparable to



of Southeast BC's total labour force (region as defined), and

20% or **1 in 5** of all jobs in the Regional District of East Kootenay.⁵

Regional GDP Contribution

Accounting for the direct, indirect, and induced GDP contributions, it is estimated that, in the representative year, Teck's Elk Valley operations accounted for



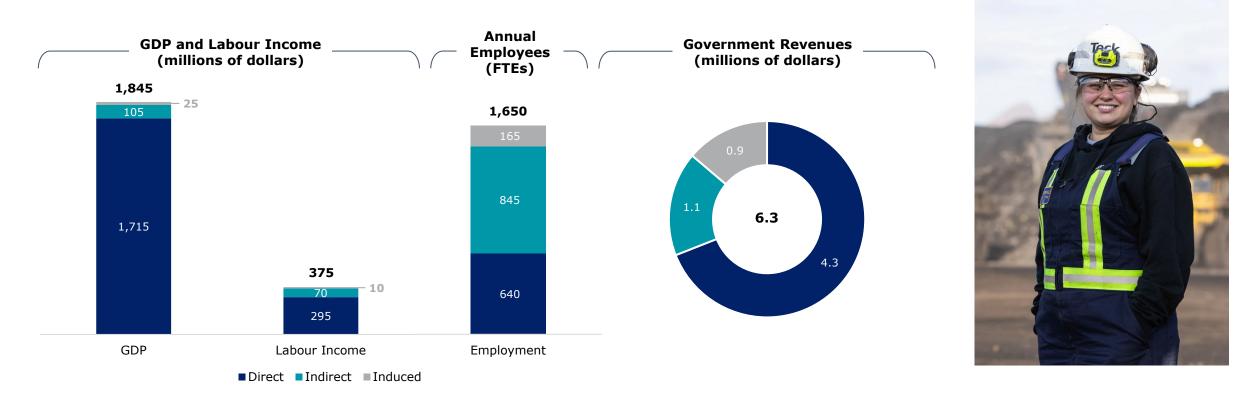
of Southeast BC's total GDP (region as defined).^{6,7,8}

- 4. Statistics Canada defines employment income as all income received as wages, salaries, and commissions from paid employment and net self-employment income. The data sourced from Statistics Canada is for full-year full-time workers.
- 5. This estimate is based on (i) the estimated employment contribution of Teck's Elk Valley operations to Elkford, Sparwood, Fernie, and Cranbrook (defined as Southeast BC) in 2019 and (ii) Statistics Canada's community-level labour force data for 2016 (i.e., the latest available year of official data). It is important to note that it is possible for this estimate to shift if community-level labour force data for 2019 were available and used.
- 6. This analysis was based on (i) the estimated GDP contribution of Teck's Elk Valley operations to Elkford, Sparwood, Fernie, and Cranbrook (defined as Southeast BC) and (ii) the estimated total GDP of Southeast BC (region as defined).
- 7. The total GDP of Southeast BC was estimated based on (i) average labour productivity by industry in BC in 2019 and (ii) estimated employment by industry in Southeast BC in 2019. Employment by industry in Southeast BC in 2019 was estimated based on (i) historical employment growth by industry in the Kootenay and BC regions and (ii) labour force data from the 2016 Census of Population for Elkford, Sparwood, Fernie, and Cranbrook.
- 8. In this analysis, it is assumed that all mining activity in Southeast BC in 2019 was attributed to Teck's Elk Valley operations; in other words, it is assumed that all active/operational mines in Southeast BC in 2019 were owned and managed by Teck's Elk Valley operations. This assumption was verified by Teck. Moreover, it should be noted that, based on our review of Statistics Canada data, the mining industry is more prominent than most other industries in Southeast BC in terms of employment and is associated with a labour productivity higher than that of most other industries factors which explain the relatively high GDP share of the Elk Valley operations' contribution.

Detailed Summary: Economic Contribution to Elkford

Accounting for the direct, indirect, and induced impacts, it is estimated that Teck's Elk Valley operations contributed **\$1,845 million to Elkford's GDP**, of which **\$375 million** was contribution to **labour income**, and created or sustained approximately **1,650 FTEs in the community** during the representative year. It is also estimated that the economic activity stimulated by Teck's Elk Valley operations generated **\$6.3 million in local taxes and government payments** annually.

Figure 16: Estimated Economic Contribution of the Elk Valley Operations to Elkford (BC)

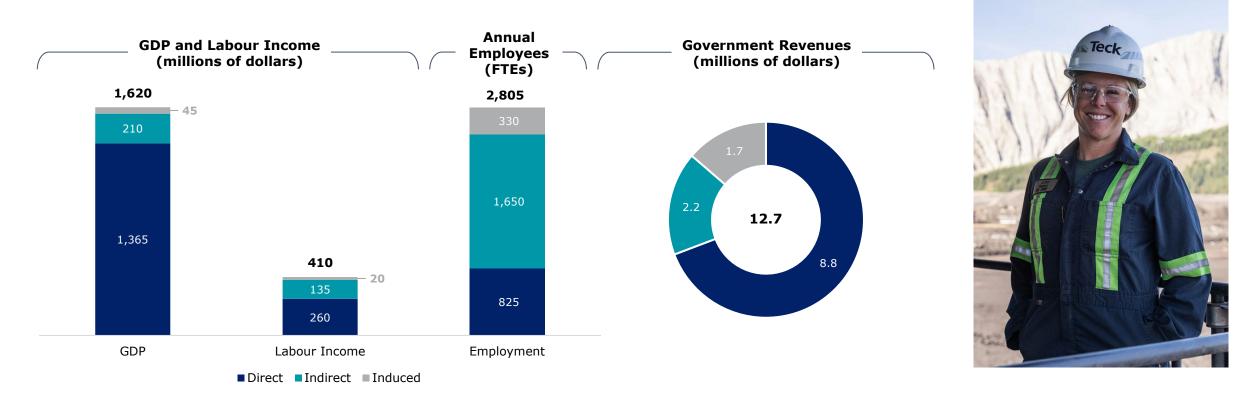


Note: Totals reported on this page may not align due to rounding. Government revenue is rounded to the nearest five million dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

Detailed Summary: Economic Contribution to Sparwood

Accounting for the direct, indirect, and induced impacts, it is estimated that Teck's Elk Valley operations contributed **\$1,620 million to Sparwood's GDP**, of which **\$410 million** was contribution to **labour income**, and created or sustained approximately **2,805 FTEs in the community** during the representative year. It is also estimated that the economic activity stimulated by Teck's Elk Valley operations generated **\$12.7 million in local taxes and government payments** annually.

Figure 17: Estimated Economic Contribution of the Elk Valley Operations to Sparwood (BC)

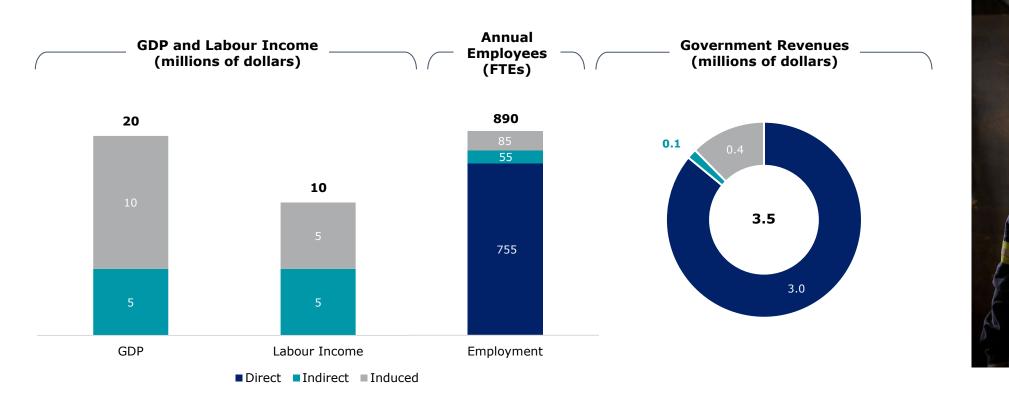


Note: Totals reported on this page may not align due to rounding. Government revenue is rounded to the nearest five million dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

Detailed Summary: Economic Contribution to Fernie

Accounting for the direct, indirect, and induced impacts, it is estimated that Teck's Elk Valley operations contributed **\$20 million to Fernie's GDP**, of which **\$10 million** was contribution to **labour income**, and created or sustained approximately **890 FTEs in the community** during the representative year. It is also estimated that the economic activity stimulated by Teck's Elk Valley operations generated **\$3.5 million in local taxes and government payments** annually.

Figure 18: Estimated Economic Contribution of the Elk Valley Operations to Fernie (BC)



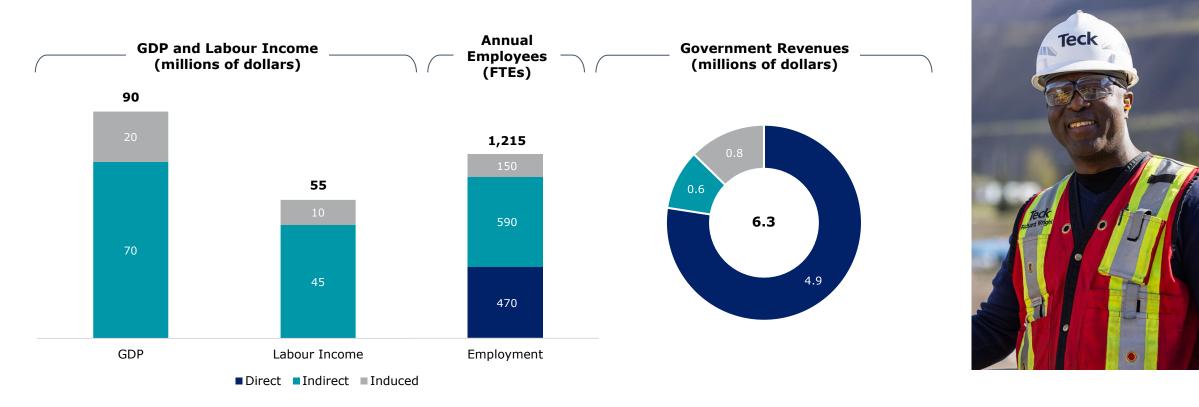
Note: Totals reported on this page may not align due to rounding. Government revenue is rounded to the nearest five million dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

Teck

Detailed Summary: Economic Contribution to Cranbrook

Accounting for the direct, indirect, and induced impacts, it is estimated that Teck's Elk Valley operations contributed **\$90 million to Cranbrook's GDP**, of which **\$55 million** was contribution to **labour income**, and created or sustained approximately **1,215 FTEs in the community** during the representative year. It is also estimated that the economic activity stimulated by Teck's Elk Valley operations generated **\$6.3 million in local taxes and government payments** annually.

Figure 19: Estimated Economic Contribution of the Elk Valley Operations to Cranbrook (BC)

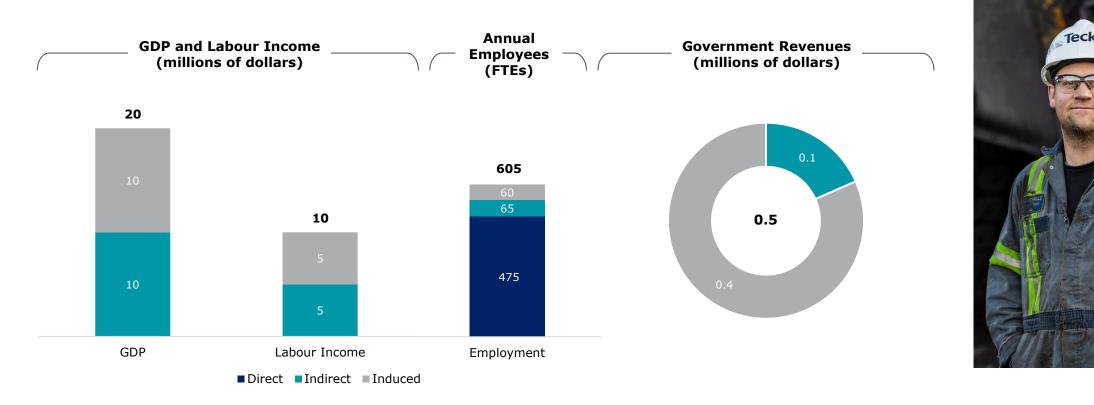


Note: Totals reported on this page may not align due to rounding. Government revenue is rounded to the nearest five million dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

Detailed Summary: Economic Contribution to Crowsnest Pass

Accounting for the direct, indirect, and induced impacts, it is estimated that Teck's Elk Valley operations contributed **\$20 million to Crowsnest Pass' GDP**, of which **\$10 million** was contribution to **labour income**, and created or sustained approximately **605 FTEs in the community** during the representative year. It is also estimated that the economic activity stimulated by Teck's Elk Valley operations generated **\$0.5 million in local taxes and government payments** annually.

Figure 20: Estimated Economic Contribution of the Elk Valley Operations to Crowsnest Pass (AB)



Note: Totals reported on this page may not align due to rounding. Government revenue is rounded to the nearest five million dollars. Employment is rounded to the nearest five full-time equivalent jobs. All other figures are rounded to the nearest five million dollars.

Socio-Economic Benefits



Summary of Additional Socio-Economic Benefits

Beyond stimulating the economy through its operations and capital investments, Teck's Elk Valley operations create and enable a range of additional socio-economic benefits.

Stimulated Investment Across the Supply Chain

- In the representative year, Teck's Elk Valley operations spent \$1.4 billion on products and services procured from roughly 900 suppliers located across British Columbia including in the British Columbian Interior, Lower Mainland, and Vancouver Island, and including many Indigenousled businesses.
- Partnership with Teck can offer suppliers longterm, stable business opportunities – which can enable them to make significant investments on their own, such as investments in infrastructure to scale up operations, technology to improve productivity or new products and services to expand their market footprint.
- These investments drive economic benefits to British Columbia and Canada on their own right, above and beyond the economic contributions quantified in this report.

Case Study: Neptune Terminals Investment

Participation with Local Indigenous Peoples

- Teck has prioritized relationships with local Indigenous communities, via an Impact Management and Benefit Agreement (IMBA) with the Ktunaxa Nation Council.
- In 2021, Teck has significantly grown procurement from Indigenous businesses, spending approximately \$52 million on KNC business entities (an increase of over \$20 million from the nearly \$30 million spent in 2020).
- Feedback provided has noted that the partnership with Teck has significantly improved the ability of local Indigenous-owned businesses to generate and diversify revenue.
- Further, it was noted that Indigenous-owned, managed and led companies within Teck's supply chain benefit from exposure to new approaches to procurement, safety programming, and business reporting – which can enhance the competitiveness of those firms.
- Teck's relationship with the Ktunaxa Nation Council includes specific commitments to conserve land on Ktunaxa territory and actively protect wildlife and the environment.
- **Case Study**: Nupqu Limited Partnership & Kettle River Contracting's Business Growth

Teck has made a range of direct investments in local community infrastructure, including financial support for the construction of seniors housing in Elkford, providing \$1 million to the College of the Rockies to construct new facilities in Cranbrook and Fernie along with a scholarship fund for trades students, and the maintenance of parks and trails throughout the Elk Valley.

Local Community Contributions

- Teck's philanthropic commitments in the province, include financial supports for floods in 2021, and wildfires in 2020 and 2021, providing financial assistance to the Canadian Red Cross, the British Columbia Society to Prevent Cruelty to Animals, with Teck also matching employee donations.
- Teck's conservation investments include a partnership with the Elk River Alliance, which focuses on the health of the local watershed.
- Teck has partnered with local educational institutions to help encourage youth to consider careers in mining and participates in co-operative education programming. Over the last five years, Teck has hired over 568 co-op students and 147 summer students.

Case Study: Community Investments by Teck's Suppliers - Bearspaw Contracting

Supporting Women in the Workforce

- Teck has made a number of commitments aimed at increasing gender representation in the mining industry, including recruitment campaigns across the country focused on diversifying the workforce.
- In 2020, 32% of Teck's new hires for the roles of operators and general labourers were women (roles which represent a large proportion of Teck's overall workforce and which were historically underrepresented by women).
- Teck has invested in upgrades to its sites that create a more inclusive experience for all gender identities, such as size inclusivity in equipment and uniforms, and the use of gender-inclusive language in operational materials and executive communications, including a gender-neutral approach to job titles and descriptions.

Case Study: Teck's Inclusion and Diversity Committee

Note: This study does not include an analysis of any environmental impacts associated with mining operations in the Elk Valley.

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Stimulated Investment Across the Supply Chain

Teck's relationship with its 900+ suppliers in BC enables them to make investments in scaling up operations, which drive economic benefits to British Columbia and Canada on their own right.

Teck's Supply Chain Reach

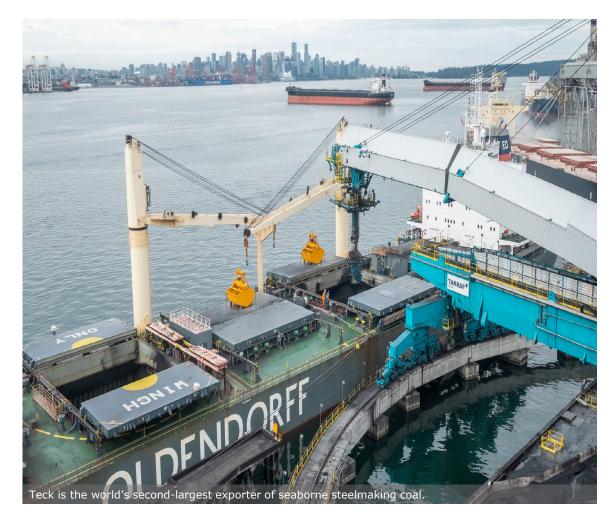
A supply chain is the network through which a company turns raw materials into finished goods and services for consumers. In the representative year, Teck's Elk Valley operations made approximately **\$1.4 billion** in payments **to roughly 900 suppliers located in British Columbia**. This vendor spend included:

- Approximately \$400 million on supplies, repairs and maintenance, of which nearly \$310 million was spent on repair parts for complex equipment, and more than \$4 million was spent on safety supplies.
- Nearly \$310 million on transportation services, engaging rail and port operators, helping get steelmaking coal to market.
- \$8 million on research and development activities in the province.
- \$24 million on professional services to support operations.

Partnership with Teck can offer suppliers long-term, stable business

opportunities – which can enable them to make significant investments on their own, such as investments in infrastructure to scale up operations, technology to improve productivity or new products and services to expand their market footprint.

These supplier investments drive additional economic benefits to British Columbia and Canada above and beyond the economic contributions quantified in the previous section of this report.



Teck's Relationship with Neptune Terminals

Teck's operations in the Elk Valley matter, not only because of their contribution to the local economy, but also because they provide suppliers across the province with the opportunity to invest and grow, thereby expanding their suppliers' own economic footprint. One example of this effect is Teck's partnership with Neptune Terminals ("Neptune"). Located on the North Shore of Metro Vancouver and partly owned by Teck, Neptune is a bulk shipping terminal that has operated in the region for the past 52 years and ships the steelmaking coal mined by Teck in the Elk Valley.

While Neptune is not located in the Elk Valley, Teck's Elk Valley operations have played an important role in Neptune's growth. Beginning in 2017 and continuing through 2021, Teck invested \$1 billion in various upgrades to Neptune's facilities, including new ship-loaders, a new stacker, refurbished dumpers for rail cars, a new tandem dumper to service multiple trains, and a new overpass to increase the efficiency of on-site traffic flows. **Teck's operating expenditures also include payments to Neptune, including \$53 million in the representative year**. In conversation with Neptune leadership, it was acknowledged that Teck supported their operations during the COVID-19 pandemic through the provision of safety and protective equipment. Teck's support included the provision of rapid testing kits, enhanced sanitary and cleaning services, investments in new air purification systems, and other resources to support the health and safety of workers.

Neptune's Economic Impact

Neptune currently boasts an annual export capacity of 30 million tonnes per year – a significant increase relative to its capacity of 18.5 million tonnes just three years prior. About 75% of Neptune's workforce is tied to the steelmaking coal export business, which is directly supported by Teck's Elk Valley operations. In 2021, Neptune employed 450 employees, the majority of whom are unionized skilled tradespeople and workers sourced from the British Columbia Maritime Employers Association's waterfront labour pool.

Neptune's own supply chain also drives a steady demand for skilled labour through its need to maintain and service critical equipment at its facilities (e.g., berths, dumpers, high-spray poles). As a result, Neptune helps provide job opportunities for skilled tradespeople and workers. An analysis conducted by Neptune in 2020 found that the company has the following economic contributions in British Columbia:

- \$485 million spent on local suppliers in BC;
- Over \$14 million spent on salaries and benefits for employees and skilled contractors;
- Nearly \$5 million spent on local utility companies and tax payments;
- \$450,000 allocated to support community organizations; and
- \$863,000 of infrastructure gateway fees remitted in 2020, to support infrastructure and supply chain improvements in the North Shore and adjacent areas.

The growth in Neptune's business has allowed the company to not only expand its purchasing activities from local businesses, but also to make significant investments in productivity-enhancing technology. One example is a recent investment in a new manually operated ship-loader, which replaced older hand-operated cranes with infrared camera systems. This investment has improved the productivity and safety in the day-to-day tasks performed by workers at Neptune.





Stimulated Investment Across the Supply Chain

Case Study:

Neptune Terminals Investment

Neptune's Community Impact

Neptune invests in local charitable initiatives, prioritizing organizations on the North Shore that serve children and families, seniors, and environmental initiatives. **In 2020, Neptune allocated \$450,000 to support these causes.**

Examples of organizations that have benefited from Neptune's support include:

- The Presentation House Theatre;
- The North Shore Restorative Justice Society which provides restorative practices, promoting a peaceful approach to resolving conflict;
- The Learning Disabilities Society, which has supported children and youth with suspected or diagnosed learning differences for over 50 years; and
- The Burrard Inlet Action Plan, an initiative led by the Tsleil-Waututh Nation which promotes a plan seeking to improve the environmental health and integrity of the Inlet by 2025.

Neptune has also launched a number of initiatives designed to engage youth and promote diversity and inclusion practices. Such programs help support the diversification of the mining sector in British Columbia and reinforce Teck's own commitment to community contributions and to diversity and inclusion, further described on pages 41 and 42.



"Teck's investment in Neptune has in turn enabled us to develop our people, improve our operating equipment and contribute to our community "

Lisa Dooling

Director, People & Community, Neptune



Stimulated Investment Across the Supply Chain

Case Study:

Neptune Terminals Investment

(continued)

Participation with Local Indigenous Peoples

Teck is able to support important economic activity in the local Indigenous business community.

The Importance of Partnership with Indigenous Communities

Partnerships between the private sector and Indigenous-owned, managed or run companies can help build resiliency in rural and remote communities, enabling business growth, and employment and training opportunities in Indigenous communities. This contributes to improving the economic and social conditions in the community.

- Prior to the pandemic, the unemployment rate for Indigenous people in Canada was twice that for non-Indigenous people, on average.
- Indigenous youth are a fast-growing demographic in Canada but face systemic barriers to participation in the workforce. Partnerships can provide mutual benefits to Indigenous communities and Canadian businesses.
- Although mining is the number one employer of Indigenous People in Canada, there is still a gap in overall unemployment rates. Statistics Canada finds a difference in unemployment rates of 11.7% for Indigenous people and 7.7% for non-Indigenous people as of 2020.
- In this context, Teck's engagement with Indigenous business partners is of significant importance for the economic opportunities available to local Indigenous communities. Teck's Elk Valley operations are located in ?amak?is Ktunaxa, the territory of the Ktunaxa Nation. Teck has a long-standing relationship with both the Ktunaxa Nation Council ("KNC"), their collective government, and Ktunaxa Enterprises Ltd – an organization that represents the economic interests of the Ktunaxa people.

Key Partnerships

Teck's mining operations work closely with, and rely on the expertise of, a number of local business partners daily that are part of Ktunaxa Enterprises Ltd. In recent years, Teck has seen **notable growth in supplier contracts with Ktunaxa-affiliated businesses**:

- In 2021, Teck spent approximately \$52 million on KNC business entities, an increase of over \$20 million from the nearly \$30 million spent in 2020.
- This level of spending does not include indirect or subcontracted spending at Teck sites, where additional business is gained by the Ktunaxa-owned, managed, or run businesses, like Nupqu Limited Partnership and Kettle River Contracting.

Ktunaxa business leaders note the relationship between Teck and local Indigenous businesses has generated **benefits outside of financial contributions**. For example, Indigenous companies have benefited from training and resources provided by Teck in **safety programing**, **business reporting and procurement procedures**, which has contributed to **organizational development and business maturity**. Teck and the Ktunaxa Nation have collaboratively developed procurement and employment task groups that are mandated to improve employment and procurement inclusion, and advance hiring and training from local Indigenous communities.



Ktuanaxa Enterprises Ltd Relationship with Teck

When asked about Teck's core contribution to the Indigenous business community, Ktunaxa Enterprises Ltd leadership shared the lasting value of being a Teck supplier. Ktunaxa Enterprises Ltd owns and oversees several businesses, including two key suppliers to Teck that were viewed to have significantly benefited from being part of Teck's supply chain and leveraged this relationship for follow-on business.

- Kettle River Contracting Limited Partnership ("Kettle River Contracting") specializes in heavy civil construction, providing contracting services to Teck. These services include, but are not limited to, archeology, environmental monitoring, site development, aggregate crushing, pit development, water management, bridge installation, road and site maintenance, airstrips, surveying, road construction, and reclamation and remediation activities.
- Nupqu Limited Partnership ("Nupqu") specializes in natural resource management consulting and contracting services within the Ktunaxa territory, including technical forestry services like wildfire protection plans, supporting procurement and contract management, and providing health and safety management coordination services.

When they were first established, a large share of Nupqu's and Kettle River Contracting's total revenues were accounted for by Teck's purchases of goods and services. More recently, given growth in internal business capacity and acknowledgement by the broader mining sector, these businesses have begun to leverage their business capacities developed in conjunction with Teck to diversify their revenue portfolios to include other clients.

- Currently, the majority of the revenues realized by Nupqu and Kettle River Contracting are attributed to business transactions with Teck, given their ability to scale and grow, and leverage new business.
- Feedback provided has noted that having Teck as a stable partner provided these businesses with streamlined sources of revenue which are dependable.
- Notably, Kettle River Contracting has expanded operations to support new investment made by BC Hydro in the Elk Valley region.
- Both companies have signaled a desire to continue growing and plan additional investments in environmental engineering, civil construction, and trucking, activities that will support business diversification and economic independence.
- Feedback provided by both Nupqu and Kettle River Contracting leadership attests that their ability to leverage their comprehensive relationship between the Ktunaxa Nation and Teck has been integral to their operations and future business plans. These examples demonstrate how Teck is able to support business success within the Indigenous community that extends beyond the supplier-contractor relationship it maintains and helps to position companies for growth.

"Ktunaxa Enterprises Ltd looks forward to continuing to build local Indigenous-owned and managed companies, in partnership with Teck" Hennie Tait, CEO, Ktunaxa Enterprises Ltd





Participation with Local Indigenous Peoples

Case Study:

Nupqu Limited and Kettle River Contracting

Local Community Contributions

Teck makes and incentivizes contributions to local communities with the goal of enhancing living standards and improving health and educational outcomes.

Investments in Community Infrastructure

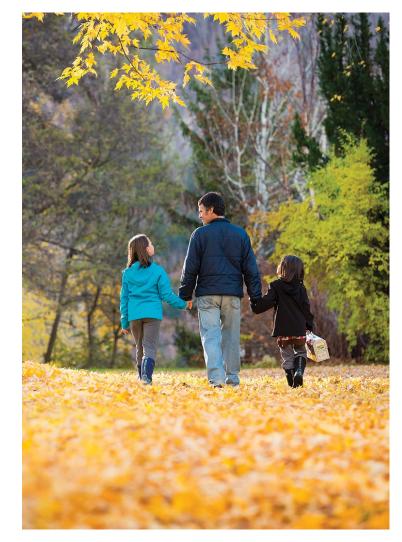
Teck is supporting economic and community development in the communities of Elkford, Sparwood, Fernie, Cranbrook, and Crowsnest Pass by making significant **investments in shared community assets**. Recent examples of these types of investments include:

- Provided \$1 million to Elkford to develop a new community centre;
- Donated the land for the Elkford Housing Society to establish a housing project, providing affordable and accessible housing options to seniors living within the community;
- Provided \$1 million to the College of the Rockies, where \$800,000 supported the construction of a new trades training facility at College of the Rockies' Cranbrook campus, \$100,000 supported the Fernie campus, and \$100,000 was used to establish a scholarship fund for trades students;
- Partnered with the East Kootenay Foundation for Health to raise funds to set up new ultrasound services at the Elk Valley Hospital and made a commitment to match up to \$50,000 of all business and community donations;
- · Supported the maintenance and public access to parks and trails throughout the Elk Valley; and
- Contributed \$150,000 to the Sparwood Skatepark, a dedicated facility in the region for skateboarding.

Philanthropic Contributions

Teck makes a range of direct donations to shared community causes and incentivizes **employees to make philanthropic contributions to communities:**

- In 2021, in response to floods in British Columbia, Teck donated \$250,000 to support aid efforts. The donation was spread across a number of organizations and included \$150,000 to the Canadian Red Cross, \$50,000 to the British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA), and \$50,000 in `matched' employee donations.
- Similarly, in 2021, in response to the wildfires in British Columbia, Teck donated \$100,000 to the Canadian Red Cross for the provision of food, clothing and temporary accommodation for evacuees, \$50,000 to the British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA) to support the rescue and relocation of pets and farm animals and matched \$25,000 in employee donations.
- Teck established the **Teck Community Response Fund** in response to the COVID-19 pandemic, to support social and health initiatives in the areas where Teck operates, with dedicated support for Indigenous communities, providing contribution amounts ranging from \$5,000 to \$50,000.



Local Community Contributions (continued)

Teck makes and incentivizes contributions to local communities with the goal of enhancing living standards and improving health and educational outcomes.

Partnering with Local Educational Institutions

Teck has made efforts to open doors for young people to access **career opportunities in the mining industry**. At local high schools in the region, Teck ambassadors visit frequently and participate in career development presentations, introducing students to the company and the industry more broadly. In 2020, Teck engaged seven local schools with over 24 presentations.

Teck also participates in more formal approaches to career development. For example, Teck participates in co-operative education ("co-op") placements which can create a key path to a career in the mining industry. On an annual basis, the company provides **co-op opportunities for approximately 100 students** to gain on-the-job experience while still in school. In conversations with Teck leadership, it was noted that students often return to their universities and colleges to become campus ambassadors, spreading the word of new opportunities at the company, engaging potential new hires. This can simultaneously develop a pipeline of talent for Teck, while encouraging students to consider mining as a career path. During the pandemic, Teck pivoted to engaging potential applicants through virtual coffee chats to be more accessible to potential new hires and maintain connections with post-secondary institutions. **Over the last five years, Teck has hired 568 co-op students, and 147 summer students**.

Teck leaders found that the mining sector historically has been difficult for young people, and especially women, to break into. In response, Teck partnered with the College of the Rockies to develop the **Mining Apprenticeship Program**, which has helped to **enhance representation** for over 16 years. The program provides young people dedicated opportunities to gain work experience concurrent to their four-year trade apprenticeship.

A notable feature of the program is that it can provide students with an opportunity to take on placements at Teck. On site, apprentices were viewed as highly-reliable and integrated team members that gain experience directly applicable to careers in mining. Importantly, these partnerships with local educational institutes help Teck hire from surrounding communities, thereby retaining job opportunities within the region.

Between 2015 and 2020, **37% of hourly operators and tradespeople, and 48% of technical staff** which include roles such as engineers, geologists, and environmental professionals were hired from local communities. This figure climbs to 72% when all global Teck sites are considered.



Teck's Relationship with Bearspaw Contracting

Beyond Teck's direct community contributions, Teck's relationship with local suppliers allows them to invest in local communities on their own right. This case study explores the community contributions of Bearspaw Contracting, an important local supplier to Teck.

Based in Elkford, British Columbia, Bearspaw Contracting ("Bearspaw") has 33 years of industry experience. Bearspaw provides Teck with labour services by helping to staff Teck sites, train new workers, and provide a wide range of 24/7 on-call equipment and labour services, catered to the mining industry. The company also provides supportive services at Teck's sites such as maintenance equipment cleaning and repairs. Bearspaw derives about 90% of its gross revenue from its partnership with Teck and supporting companies.

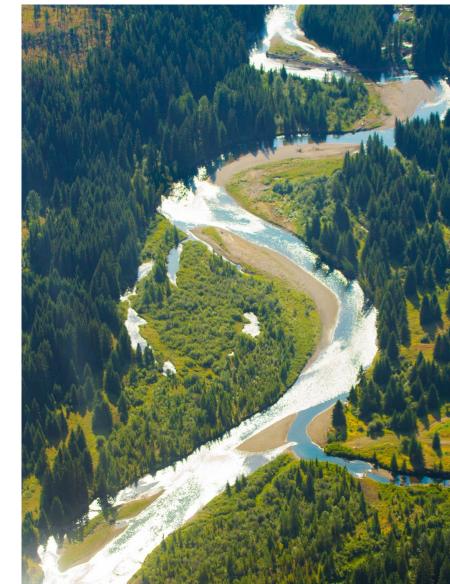
"Our company has been able to take our relationship with Teck and grow our overall portfolio of business "

Ian Benson, CEO, Bearspaw

Bearspaw's Community Impact

Teck's relationship with Bearspaw has enabled the company to make significant contributions to local communities on its own right:

- 90% of Bearspaw's employees are based in the Elk Valley community.
- Since 2013, Bearspaw has raised over \$500,000 for local causes through its non-profit charitable trust, the Community First Society.
- Recently, Bearspaw raised \$185,000 to support Elk Valley Safe Homes, a local women's shelter in Elkford which has been at capacity for the last five years, helping hire six full-time and two part-time staff.
 - With the support of Teck and other local businesses this donation was the Community First Society's biggest success to date.
- In conversation with company leadership, it was stated that the Community First Society was established to assist important projects for community betterment in the Elk Valley, with a focus on health, education, and community services.





Local Community Contributions

Case Study:

Bearspaw Contracting

Supporting women in the workforce

Teck has taken steps to enhance diversity and representation in hiring and to create an inclusive workplace.

The Persistent Challenge of Female Representation in Mining

While women's participation rate in the labour force has almost doubled over the past 40 years, their participation in skilled trades remains lower than average. According to Statistics Canada, nationally, women comprise 48% of the Canadian labour force, but account for only 15% in the mining industry. Similarly, in the skilled trades, a key pool of talent for the mining industry, women continue to be significantly underrepresented in trades apprenticeship enrolment. For mining companies such as Teck, and partners like the United Steel Workers, this can require **dedicated initiatives to help support diversity in hiring activities**. Specifically, efforts have been made to support increasing representation from women in the industry and members of the LGBT2Q+ community.

Teck's Focus on Enhancing Gender Diversity in Hiring

Ensuring hiring efforts are able to capture and target female applicants is critical to achieving gender balance. Accordingly, Teck's recruiting department pays close attention to gender metrics, including applicant rates, hiring rates, and retention rates of women, with the goal of seeing improvement in these numbers.

- As a step to achieve this goal, Teck ensures that it captures a large population base during recruitment activities and executes hiring campaigns beyond their operations within the interior of British Columbia, throughout western Canada.
- Over the last five years, Teck has observed growth in the proportion of women team members. In 2020, 32% of new hires were women for the roles of operators and general labourers roles which represent a large proportion of Teck's overall workforce and are historically underrepresented by women. This trend reflects notable progress towards the company's overall goal to increase workplace inclusion and diversity.



Teck's Inclusion and Diversity Committee

An important dimension to diversity is providing adequate support and an inclusive workspace for all employees. These types of initiatives can support retention, which can thereby enable the progression of women, and other traditionally underrepresented groups. Teck has set up an Inclusion and Diversity Committee which is mandated to execute a number of initiatives designed to support a more inclusive workplace. The committee is primarily focused on gender inclusion, but also has extended its reach to engage on topics related to supporting youth and engagement with the LGBT2Q+ communities.

Implementing Inclusion and Diversity Initiatives

Examples of initiatives that help to support diversity and inclusion that the committee has undertaken include:

- Ensuring personal protective equipment for "all shapes and sizes" during the COVID-19 pandemic;
- Reinforcing culturally appropriate on-boarding strategies;
- Using of gender-inclusive language in operational materials and executive communications, including a gender-neutral approach to job titles and descriptions;
- Supporting the development of on-site infrastructure for women; and
- Pursuing extensive efforts to diversify the talent pool pipeline with recruitment strategies at the operational and executive leadership levels.

In conversations with Teck leadership, it was noted that the committee is taking tangible actions towards attracting and retaining staff from all walks of life and serves as a formal forum where matters related to inclusion can be discussed openly.

" Teck continues to take action on enhancing representation across our business and encouraging diversity and inclusion "

> Laura Gislason, General Manager, Teck Elkview Operation





Workforce

Women in the

Supporting

Case Study:

Teck's Inclusion and Diversity Committee

Appendix

Definitions and Additional Information on Quantitative Methodology



Definitions of Economic Variables

Direct Contribution	Direct economic contribution represent the economic value-added directly associated with business operations. For example, this includes the employment and income of employees directly involved in the business operations, as well as the associated product, production, and income taxes paid.
Indirect Contribution	Indirect economic contribution represent the economic value-added resulting from the demand for materials and services that business operations generate in supplier industries. This represents, for example, economic activity generated in the manufacturing, wholesale trade, transportation and professional service sectors as a result of demand for materials and services and services generated by the business operations.
Induced Contribution	Induced contribution represents general income effects associated with the expenditure of wages earned as a result of the business operations (capturing the general income effects associated with the company's direct and indirect contribution). For example, this includes the economic activity stimulated by the purchase of goods and services at the household level.
Gross Domestic Product	Gross Domestic Product ("GDP") is a measure of the total unduplicated value of goods and services produced in the economic territory of a country or region during a given period. GDP includes household income from current productive activities (e.g., wages, salaries, and unincorporated business income), as well as profits and other income earned by corporations.
Employment	This study measures employment contribution in terms of full-year equivalent positions for ongoing employment (i.e., employment contribution associated with annual expenditures). Full-year equivalent positions are counted according to their duration and not according to whether they were employed on a full-time or part-time basis. That is, two part-time employees would be counted as one full-year equivalent if the total time they spent on the job adds up to one year. This approach is consistent with standard statistical terminology.
	At the direct level, the contribution to employment captures employees (FTEs) on the company's payroll. At the indirect level, the contribution captures the creation or maintenance of jobs arising from the demand for goods and services generated in supplier industries by the company's expenditures. At the indirect level, the contribution captures the creation or captures the creation or maintenance of jobs generated through the spending of income earned by households as a result of the company's direct and indirect contribution.
	Labour income represents the total earnings of employees (including employees of suppliers to the projects), consisting of wages and salaries as well as supplementary labour income (such as employer's contribution to pension funds, employee welfare funds, the Unemployment Insurance Fund and Workers Compensation Fund). Labour income is defined as the wages, salaries, and supplementary income realized with respect to the geographic location of the labourers' activity (i.e., place of employment).
Labour Income	At the direct level, the contribution to labour income captures the wages, bonuses, and benefits paid by the company to its directly employees. At the indirect level, the contribution captures the wages, bonuses, and benefits associated with the jobs created or maintained in supplier industries as a result of the company's expenditures. At the induced level, it captures the wages, bonuses, and benefits associated with the jobs created or maintained through the spending of income earned by households as a result of the company's direct and indirect contribution.
Covernment	This study measures all components of government revenue (across federal, provincial/territorial, and municipal levels) for the regions under analysis. The estimated government revenue contribution includes products and production taxes, such as sales tax (GST), payroll taxes, and excise duty, as well as corporate income taxes and personal income taxes.
Government Revenue	At the direct level, the contribution to government revenue captures the tax and government payments made directly by the company. At the indirect level, the contribution captures the tax and government payments associated with the demand for goods and services generated in supplier industries by the company's expenditures. At the induced level, the contribution captures the tax and government payments the tax and government payments associated with the demand for goods and services generated in supplier industries by the company's expenditures. At the induced level, the contribution captures the tax and government payments associated with the spending of income earned by households as a result of the company's direct and indirect contribution.

Note: For further technical information, please refer to: Statistics Canada - Industry Accounts Division, System of National Accounts, 2009.

Methodology and Assumptions (1/2)



I. Additional Information on Quantitative Approach

The quantitative approach employed to estimate the economic contribution of Teck's Elk Valley operations in 2019 (i.e., the representative year) is as follows:

- Collated and analyzed financial, employment, and tax data by region, as provided by Teck for the 2019 fiscal year.
- Applied Statistics Canada direct, indirect, and induced multipliers (by region and industry category) to the corresponding revenue and expenditure items. The latest available year of input-output multipliers (2016, at the time of this study) was employed to analyze the revenues and expenditures.
- Estimated taxes on production and products, corporate income taxes, personal income taxes (in addition to the direct tax data collected from Teck).
- Applied location quotients to estimate the indirect and induced economic impacts to the five local communities in the Elk Valley (based on segmented expenditure data and the respective provincial inputoutput multipliers).
- Computed economic impact ratios to illustrate economic contributions to GDP and employment for every dollar (or for every million dollars in the case of the employment ratio) spent by Teck's Elk Valley operations. These ratios are based on Teck's Elk Valley operations' total expenditures in 2019.



The analysis provided in this report is based on the following key data assumptions:

 Due to data limitations, personal income taxes and taxes on products (e.g., indirect taxes) at the direct level were estimated based on Teck's financial data. Moreover, the breakdown of certain taxes (e.g., income taxes) by level of government (i.e., federal and provincial) was estimated for the purposes of this study. Accordingly, the tax information presented in this study may differ from tax information published by Teck.



III. Measuring Economic Contribution by Region

- The economic contribution at the national level is inclusive of the economic contribution to British Columbia and the economic contribution to Crowsnest Pass, Alberta.
- The economic contribution to British Columbia is inclusive of the economic contribution to the four Elk Valley communities located within the geographic boundary of British Columbia (Elkford, Sparwood, Fernie, Cranbrook).
- Location quotients were used to estimate the indirect and induced economic contribution to the five local communities in the Elk Valley. A location quotient refers to the quantification of how concentrated a particular industry is in the sub-provincial region as compared to the province. The estimation of location quotients utilizes regional employment data (as per the 2016 Census of Population) and supply-and-use data from Statistics Canada.

Methodology and Assumptions (2/2)



Introduction to Input-Output Models

Input-output ("I-O") models are used to simulate the economic impact of an expenditure on a given basket of goods and services or the output of one of several industries. Inputoutput analysis uses data on the flow of goods and services among various sectors of the economy, and attempts to model how an expenditure, increase in demand, or investment ripples through a region's economy. This is done by mapping the production of products and services by each industry, and identifying the intermediate inputs used in the production of each final product or service used by consumers, sold as an export, or purchased by government.

The model can then aggregate all of the employment and value-added impacts generated in the supply chain as commodities are produced. I-O models also consider the role of imports, which tie the supply chain to the global economy. This data is combined into a single model of the economy which can be solved to determine how much additional production is generated by a change in the demand for one or more commodities or by a change in the output of an industry.

Assumptions and Limitations of Input-Output Models

The I-O model is subject to a number of general assumptions and limitations. The model reflects a simplified macroeconomic structure, and does not include some variables of interest for macroeconomic analysis such as interest rates, unemployment rates, or income tax rates. The model assumes that the Canadian economy has the capacity to produce the goods and services stimulated by the economic shock. The model is not able to forecast situations in which demand may outpace the capacity to produce the required goods and services, however it does estimate the portion of goods and services sourced from other provinces in Canada and internationally. The model makes a basic underlying assumption that the number of jobs created maintains a linear relationship with short-term gross output. This approach can be considered sound if the value and quantity measures are for the same year and the analysis is focusing on the structure of the economy for that same year. When used for projecting beyond the IO model year, the relationship between values and quantities may be [impacted] by price variations.

For more information on the assumptions and limitations of the model, please refer to the "The Guide to Using the Input-Output Simulation Model" document, which is available free of charge upon request from Statistics Canada.

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