

# China's Economic Impact on Canada

## Trade, Investment, and Immigration



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The background of the top section features a stylized financial dashboard. It includes a bar chart on the right with several bars of varying heights, some outlined in white. To the left of the chart are several data points with plus signs, such as '+3.48', '+22.38', '25,645.39', '+9.15', '8,342.59', '+46.27', and '12,845.32'. There are also circular icons and dashed lines suggesting a network or data flow.

# Executive Summary

Canada and China have a strong history of economic connection and, through its rise to prominence over recent decades, **China has become Canada's second most important national economic partner, after the United States.**

Given the many countries re-evaluating their relationships with China, weighing the benefits of engagement and the costs of diversifying or decoupling, this report aims to provide a comprehensive account of China's role in the Canadian economy. The relationship between Canada and China is complex and nuanced. Some elements are easily quantifiable, while others must be explained qualitatively. Our goal is to provide an objective overview of the bilateral economic relationship to help policy makers and stakeholders better understand this important relationship, with data to aid evidence-based assessment and strategy development.

This report, which focuses primarily on China-Canada trade, immigration, and investment, concludes that China has a significant impact on Canadian GDP, employment, and overall economic activity. In 2018, for example, the direct GDP impact of China-related exports, new immigration, and Canada-bound investment totalled \$42.6 billion, \$6.1 billion, and \$9.4 billion, respectively. Given the overlaps in these figures, **the cumulative GDP effect of measurable China-related impacts likely exceeded \$55 billion.**

Several other aspects of the Canada-China relationship that also contribute to the Canadian economy, however, could not be directly quantified. These include access to competitive Chinese imports of consumer and producer (intermediate and capital) goods, investment flows from China, Canadian yields from investments in China, and the impact of second or higher generation Chinese immigrants. Imports from China are critical for many Canadian supply chains, particularly in the electrical equipment sector, and provide Canadian consumers with access to globally competitive goods and services.

**In 2019, the total economic impact of exporting to China, a measure of broad economic activity not accounted for in GDP, was estimated at \$76.9 billion, which is more than double the value of exports.** This translates to income for exporters, their suppliers, their employees, and the places where that money is subsequently spent. Altogether, we estimate that China-bound exports supported 365,915 jobs. These jobs were also found to have a 4.5% wage premium relative to the Canadian average income, amounting to \$18 billion in wages for Canadians.

Similarly, the overall economic impact of Chinese investment in Canada exceeded its reported \$9.4 billion contribution to GDP in 2018. In the same year, China invested an additional \$2.3 billion in Canada, and Chinese Multinational Enterprises (MNEs) generated \$30.4 billion in revenue and \$492 million in intellectual property in Canada. In 2018, existing and new Chinese investments in Canada supported at least 46,295 jobs.

While there is some overlap between the impact of exports and Chinese investment, due to some exporting by Chinese MNEs in Canada, **Canadian employment supported by Chinese investment and exports to China likely exceeded 400,000 jobs in 2019. The corresponding wage effect also exceeded \$20 billion.** The true number is likely greater, as these estimates do not include jobs supported by Chinese imports, Chinese immigration, and Canadian investment in China.

Notably, education exports to mainland China and Hong Kong surpassed every goods export category tracked by Statistics Canada's International Merchandise Trade Database in 2019. Chinese students accounted for 26.2% of the international student body, spent an estimated \$5.72 billion in Canada, and supported 57,000 jobs in the same year. The impact of Chinese immigration on the Canadian economy is another important and developing aspect of the bilateral economic relationship. Since 2011, the annual growth rate of new Chinese immigrants' GDP contribution has averaged 9%, far exceeding Canada's average annual GDP growth of 1.52% over the same period. The associated GDP impact totalled \$48.95 billion since 2011.

**China's significance to Canadians and Canadian business extends from coast to coast.** In terms of trade, British Columbia and Saskatchewan are the provinces most reliant on the China market for their exports, while Nova Scotia and Newfoundland and Labrador rank third and fourth. Alberta and Ontario, on the other hand, have the highest and third highest stock of Chinese investment in Canada. These are just two of many examples that demonstrate China's importance to every Canadian province and the need for a comprehensive understanding of China across the country.

Overall, the story of the Canada-China economic relationship is one of strong ties and promising opportunities. In trade, for example, **Canadian merchandise exports to China increased by 50% between 2011 and 2020, more than three times the export growth to all other countries, which was just 16%.** Furthermore, the development and exchange of knowledge, skills, and cultural experience that occurs as a result of trade, immigration, and investment can profoundly alter the business and societal landscape, particularly in a trade-dependent economy like Canada's. Canada's and China's futures are inextricably linked, so understanding the dynamics and nuances of this complex bilateral relationship is critical to charting a path forward that best serves Canada's long-term interests.

# Introduction

The year 2020 marked 50 years since Canada and China established diplomatic relations. While the frigid state of the bilateral relationship, along with the COVID-19 pandemic, suppressed the usual celebratory fanfare of such a diplomatic milestone, that milestone underscores the deep and long standing relationship between the two countries.

The shared history of Canada and China extends far beyond 1970. The early flow of people, goods, and ideas from Canada to China and China to Canada predates even Canada's creation in 1867.

The Canada-China economic relationship is now well established and important. China is Canada's second largest national trading partner, and third largest trading partner when considering the EU as a collective bloc. Billions of investment dollars flow across the Pacific between Canada and China and, prior to pandemic-related disruptions, hundreds of thousands of Chinese students and tourists chose Canada as their study or vacation destination.

This report ***China's Economic Impact on Canada - Trade, Investment, and Immigration*** aims to comprehensively assess the magnitude of the economic impact of China on Canada. It identifies and quantifies China's economic impact on Canada at the national, regional, and sectoral levels, bringing together the various disparate elements of the economic relationship.

The first section of this report examines goods and services trade. The second section assesses the impacts of immigration using the most recent publicly available data from Statistics Canada. The third section looks at investment, first at Canadian investments in Mainland China and Hong Kong and then at Canada-bound investment. The report utilizes data from the ***CIUA China-Canada Investment Tracker*** and Statistics Canada to quantify the flow of Chinese investment in Canada and assess its cumulative impact.

As an addendum to the core report, we will release two sub-reports focused on Chinese companies operating in Canada and Canada-Hong Kong ties. The former will be based on our Chinese Company Business Practices and Impacts Survey and the latter will focus on Canada-Hong Kong economic ties and Hong Kong's role between Canada and mainland China.

Note that Statistics Canada reports Hong Kong data separately from mainland China, which is reflected in many figures within this report.



# Bilateral Trade

## BACKGROUND

Canada is a country deeply reliant on trade. In 2018, the Canadian trade-to-GDP ratio, a metric used to measure the importance of international trade relative to the domestic economy, stood at 66%. This trails only Germany (87%) among G7 economies, and also sits well ahead of Australia (43%) and New Zealand (56%).

China is Canada's largest single trading partner outside of the United States and the European Union. Bilateral trade with China is perhaps the most visible component of the broader Canada-China economic relationship. This, at times, has linked trade with political controversies, including when bilateral relations

deteriorated in late 2018, which contributed to trade disputes involving Canadian canola, pork, and beef. However, the key story regarding

.....► *between 2011 and 2020, Canadian goods exports to China increased by 50 percent, while Canadian goods exports to all other countries grew by only 16 percent*

Canada-China trade is growth. Importantly, between 2011 and 2020, Canadian goods exports to China increased by 50 percent, while Canadian goods exports to all other countries grew by only 16 percent.

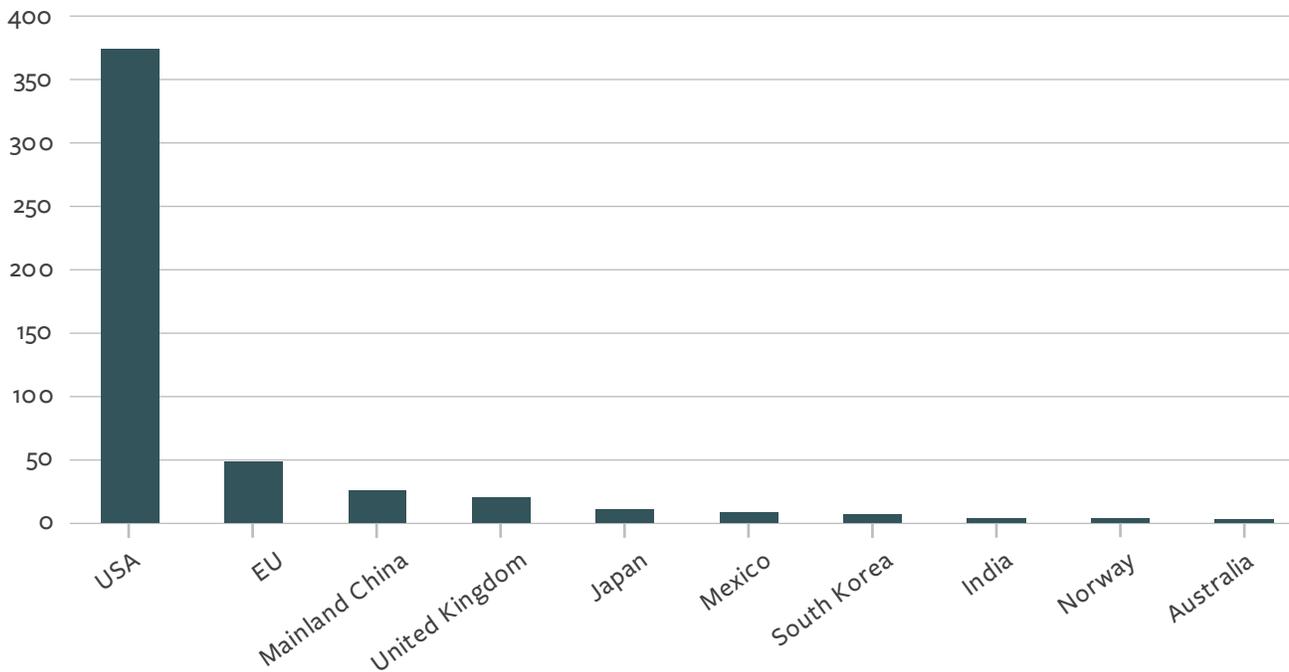
Canadian trade with China consists of both merchandise (goods) and services. It is no surprise that China, the world's "factory," is a key supplier of goods that Canadian firms and consumers need. Canada imports large quantities of cell phones and electronics, children's toys, and, more recently, facemasks and personal protective equipment (PPE) from China.<sup>2</sup> China, conversely, is a leading buyer of Canadian canola, pork, coal, and iron ore, among other key exports.

FIGURE 1.1

## TOP 10 EXPORT AND IMPORT PARTNERS FOR CANADA IN 2020

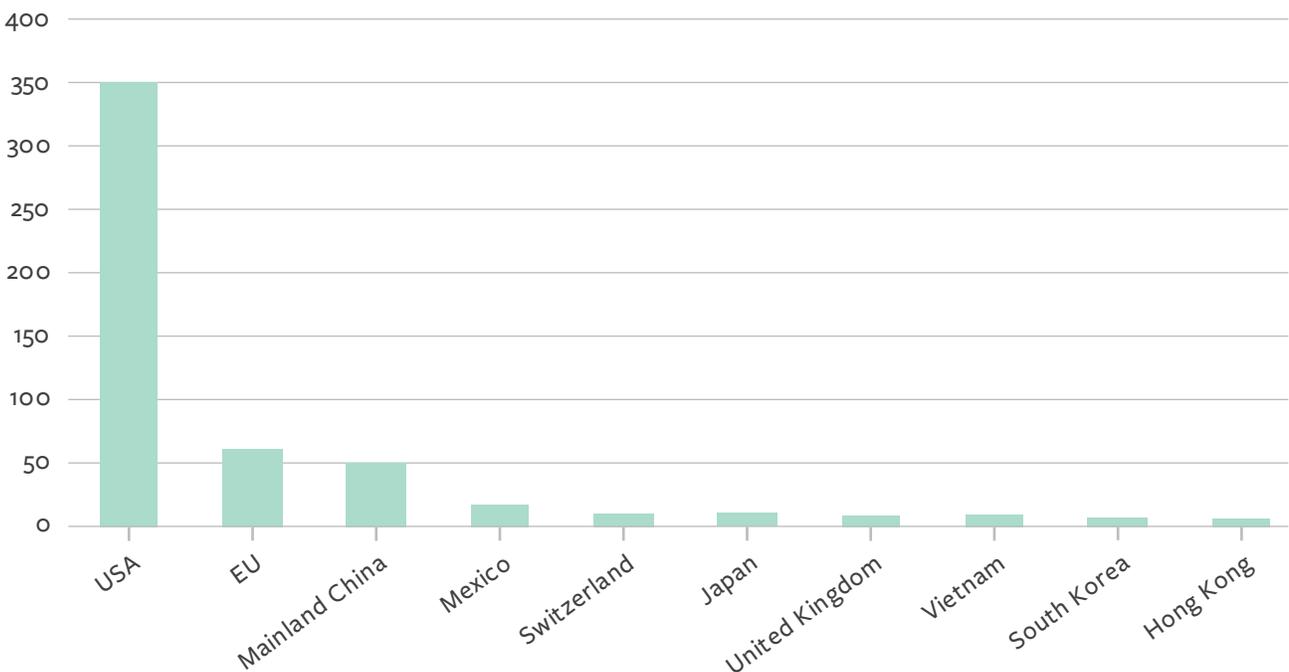
### CANADA'S TOP 10 EXPORT PARTNERS, 2020

EXPORTS (BILLIONS OF DOLLARS, CAD)



### CANADA'S TOP 10 IMPORT PARTNERS, 2020

IMPORTS (BILLIONS OF DOLLARS, CAD)



Source: Statistics Canada<sup>1</sup>

Though less significant in magnitude than merchandise trade, Canada-China trade in services is also an essential part of our economic relationship. Services trade has grown considerably in recent years as inbound tourists and student numbers swell and Canadian financial institutions expand their business in China.

## 1.1 ECONOMIC IMPACT OF EXPORTING TO CHINA

We focus our analysis on Canadian **exports**, as this element of the Canada-China trade relationship has a more tangible impact on Canadian economic activity and GDP.<sup>3</sup> Canadian imports from China are also presented and discussed for reference, although the purchase of imported goods and services does not have a direct impact on GDP.<sup>4,5</sup> Imports do, however, have a substantial impact on Canadian supply chains and consumers.

TABLE 1.1.1

### CANADIAN IMPORTS AND EXPORTS FROM/TO MAINLAND CHINA

2011-2020, MILLIONS OF DOLLARS CAD

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Exports (Total)</b>	20,680	23,620	26,115	25,239	26,763	28,663	31,899	36,758	32,585	31,662
Exports to China (Goods)	18,133	20,368	22,031	20,467	21,419	22,346	24,992	29,076	24,489	26,303
Exports to China (Services)	2,547	3,252	4,084	4,773	5,344	6,317	6,907	7,682	8,096	5,359
<b>Imports (Total)</b>	30,716	33,041	34,090	37,941	41,521	40,289	45,401	49,435	50,206	51,937
Imports from China (Goods)	28,711	30,952	31,944	35,570	38,963	37,661	42,732	46,358	46,862	49,551
Imports from China (Services)	2,005	2,089	2,146	2,371	2,558	2,628	2,669	3,077	3,344	2,386

Source: Statistics Canada<sup>6</sup>

In 2020, the direct impact of goods and services exports to mainland China and Hong Kong was worth \$31.6 billion and \$3.3 billion, respectively.<sup>8</sup> The overall direct GDP contribution of Canadian exports to China was \$34.9 billion in 2020. In 2019, the direct impact of total exports to mainland China and Hong Kong amounted to \$32.6 billion and \$6.0 billion, respectively. The combined total direct impact of Canadian exports to China in 2019 was \$38.6 billion.<sup>9</sup>

TABLE 1.1.2

**CANADIAN IMPORTS AND EXPORTS FROM/TO HONG KONG**

2011-2020, MILLIONS OF DOLLARS CAD

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Exports to Hong Kong	3,842	3,710	5,798	5,927	5,414	4,084	3,882	5,883	6,037	3,343
Exports to Hong Kong (Goods)	2,917	2,553	4,551	4,623	4,025	2,378	2,308	4,067	4,162	1,949
Exports to Hong Kong (Services)	925	1,157	1,247	1,304	1,389	1,706	1,574	1,816	1,875	1,394
Imports from Hong Kong	7,920	7,943	7,838	8,149	8,665	8,454	8,829	9,563	9,474	8,602
Imports from Hong Kong (Goods)	4,689	4,594	4,148	4,169	4,421	4,116	4,120	4,248	4,179	4,149
Imports from Hong Kong (Services)	3,231	3,349	3,690	3,980	4,244	4,338	4,709	5,315	5,295	4,453

Source: Statistics Canada<sup>7</sup>

The above numbers, however, do not capture the true breadth of China's impact on Canada through trade. China's direct spending on Canadian goods and services is indirectly supported by Canadian companies within the supply chain of exported products. The employee compensation derived from this activity induces further spending within the economy. Therefore, the total economic effect of trade comprises the direct company earnings on exports, the earnings of companies that indirectly support export activity, and the induced spending that occurs as a result of consequent employee compensation. Together, this is known as the multiplier effect.

Given the diversity of industries and regions involved in Canada-China trade it is complicated to produce an accurate estimate for the combined direct, indirect, and induced effects. To calculate the total effects of Canadian exports to China, we have retrieved Statistics Canada input/output multipliers and Canada-China export statistics on an industry level.<sup>10</sup> The following subsections will address the total economic impact of Canadian exports to China, the impact of exports on jobs and wages, the sectoral characteristics and distribution of exports, the regional characteristics of exports, and various qualitative issues surrounding exports to China. Finally, a case study on the exporting canola industry will be presented to illustrate these economic effects on an industry level.

Note, this report will often present its findings for both 2019 and 2020. However, in some cases, 2020 data has been skewed by the pandemic, making it less representative of regular circumstances. Thus, 2019 numbers are primarily used for point estimates.

## TOTAL ECONOMIC IMPACT

Statistics Canada's Industry Accounts Division calculates multipliers for various economic activities as well as an all-encompassing "total industries" multiplier on an annual basis.<sup>11</sup> These multipliers indicate how much of a "spin-off" (indirect + induced) effect is generated by specific (direct) economic activities. To illustrate this effect, suppose a local company exports \$10,000 of a specialty beverage in which apple juice is an input. To acquire the apple juice the local company pays the juice manufacturer \$5,000, who in turn pays an orchard \$2,000 for the actual apples. Furthermore, employees of all three enterprises are paid to facilitate these business activities, with a portion of that pay to the employees used to purchase other products amounting to \$3,000. When the specialty beverage is exported, the trade ledger records \$10,000 in export activity; however, the total economic impact generated by this export is equal to the sum of all aforementioned transactions, which is \$20,000. Therefore, in this case, the total output multiplier would be equal to 2.

Given the complexity of modern supply chains and products, a complete analysis of the total economic impact of activity in any sector would require the application of several multipliers across different stages of the supply chain. Due to the limited availability of detailed sectoral data and the scope of this report, our industry level data analysis does not go this far, though it does provide a detailed case study of the canola industry in Canada.

Instead, we calculate two estimates of the total economic impact of all exports to China.<sup>12</sup> The first applies the "total industries" multiplier, which is the weighted average multiplier for all economic activities in Canada, to the total Canada-to-China export value. The second method employs an industry export weighted approach by applying the most relevant available multiplier<sup>13</sup> to each of the twenty-one export categories delineated by the Canadian International Merchandise Trade Database.<sup>14,15</sup>

For exports, applying industry specific multipliers to Canadian export categories to China consistently estimated a total economic effect greater than did the application of the "total industries" multiplier across all exports. In 2019, the Canadian International Merchandise Trade Database reported that Canada's gross goods exports to mainland China amounted to \$23.3 billion.<sup>16</sup> Applying the "total industries" multiplier generated an estimated total economic impact of \$45.1 billion; however, the exports by industry approach

estimated the total economic impact at \$47.8 billion. This suggests that exporting industries to China generate more total economic impact per dollar of direct impact than does industry in Canada in general. This discrepancy was observed for merchandise and services exports to both mainland China and Hong Kong.

The “total industries” multiplier approach estimated that the total economic impact of all goods and services exports to China over 2019 was \$72.14 billion. Likewise, **the total economic impact** estimated by the “sectoral multipliers” approach yielded **\$76.90 billion**. The latter estimate is likely more accurate

.....> ***the total economic impact estimated by the “sectoral multipliers” approach yielded \$76.90 billion***

as it accounts for the particular composition of industries and activities involved in exports to China. Of this impact, \$56.03

billion is embodied in merchandise exports while \$20.86 encompasses services exports. The total economic impact of exports directly to mainland China amounted to \$64.48 billion, while the remaining \$12.42 billion was generated by exporting to Hong Kong, some of which may be ultimately bounded for the mainland. Altogether, the multiplier effect for exporting activities to mainland China and Hong Kong is 2.064.

## **1.2 EMPLOYMENT AND WAGE EFFECTS OF EXPORTING TO CHINA**

The Organization for Economic Cooperation and Development (OECD) estimates that the share of domestic employment embodied in foreign final demand ranged from 19.4% to 20.5% from 2009 to 2015, which is the most recently available data.<sup>17</sup> Using these numbers, and assuming that the number of jobs supported by exports to a particular country is proportional to the share of exports to that country, we calculate that 137,370 Canadian jobs were supported by Chinese demand in 2015.<sup>18</sup> This includes both jobs directly and indirectly supported by Chinese demand for Canadian exports. Assuming the same share of domestic employment in subsequent years but using more recent trade and employment data, we could estimate 149,227 and 176,392 jobs were embodied in exports to China in 2019 and 2020 respectively.<sup>19</sup>

A September 2020 Global Affairs Canada trade report, based on 2016 supply and use data, estimated that the number of jobs linked to exporting to China was 182,026.<sup>20</sup> It notes: “Statistics Canada does not estimate directly the number of jobs linked to exporting to China; however, they do provide estimates for

total jobs supported by exporting.<sup>221</sup> It therefore produces this estimate by assuming that the number of jobs supported by exports to China is proportional to the share of Canadian exports to China. This source used total jobs numbers reported in the supply and use tables which exceeds the numbers reported in the labour Force Characteristics by Industry table.<sup>22</sup> From here on we use the lower number to produce more conservative jobs number estimates.

OECD data suggests that the true jobs number may be much higher. Their data shows that the share of domestic employment embodied in demand from the United States is significantly less than is the share of export revenue from the United States. Consequently, the share of employment associated with demand from other countries is proportionally larger. While exports to mainland China grew from 3.11% to 3.86% of total exports from 2009 to 2015, the share of domestic employment supported by Chinese demand grew from 4% to 7.7%. Using these figures and excluding any assumption of proportionality between share of exports and share of employment embodied in exports, we calculate that 274,028 jobs were connected to Chinese demand for Canadian goods and services in 2015. If we assume that the share of domestic employment linked to foreign demand remained in the 19.4% to 20.5% range and that China's share of said demand remained at 7.7%, then we calculate that 292,378 and 277,188 Canadian jobs were embodied in mainland Chinese demand in 2019 and 2020, respectively.

Furthermore, the OECD estimates that the share of domestic compensation of employees embodied in foreign final demand ranges from 20.2% to 21.4% from 2009 to 2015, implying that the aggregate compensation of those whose employment is linked to exports exceeds that of the average Canadian employee.<sup>23</sup> In essence, people whose jobs support exports, including those to China, tend to earn more on average than the Canada-wide average income. The implied income premium relative to the average Canadian income is about 4.5%.

The most recent Statistics Canada data shows that average individual income in 2015 and 2019 was \$47,300,<sup>24</sup> which would place the average income for employment embodied in foreign final demand from China at \$49,428. Consequently, it is estimated that the total wage impact from direct and indirect employment embodied in exports to mainland China was equal to \$13.5 billion in 2015, \$14.5 billion in 2019, and \$13.7 billion in 2020.

Using the same method, it is estimated that 24,912 Canadian domestic jobs were linked to Hong Kong's demand for goods and services in 2015, 26,580 jobs in 2019, and 25,199 jobs in 2020. Further, the total wage impact was \$1.23 billion in 2015, \$1.31 billion in 2019, and \$1.25 billion in 2020. The total (direct + indirect + induced) employment and wage effects for mainland China and

Hong Kong aggregated are 298,940 jobs and \$14.8 billion in wages in 2015, 318,958 jobs and \$15.8 billion in wages in 2019, and 302,387 jobs and \$14.9 billion in wages in 2020.<sup>25</sup>

As the most recent available OECD data is from 2015, these estimates may not accurately reflect the changes of the underlying effects year to year. Given that export growth to China outpaced Canada-wide export expansion, these estimates likely still underrepresent the true employment and wage effects in 2019 and 2020. Notably, the 2019 jobs estimate of 318,958 is not far from the simple jobs number estimate produced by multiplying the most recent

.....▶ *the estimated number of jobs supported by exports to China in 2019 amounts to 365,915*

“total industries” jobs multiplier (2017) with the total value of exports to China in 2019. Doing so

produces a jobs number estimate of 367,784. When total exports are broken down by industry and multiplied by the most sector-relevant input-output total jobs multiplier, the estimated number of jobs supported by exports to China in 2019 amounts to 365,915.

Given that 2019 and 2020 jobs number estimates based on OECD data are more likely to underestimate the true number of jobs, these higher estimates may provide a more accurate picture for the last few years. The

.....▶ *wage effect for 2019 [...] amounts to \$18 billion*

2019 jobs estimate produced using the sector-relevant jobs multipliers exceeds

the 2015 estimate based on OECD data by about 22%. Over the same period, total exports to mainland China and Hong Kong increased by 20% (from \$32.2 billion to \$38.6 billion). This provides a fair indication that our sector-relevant multiplier-based jobs estimate for 2019 is in line with the changing role of China as a Canadian export destination. Accordingly, **the wage effect for 2019** estimated by the sector-relevant multiplier approach amounts to **\$18 billion**.

### 1.3 MERCHANDISE TRADE

China, the only major economy to record positive economic growth in 2020, will undoubtedly play an even greater role in the global economy moving forward. While the U.S. is and will remain by far the largest export market for Canada, China is a key export market for many Canadian industries.

The table below presents the Canadian dollar value of Canadian goods exports to China over the past 10 years. Canadian goods exports to mainland China and Hong Kong reached \$28.3 billion in 2020, growing at an average pace

TABLE 1.3.1

**CANADIAN GOODS EXPORTS TO CHINA**

2011-2020, MILLIONS OF DOLLARS CAD

Goods Trade	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Exports to Mainland China (Goods)	18,133	20,368	22,031	20,467	21,419	22,346	24,992	29,076	24,489	26,303
YoY% Change		12%	8%	-7%	5%	4%	12%	16%	-16%	7%
Exports to Hong Kong (Goods)	2,917	2,553	4,551	4,623	4,025	2,378	2,308	4,067	4,162	1,949
YoY% Change (HK)		-13%	78%	2%	-13%	-41%	-3%	76%	2%	-53%

Source: Statistics Canada<sup>26</sup>

of 5% since 2011. Using calculations from the previous section on jobs and wage impacts, we also estimate that nearly 220,000 jobs were embodied in merchandise (goods) exports to China in 2019.

The pulp mill industry (12%) represents the largest export category in Canada to China at the national level. Iron ore mining (11%), animal

TABLE 1.3.2

**TOP 10 CANADIAN EXPORTS TO CHINA BY INDUSTRY**

2020, MILLIONS OF DOLLARS CAD

	Total Exports 2020	% of national total
Pulp mills	2,933	12%
Iron ore mining	2,812	11%
Animal slaughtering & processing	1,845	7%
Starch & vegetable fat/oil manufacturing	1,678	7%
Oilseed (except soybean) farming	1,556	6%
Copper, nickel, lead, zinc ore mining	1,064	4%
Wheat farming	953	4%
Dry pea and bean farming	948	4%
Automobile/light-duty motor vehicle manufacturing	849	3%
Coal mining	731	3%

slaughtering/processing (7%), starch and vegetable fat & oil manufacturing (7%), and oilseed farming (6%) round out the top five.

Iron ores and concentrates are the single largest product export category (at 11% of the national total), followed by chemical wood pulp (8%), canola seeds (6%), swine (pork) (6%), and canola oil (4%).

Source: Statistics Canada<sup>28,29</sup>

TABLE 1.3.3

**TOP 10 CANADIAN EXPORTS TO CHINA BY PRODUCT**

2020, MILLIONS OF DOLLARS CAD

	Total Exports 2020	% of national total
Iron ores and concentrates	2,565	10%
Chemical woodpulp	1,691	7%
Canola seed	1,446	6%
Swine (pork)	1,112	4%
Canola oil	1,069	4%
Copper ores and concentrates	1,034	4%
Meslin and wheat	952	4%
Peas (dried and shelled)	934	4%
Semi-chemical wood pulp	849	3%
Bituminous coal	731	3%

Source: Statistics Canada<sup>30</sup>

## TRADE IN GOODS/MERCHANDISE (REGIONAL/PROVINCIAL LEVEL)

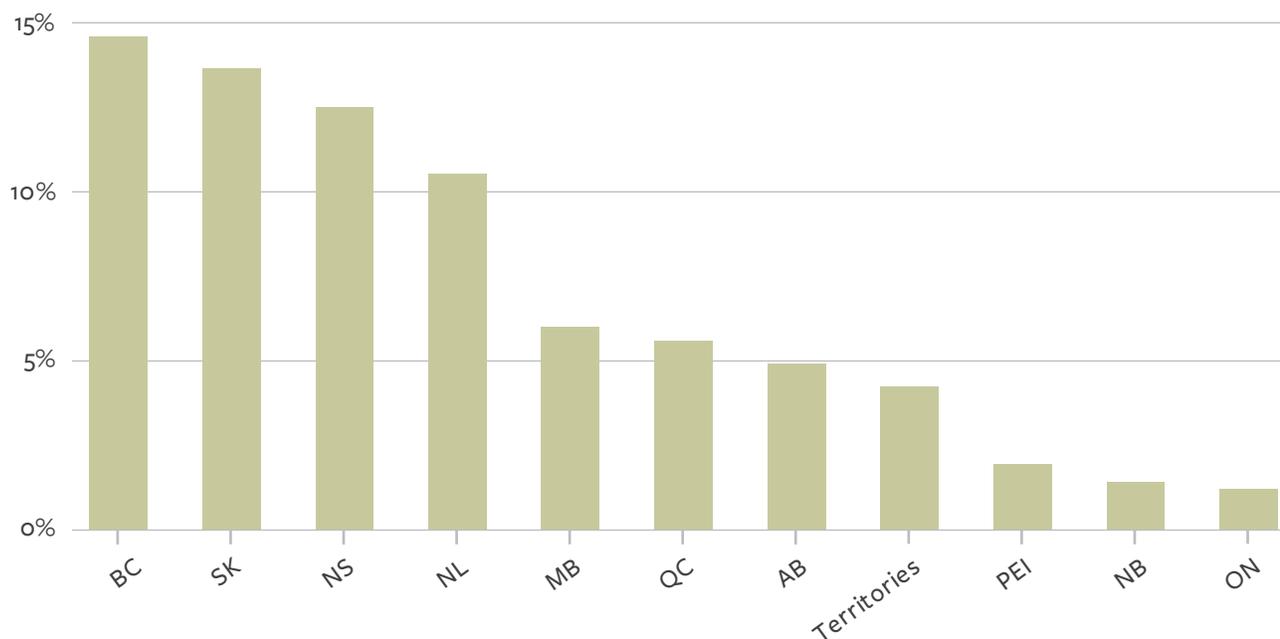
Statistics Canada has established six geographical regions of the country (British Columbia, the Territories, the Prairies, Ontario, Quebec, and Atlantic Canada) for the purposes of statistical reporting.<sup>31</sup>

Exports to China from the Prairies (Alberta, Saskatchewan, Manitoba) represent 38% the national total. British Columbia constitutes 24% of the national total—the single largest provincial total. This is followed by Quebec (19%) and Ontario (11%). The Atlantic region (Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland & Labrador) represents 8% of the national export total. Comparatively, Atlantic Canada makes up only 5.5% of Canada's GDP, suggesting that they overperform in exports to China relative to the national average. The Canadian Territories (Yukon, Northwest Territories, and Nunavut) represent just 0.4% of Canadian merchandise exports to China.

Interestingly, British Columbia led Canada in terms of percentage of its provincial exports that are destined for China in 2020, at 14%. It is followed closely by Saskatchewan (14%), Nova Scotia (12%), and Newfoundland and Labrador (11%).

FIGURE 1.3.1

**PERCENT OF PROVINCIAL EXPORTS DESTINED FOR CHINA, 2020**



Source: Statistics Canada<sup>32</sup>

TABLE 1.3.4

**EXPORTS, IMPORTS, AND TRADE BALANCE WITH CHINA BY REGION**

2020, MILLIONS OF DOLLARS CAD

	Prairies	Ontario	Quebec	BC	Territories	Atlantic Canada	Total
<b>Total Exports</b>	9,646	2,755	4,795	5,974	106	1,942	25,129
<b>Total Imports</b>	5,122	45,710	11,416	13,455	0.072	800	76,503
<b>Trade Balance (China)</b>	4,524	-42,995	-6,621	-7,482	-106	1,143	-51,285
<b>Total Exports (HK)</b>	269	950	342	252	0.00035	92	1,904
<b>Total Imports (HK)</b>	29	333	113	92	N/A	5	572

Source: Statistics Canada<sup>33, 34</sup>

**PRAIRIES**

Alberta and Saskatchewan (at 18% and 16% of the national export total, respectively) are the two primary drivers of the Prairies’ exports to China. Manitoba, meanwhile, makes up 4%.

Unsurprisingly, agricultural industries lead the way in the Prairie provinces. Starch/vegetable fat/oil manufacturing were most significant at 17%, followed

TABLE 1.3.5

## EXPORTS AND IMPORTS FOR INDIVIDUAL PRAIRIE PROVINCES

2020, MILLIONS OF DOLLARS CAD

	Alberta	Saskatchewan	Manitoba
Total Exports	4,557	4,138	952
Total Imports	3,423	411	1,288
Total Exports (HK)	239	25	5
Total Imports (HK)	22	2	5

Source: Statistics Canada<sup>35</sup>

TABLE 1.3.6

## TOP 10 PRAIRIE EXPORTS TO CHINA BY PRODUCT

2020, MILLIONS OF DOLLARS CAD

	Total Exports 2020	% of regional total
Starch/vegetable/fat/oil manufacturing	1,670	17%
Oilseed farming	1,547	16%
Dry pea/bean farming	940	10%
Wheat farming	915	10%
Pulp mills	779	8%
Other non-metallic mineral mining/quarrying	677	7%
Animal slaughtering/processing	599	6%
Other grain farming	570	6%
Other basic organic chemical manufacturing	509	5%
Resin/synthetic rubber manufacturing	295	3%

Source: Statistics Canada<sup>36</sup>

by oilseed farming (16%), dry pea and bean farming (10%), wheat farming (9%) and pulp mills (the only non-agrifood industry in the top five, at 8%).

Similarly, agricultural products constitute most of the top Canadian Prairie exports to China. Canola/colza Seeds (15%), canola/colza oil (11%), leguminous vegetables (10%), wheat (9%), and potassic mineral or chemical fertilizers (7%) were the top five product categories in 2020.<sup>37</sup>

## ONTARIO

Exports from Ontario constitute 11% of all Canadian goods flowing to China. This places Ontario fifth among individual provinces in Canada, trailing British Columbia, Quebec, Alberta, and Saskatchewan.

While the other top Canadian exporting provinces send vast quantities of agricultural and mining-related commodities to China, Ontario's exports are mainly concentrated in manufacturing industries.

Ontario's top industry by Chinese export value is automobile/light-duty motor vehicle manufacturing, at 13% of the provincial total. This is followed closely by pharmaceutical/medicine manufacturing (10%), animal slaughtering/processing (7%), navigational/measuring/medical/control instruments (5%), and resin/synthetic rubber manufacturing (5%).

TABLE 1.3.7

### TOP 10 ONTARIO EXPORTS TO CHINA BY PRODUCT

2020, MILLIONS OF DOLLARS CAD

	Total Exports 2020	% of provincial total
Automobile/light-duty motor vehicle manufacturing	366	13%
Pharmaceutical/medicine manufacturing	275	10%
Animal slaughtering/processing	190	7%
Measuring/medical/control instruments	145	5%
Resin/synthetic rubber manufacturing	135	5%
Soybean farming	118	4%
Commercial/service machinery manufacturing	104	4%
Non-ferrous metal (except aluminium) smelting/refining	102	4%
Animal food manufacturing	101	4%
Industrial machinery manufacturing	80	3%

Source: Statistics Canada<sup>38</sup>

Passenger motor vehicles (13% of the provincial total) are the top export by product category, followed by medicine (9%), swine (pork) meat (5%), soya beans (4%) and pet food (4%).<sup>39</sup>

There is considerable distribution of exports in Ontario across industry and product categories. Only 21% of exports fall outside of the top 25 industries, while 35% of exports fall outside the top 25 product categories.<sup>40</sup>

## QUEBEC

Quebec is the source of 19% of Canadian goods flowing to China, trailing only B.C. in the individual provincial rankings.

Exports are highly concentrated in the iron ore mining and animal slaughtering/processing industries, which make up 40% and 21% of the provincial export total, respectively. There is a considerable drop-off to commercial/service industry machine manufacturing (5%), pulp mills (4%), and aerospace product/parts manufacturing (4%).

Similarly, iron ores and concentrates comprise 40% of the provincial export total, followed by swine/pork meat (18%), ground flying trainers/flight simulators (4%), helicopters/airplanes/spacecraft (4%), and motor vehicles for passenger transport (3%).<sup>42</sup>

TABLE 1.3.8

### TOP 10 QUEBEC EXPORTS TO CHINA BY PRODUCT

2020, MILLIONS OF DOLLARS CAD

	Total Exports 2020	% of provincial total
Iron ore mining	1,908	40%
Animal slaughtering/processing	988	21%
Commercial/service machinery manufacturing	255	5%
Pulp mills	191	4%
Aerospace product/parts manufacturing	189	4%
Automobile/light-duty motor vehicle manufacturing	129	3%
Iron and steel mills/ferro-alloy manufacturing	121	3%
Non-ferrous metal (except aluminium) smelting/refining	113	2%
Measuring/medical/control instruments	109	2%
Sawmills and wood preservation	90	2%

Source: Statistics Canada<sup>41</sup>

## BRITISH COLUMBIA

B.C. is the single largest provincial source of merchandise exports to China, representing 24% of the national total.

Exports (by industry) are mostly heavily concentrated in pulp mills, which make up 31% of the export total in this region. Copper/nickel/lead/zinc ore mining (17%), coal mining (12%), sawmills (9%), and automobiles/light-duty motor vehicle manufacturing (5%) round out the top five.

Product exports are led by chemical wood pulp (27%), copper ores and concentrates (17%), coal (12%), lumber (9%), and passenger motor vehicles (6%).<sup>44</sup>

TABLE 1.3.9

### TOP 10 BC EXPORTS TO CHINA BY PRODUCT

2020, MILLIONS OF DOLLARS CAD

	Total Exports 2020	% of provincial total
Pulp mills	1,888	32%
Copper/nickel/lead/zinc ore mining	1,022	17%
Coal mining	705	12%
Sawmills	555	9%
Automobiles/light-duty motor vehicle manufacturing	321	5%
Logging	190	3%
Gold/silver ore mining	189	3%
Seafood product preparation/packaging	141	2%
Fishing	96	2%
Paper mills	91	2%

Source: Statistics Canada<sup>43</sup>

## ATLANTIC CANADA

Atlantic Canada generates 8% of Canadian exports to China. On a provincial level, Newfoundland & Labrador (4%) leads the way, followed by Nova Scotia (3%), New Brunswick (1%), and Prince Edward Island (0.13%).

The iron ore industry is by far the largest source of Atlantic Canadian exports to China at 41%, followed by seafood product preparation and packaging at 21% and fishing at 19%. Pulp mills (4%) and non-ferrous metal (except aluminum) smelting/refining (3%) round out the top five.

TABLE 1.3.10

## EXPORTS AND IMPORTS FOR INDIVIDUAL ATLANTIC PROVINCES

2020, MILLIONS OF DOLLARS CAD

	New Brunswick	Nova Scotia	PEI	Newfoundland and Labrador
Total Exports	144	658	40	1,108
Total Imports	225	514	3	58
Total Exports (HK)	16	31	5	40
Total Imports (HK)	>0	5	>0	>0

Source: Statistics Canada<sup>45</sup>

TABLE 1.3.11

## TOP 10 ATLANTIC EXPORTS TO CHINA BY PRODUCT

2020, MILLIONS OF DOLLARS CAD

	Total Exports 2020	% of provincial total
Iron ore mining	799	41%
Seafood product	413	21%
Fishing	370	19%
Pulp mills	72	4%
Smelting and Refining	67	4%
Oil and gas extraction	56	3%
Meslin and wheat	41	2%
Peas (dried and shelled)	38	2%
Semi-chemical wood pulp	13	1%
Bituminous coal	11	1%

Source: Statistics Canada<sup>46</sup>

Iron ores and concentrates (41% of the provincial merchandise export total), crustaceans (32%), frozen fish (4%), nickel (3%), and chemical wood pulp (3%) are the top five product categories from Atlantic Canada.<sup>47</sup>

## TERRITORIES

The Canadian Territories (Yukon, NWT, and Nunavut) represent just 0.4% of Canadian merchandise exports to China. In 2020, Nunavut’s iron ore mining industry comprised almost the entire territorial total via the export of iron ores and concentrates.

TABLE 1.3.12

### TOP 5 TERRITORIES EXPORTS TO CHINA BY PRODUCT

2020, CAD

	Total Exports 2020
Iron ore mining	105,527,918
Instruments Manufacturing	297,850
Store retailers	35,500
Mechanical manufacturing	5,686

Source: Statistics Canada<sup>49</sup>

## 1.3.1 CANADA CHINA INTERDEPENDENCE: DIFFICULT TO UNTANGLE

Statistics often fail to communicate the full picture when it comes to trade, and China is no exception. The following considerations regarding Canadian merchandise trade illustrate the importance of China as a trading partner and outline the difficulties surrounding efforts to diversify or disengage with China.

Canadian goods trade (both exports and imports) with China has had an overwhelmingly upward trajectory over the past 30 years. Despite recent political tensions and a global pandemic, 2020 saw a 7% increase in goods exports from Canada to China. While this comes after a considerable decrease (-16%) in the prior year (largely due to agricultural products),<sup>50</sup> it serves to demonstrate the resilience of the broader trading relationship. For comparison, 4.8% of Canadian merchandise exports went to China in 2020 while only 0.7% went to India.<sup>51</sup>

Conversely, public opinion polling suggests that Canadians are wary of the Canada-China trade relationship. A Nanos/CTV News poll released in January 2021 indicates that 45% of Canadians think that trade with China should be reduced. Just 10% believe trade should increase, while 28% state that it should be kept at its current level; 17% of respondents were unsure.<sup>52</sup> A prior Ipsos poll, released on July 21,

.....► *rapid growth, massive consumption of commodities, and integration in the global supply-chain make it exceedingly difficult for Canada to “turn off the taps”*

2020, reported that 82% (35% strongly/47% somewhat) “agree ... Canada should reduce its reliance on trade with China and diversify to other countries.”<sup>53</sup>

This is difficult to reconcile. Political tensions are not always reflected in the economic relationship between two countries and calls for reliance reduction are not easily translated to real outcomes. While the idea of pulling back trade with China is often-discussed in expert circles, China’s rapid growth, massive consumption of commodities, and integration in the global supply chain make it exceedingly difficult for Canada to “turn off the taps.”<sup>54</sup>

This is not to say that trade diversification is impossible. The Government of Canada, through its Export Diversification Strategy, sets an ambitious target to expand trade via “50% more overseas exports by 2025.” It states that “[d]iversification is a national imperative” and that it “will not stop until [Canada] is the hub of global trade and the world’s most connected, stable, predictable, innovative and in-demand market on earth.”<sup>55</sup> Canada’s existing multilateral trade agreements, such as the Comprehensive Economic and Trade Agreement (CETA), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the Canada-United States-Mexico Agreement (CUSMA) will undoubtedly play a role in this equation. That being said, any public expectations of a rapid move away from China trade should be tempered with reality.

### **1.3.2 CANADIAN USE OF CHINESE IMPORTS/INPUTS**

A key aspect of the Canada-China trading relationship not yet discussed in this section is the importance of Chinese imports (and inputs) for Canadian consumers and businesses. Similar to Canadian exports, imports from China have grown considerably over past decades. Chinese goods comprised 14% of cumulative Canadian imports in 2020, up from 12% in 2019, in part due to a spike in imports of masks and PPE to combat the pandemic.

A 2020 Global Affairs Canada report on Canadian supply chains linked with China illustrates China’s importance.<sup>56</sup> Attesting to China being the dominant

supplier for a large number of internationally traded goods, the report notes that China holds a dominant (50%) market share in 448 products (out of 5,428) at the HS-6 level.<sup>57</sup> By comparison, the U.S. was the dominant (50%) market share holder for only 101 products. The report notes that China is a significant source for “limited supply products,” where “Canada imported the product from 3 or less supplier countries, or if the HHI is greater than 0.81 (which roughly indicates 90% market share from a single source).”<sup>58</sup>

Moreover, that report highlights that China is increasingly supplying Canadian businesses with capital (like factory machinery) and intermediate goods which can enhance domestic production. In 2000, 57% of Canada’s imports from China were consumption goods—consistent with China being the final assembly point in many Asian supply-chains—16% of imports were capital goods, and 27% were intermediate goods. By 2019, only 41% of imports from China were consumption goods, 26% were capital goods, and 32% were intermediate goods. In terms of economic impact, this shift enables Canadian producers to make value-adding contributions in the supply chain for either domestic consumption or export, which in turn contributes to GDP.

Expectedly, certain industries are more reliant than others on Chinese imports for inputs. Canadian manufacturing of hand tools, electrical equipment, computer parts, and small electrical appliances are particularly reliant on Chinese products. 36% of components in small electrical appliances are Chinese imports as of 2016. Disruptions to this area, where input concentration is so high, could reverberate widely throughout the economy given that small electrical appliances are found throughout 97% of all industries in Canada.

Generally speaking, the impact of trade disruption on consumer goods imports, for example, would be shortage and price increases. In some cases, “certain consumption goods (such as “Toys, Games, and Sports Equipment”)

.....▶ ***the impact of trade disruption on consumer goods imports would be shortage and price increases***

are not readily available from other producers and these would be difficult to replace.”<sup>59</sup> For capital goods, those “tangible

goods that are instrumental in producing goods and services,” the loss of Chinese imports would overwhelmingly impact machinery and equipment manufacturing, which produce critical “computers, computer peripherals, and parts; and other communications equipment.”<sup>60</sup> For intermediate goods, Chinese content is found in roughly 47% (21,793) of all Canadian production inputs. While one might wager that Canadian firms could substitute Chinese inputs in some cases, “[a]ny disruption to trade that involves firms

involuntarily substituting away from the 21,793 Chinese inputs could cause the cost of production to increase, a decrease in productivity, and ultimately hurt Canadian producers and consumers.”<sup>61</sup>

While the benefits of exports are more easily quantifiable, the importance of Chinese imports for Canadian consumers, businesses, and supply chains cannot be understated. A shift away from Chinese imports may make the Canada-China trade balance appear more favourable, but it would undoubtedly increase costs for consumers and expose some Canadian firms to potentially damaging supply chain disruptions.

## 1.4 “SPIN-OFF” EFFECTS: CASE STUDY ON THE CANOLA INDUSTRY

The Canadian canola industry has long been linked to, and interconnected with, the China market. China has been the source of both pain and gain for producers across Canada. The wide-ranging, and sometimes deleterious, implications of such an export-dependent industry make it a relevant case study for this report. The oilseed, which originated in Canada in the 1970s, is well known across the globe as a useful (and healthy) cooking oil choice, feedstock, and emerging source of biofuel.<sup>62</sup>

Canola is one of Canada’s top agricultural products for export, bringing immense benefit to producers and farmers across Canada. LMC International (a global consultancy commissioned by the Canola Council of Canada) found that the annual economic impact of the canola industry in Canada over the three-year period from 2016/17 to 2018/19 was \$29.9 billion.<sup>63</sup> The sector also supported 207,000 domestic jobs, with wages totalling \$12 billion.

In the calendar year 2020, the Canola Council of Canada reported production of 18.8 million metric tonnes (MMT) from 20.8 million seeded acres.<sup>64</sup>

TABLE 1.4.1

### VALUE OF CANOLA EXPORTS BY COUNTRY

2020, CAD



\$4 billion



\$3 billion



\$1 billion



\$1 billion



\$800 million

Source: Canola Council of Canada<sup>65</sup>

Domestic processing (crushing) produced 4.5 MMT of canola oil and 5.79 MMT of canola meal. Cumulative exports equalled 11.8 MMT (worth \$6.3 billion) of seed, 3.4 MMT (\$3.7 billion) of oil, and 5.0 MMT (\$1.9 billion) of meal for a sum total of \$11.9 billion.

Exports of canola to China—the world’s top consumer of vegetable oil—reached \$3.1 billion in 2020, trailing only the U.S. (\$3.7 billion) in total value.<sup>66</sup> This far outpaced the entire European Union (\$1.3 billion), Japan (\$1.3 billion), and Mexico (\$797.1 million). Seed exports to China totalled 2.6 MMT (22% of the national total and first among all export markets), oil reached 1.1 MMT (32%), and meal reached 1.5 MMT (30%).<sup>67</sup>

## **EXPORT DISRUPTIONS**

Canola exports to China have grown rapidly since the Chinese oilseed market opened up in the 1990s. The only periods of disruption have largely been linked to periodic Chinese import restrictions.

China has previously imposed restrictions on Canadian canola in 2009 and 2016, invoking concerns over the spread of blackleg disease.<sup>68</sup> Both were eventually resolved; however, the most recent, and perhaps most well-known, export disruption took place in 2019, when China revoked the canola seed export licenses of Richardson and Viterra, two of Canada’s largest canola producers. According to the Canola Council, this situation was estimated to have “cost the industry between \$1.54 and \$2.35 billion from lost sales and lower prices between March 2019 and August 2020.”<sup>69</sup>

The official reason for the ban given by Chinese authorities was the presence of “dangerous pests such as fungus” in shipments to the country.<sup>70</sup> While the reason for the ban is evidently complicated and multifaceted, it came just months after Huawei CFO MENG Wanzhou was detained by Canadian authorities in Vancouver.<sup>71</sup> Observers have linked the two events and posited that the ban could have been motivated by political elements. Prime Minister Justin Trudeau was even quoted saying that China was “inventing excuses” and that it was “unjustified” to stop the flow of Canadian exports to China.<sup>72</sup>

This situation is ongoing (with both producers’ canola seed export licenses still suspended), although seed exports as a whole are beginning to recover.<sup>73</sup> The year 2020, for example, was a strong one for Canadian producers, who benefited from rapidly increasing Chinese demand for agri-food products.<sup>74</sup> It is also important to note that canola oil and meal exports were not impacted by the ban.

This does not mean that Canadian industry stakeholders should be (or are) complacent with regards to China. The Canola Council of Canada, for example,

TABLE 1.4.2

**CANADIAN CANOLA EXPORTS BY YEAR**

Year	Exports in Metric Tonnes
2020	20 million
2019	16 million
2018	18 million
2017	19 million
2016	16 million

Source: Canola Council of Canada<sup>75</sup>

noted the importance of trade diversification in its new 2021 market access strategy, noting that “more government resources are required to diversify markets and create trade predictability in Asia.”<sup>76</sup> It will clearly take both industry and government buy-in to promote the necessary levels of trade diversity and expand into new markets.

The multibillion-dollar China market is, and will continue to be, a core market for the Canadian canola industry despite ongoing restrictions. Although the industry may face short-term roadblocks and/or disruption, the general trajectory (and resulting economic benefit) has proven to be positive.

**CUMULATIVE ECONOMIC EFFECT**

The aforementioned LMC report concluded that in the 2018-19 fiscal year when exports to China accounted for \$3.187 billion of the \$10 billion total, the direct economic impact was \$12.18 billion and the cumulative, which includes indirect and induced effects, was \$27.7 billion.<sup>77</sup> Therefore, if the direct impact of China’s Canadian canola imports is proportional to its cumulative effect, then China’s import of Canadian canola is responsible for a \$7.25 billion impact in Canada over the 2018-19 fiscal year. This means that the indirect and induced effects are 1.27 times greater than the direct impact and the multiplier for the total industry activity is 2.27. This is notably higher than the multiplier calculated for total exporting industries to China, which was 2.064.

Furthermore, the report found that the number of jobs directly supported in the canola industry in 2018-19 was about 60,000. However, when accounting for the indirect and induced consumption effect in particular, the number of Canadian jobs supported by the canola industry increases to 142,000 and is even higher at 204,000 when including farm family members who help with the canola farming work on site. Given the proportion of canola industry

revenue generated by exporting to China, we can estimate that canola exports to China support 37,500 jobs of the 142,000 total.

It is important to note that the indirect and induced effects of canola exports are likely higher than that of many other industries since wages in the canola industry, at \$86,000 per year, are nearly double the average salary across Canada. This partially explains why the multiplier effect in the canola industry (2.27) is higher than for total China targeted export activity (2.064).

## 1.5 SERVICES TRADE

TABLE 1.5.1

### CANADIAN SERVICE EXPORTS TO CHINA

2011-2020, MILLIONS OF DOLLARS CAD

Services Trade	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total Services Exports (Mainland)</b>	2,547	3,252	4,084	4,773	5,344	6,316	6,907	7,682	8,096	5,359
<b>% Change YoY</b>		28%	26%	17%	12%	18%	9%	11%	5%	-34%
<b>Travel (Exports)</b>	1,690	2,099	2,924	3,679	4,185	4,983	5,505	6,002	6,333	
<b>Commercial Services Exports</b>	386	583	491	505	546	597	617	791	798	
<b>Transportation and government services (Exports)</b>	471	570	669	588	613	736	785	889	964	
<b>Total Service Exports (Hong Kong)</b>	924	1,156	1,247	1,305	1,389	1,705	1,574	1,816	1,875	1,394
<b>% Change YoY</b>		25%	8%	5%	6%	23%	-8%	15%	3%	-26%
<b>Travel (Exports)</b>	220	229	249	250	293	322	305	363	379	
<b>Commercial Services Exports</b>	252	278	344	385	429	720	570	618	622	
<b>Transportation and government services (Exports)</b>	453	649	655	670	667	663	700	835	874	

Source: Statistics Canada<sup>78</sup>

\*Subcategory breakdown not available for 2020 data.

Canadian service exports to China grew at an average rate of 15% over the past 10 years, before tumbling by over 34% in 2020. Obviously, the COVID-19 pandemic greatly hindered international travel, which in turn reduced education and tourism exports. In recent years, travel exports, which encompasses both tourism and education, has been by far the largest and fastest growing services export category to China. About two thirds of the value of travel exports comes from education exports (~\$4.5 billion), while the remaining third (~\$2.2 billion) is generated by tourism from China. Services exports to Hong Kong were not as adversely affected by pandemic responses due to their greater concentration in commercial services, which were not as vulnerable to travel restrictions as education and tourism.

While smaller in quantity than merchandise trade, services trade with China is an important dimension of the Canada-China economic relationship. The primary components of Canadian service exports to China are tourism, financial services, and education, which is constituted mainly by Chinese international students at Canadian universities, but also includes those studying at colleges and grade schools. These activities bring billions of dollars to Canada and are a key driver of the social and cultural connection between the two countries. Social and cultural exports are an important factor even in the China-Canada economic relationship because they facilitate further trade in goods and services and even investment. For example, many Chinese international students in Canada end up immigrating, which brings long-term positive changes to the Canadian economy. Therefore, the importance of the social and cultural exports embedded within services exports to China must not be understated.

This section examines the specific impacts of Canadian services exports to China on a sectoral and regional basis before discussing the cumulative impacts and implications.

## 1.5.1 EDUCATION

Canada is a world leader in educational exports. In 2018, the Canadian government and independent research estimated that international students

.....▶ *education services were Canada's largest export to China in 2019*

spent about \$22 billion on tuition, accommodation, and discretionary expenses combined.<sup>79</sup>

This directly supported nearly 220,000 Canadian jobs. Because international students' expenditures represent revenue for goods and services from overseas, they are Canadian exports of education services. In fact, international

students earn the country more than traditional exports, such as wheat, seafood, coal and iron. In fact, according to Statistics Canada's International Merchandise Trade Database, education services were Canada's largest export to China in 2019, ahead of each of the twenty-one merchandise export categories delineated in the database (including mineral and wood pulp products) as well as every other services export category.

International students from mainland China and Hong Kong amounted to **169,905**, or **26.2%** of the international student population in Canada in **2019** based on Immigration, Refugees and Citizenship Canada (IRCC) data. Notably, this is lower than the number of students estimated by the Chinese consulate in Toronto, which puts the number at over 180,000. Proportionally, this translates to Chinese student spending of about **\$5.72 billion** in Canada in 2019, supporting over **57,000 jobs**. The overall tax contribution from international students in Canada was \$3.7 billion in 2018. Mainland Chinese and Hong Kong students accounted for about \$800 million of this total. Notably, many analyses of Chinese students' impact in Canada do not consider those from Hong Kong, which does change these figures from those found in other sources on this topic over recent years.

## REGIONAL AND SECTORAL FEATURES

Chinese international students are not evenly distributed across Canada, nor do they parallel the distribution of international students across Canada in general. International students from China are more concentrated in B.C. than those from any other major country; however, the majority of them study in Ontario. At Canada's largest university, the University of Toronto, Chinese international students made up two-thirds of the international student body in 2019.<sup>80</sup> York University hosted the second most Chinese international students, and the University of British Columbia hosted the third most.<sup>81</sup>

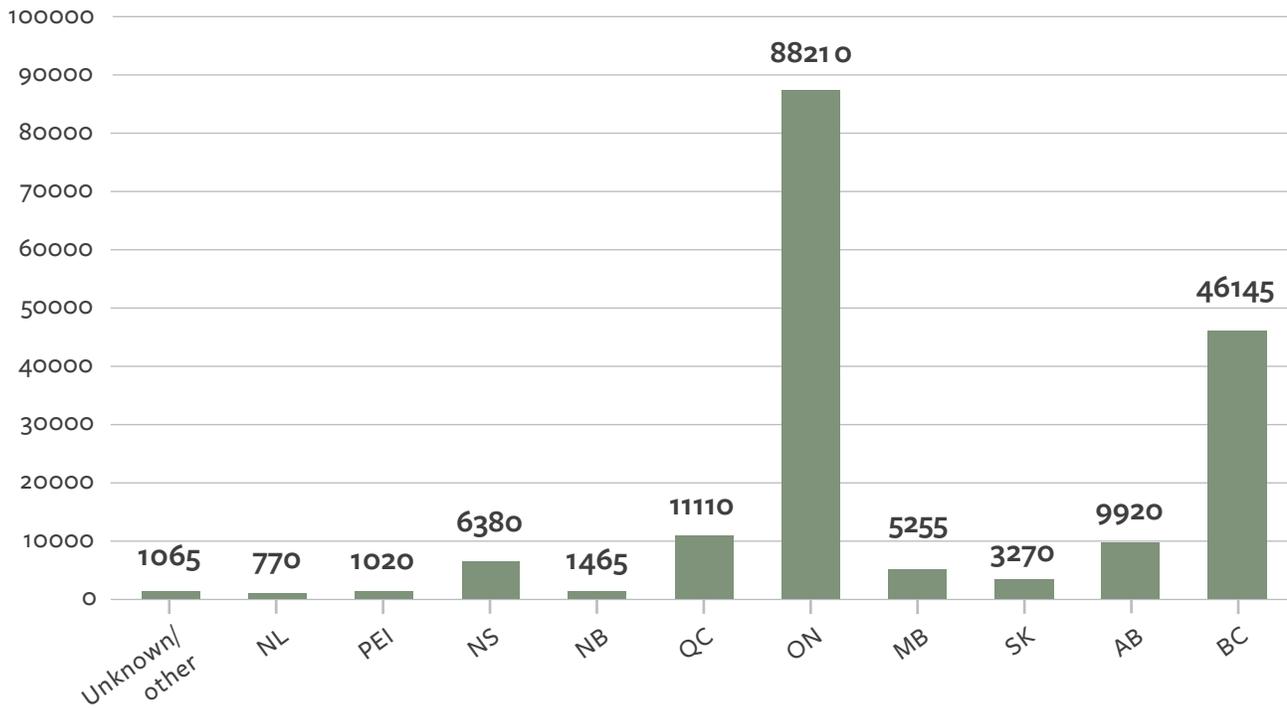
Importantly, when referring to Chinese international students, we do not refer only to university students. In fact, only 45% of study permits issued to Chinese students were related to university study.<sup>82</sup> A significant number of Chinese students also study at colleges and technical institutes, and some even attend secondary and primary schools in Canada, sometimes as preparation for future English-language university study.

Figure 1.5.1 shows the number of foreign study permits issued to Chinese international students by province of study in 2018. Notably, British Columbia, Nova Scotia, Prince Edward Island and Ontario host the most Chinese students on a per-capita basis. In British Columbia, the already large Chinese-Canadian community and its relative proximity to China make it an attractive study destination for many students. Likewise, the University of Toronto, which

FIGURE 1.5.1

### NUMBER OF CHINESE STUDENTS BY PROVINCE

2018

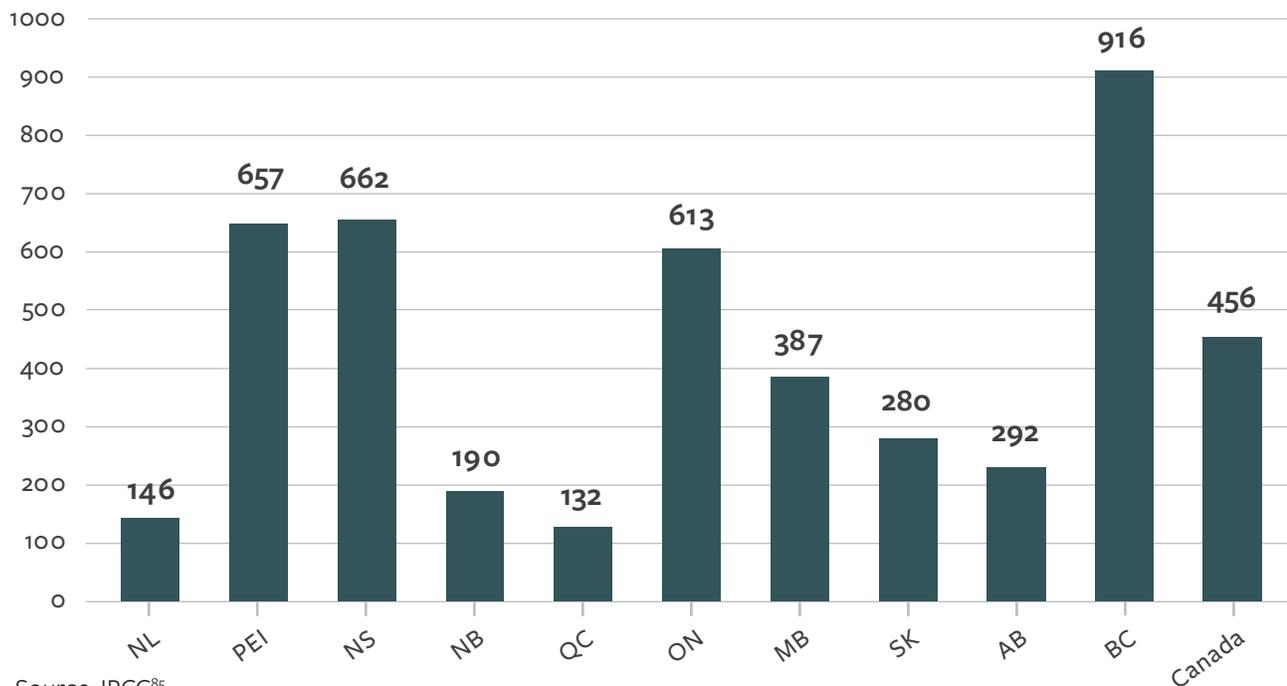


Source: IRCC<sup>84</sup>

FIGURE 1.5.2

### NUMBER OF CHINESE STUDENTS PER 100,000 PERSONS, BY PROVINCE

2018



Source: IRCC<sup>85</sup>

hosted the most Chinese students in 2019, is broadly seen as a top destination to study in Canada, helping to boost Ontario's share of Chinese students in Canada.<sup>83</sup> Nova Scotia and Prince Edward Island appear as outliers primarily because of their relatively low populations.

Notably, Chinese international students are also heavily concentrated in a few academic disciplines.<sup>86</sup> In 2017, Chinese students at Canadian universities greatly favoured Commerce (39%), followed by Science, Technology, Engineering and Mathematics (STEM) (34.5%), and Social Sciences (22.6%). Comparatively, only 13% of all other international students chose to study commerce in Canada.

## **RESEARCH AND DEVELOPMENT BENEFITS**

Canada and China have long maintained a strong collaborative relationship in R&D. Despite becoming a controversial issue in recent years, this relationship has promoted innovation in clean tech, transportation, nanotechnology, and artificial intelligence. For example, the University of Alberta and Tsinghua University partnered to create the Joint Research Centre for Future Energy and Environment aimed at addressing climate change through sustainable energy advancement.<sup>87</sup>

Research benefits at Canadian universities can also arise from Chinese graduate student research and private enterprise funding. For example, Canada's National Sciences and Engineering Research Council (NSERC) partnered with Huawei Canada in 2021 to support cutting-edge computer and electrical engineering research by finding collaborators in Canadian universities.<sup>88</sup> As for Chinese researchers working in Canada, the Paulson Institute found that Chinese researchers in Canada make up as much as a third of the personnel working on advanced AI development.<sup>89</sup>

However, research collaboration with China has become a sensitive issue. Huawei funding in universities is a particularly salient example as it is easier to track than professor-led research collaboration. On that topic, some have drawn attention to the lack of a regulatory framework for tracking R&D collaboration,<sup>90</sup> which has inhibited awareness of the products of China-Canada academic collaboration. Regarding the recent Huawei Canada partnership with NSERC, several experts have voiced concern that such collaboration will ultimately help China at Canada's expense by allowing Huawei to extract valuable intellectual property for a relatively low cost. However, Canada may need such partnerships to advance its own research in certain fields, due to a dearth of potential collaborators with the ability to advance cutting-edge projects. Professor Roberto Morandotti, the Canada Research Chair in Smart Photonics, said that in his field only Cisco and Huawei are viable

collaborators. To lock Huawei out means that “you don’t do any projects, and then you don’t develop any intellectual property and you don’t pay any students and you don’t support the Canadian economy.”<sup>91</sup>

## **RISK OF DECLINE IN CHINESE INTERNATIONAL STUDENT BODY IN CANADA**

The figures presented thus far cover the decade leading up to 2019, portraying the population of Chinese students in Canada under what we might call “normal” circumstances. However, it is also important to assess the potential impacts of bilateral tensions and the pandemic on future trends. The subsequent analysis regards 2020 and 2021 data to situate Chinese international study in Canada in the troubled current circumstances.

### ***Impact of the COVID-19 Pandemic***

Overall, the population of international students in Canada at all levels of study declined by 17% in 2020, reaching 530,540. Among them, 22%, or 116,935, were Chinese. While still a significant share, it is a considerable drop from 26% in 2019, and illustrates a sharper decline in Chinese students compared to those from other countries.<sup>92</sup> Several factors could explain this discrepancy. First, that the pandemic started in China means they were isolated earlier than the rest of the world. Therefore, travel from China had already been complicated by the beginning of the winter semester in January. Although classes were transferred online a few weeks after, being in China on a disparate time zone amid a strict lockdown made it challenging for these students to keep up with remote studies at Canadian universities. This may have discouraged prospective students from enrolling in the following academic year, resulting in Canada only receiving 12,077 study permit applications from mainland China in 2020, compared to 34,583 applications in 2019.<sup>93</sup> Canada’s approval rate for Chinese study permits also fell by 3.6% over the same period, which, together with a decreased application rate, caused the total number of Chinese students approved to study in Canada to fall by 66.6% between 2019 and 2020. Moreover, there are many existing permit holders who have not yet come to Canada due to travel restrictions, changes in universities’ course offerings, and overall uncertainty.

### ***Impact of Political Tensions***

Political tensions also have the potential to impact future trends. Amid bilateral tensions between China and Australia, Amy Mo, a Beijing education agent, suggested that if relations deteriorated further or did not improve, China may

leverage its demand for Australian education to further sanction the Australian people and government. Likewise, as bilateral tensions grew between China and Canada after Michael Kovrig and Michael Spavor were initially detained in China, some questioned whether Canadian universities were vulnerable to sanctions.

With two-thirds of the international student population at the University of Toronto made up of Chinese students, and over half at Simon Fraser University, a withdrawal of Chinese students from Canada would have significant impacts on the student body and revenue of many Canadian educational institutions. At the height of fears regarding a potential Chinese student withdrawal in 2019, Moody's Investor Services released a report suggesting that many Canadian universities could face a credit crunch, where the University of Columbia, McGill, and the University of Toronto would be the hardest hit.<sup>94</sup> However, talk of such a withdrawal quickly subsided.

## **UNIVERSITIES' RELIANCE ON FUNDING FROM CHINESE STUDENTS**

International students pay up to three times as much as domestic students for tuition, not even considering other costs such as housing and discretionary spending. This investment is spread across the country, but concentrated in major cities, with Toronto being the largest recipient.

In this regard, the revenue received from international students, including Chinese, supports Canadian universities' ability to deliver quality education services to the Canadian public, which not only enhances innovation but supplies Canadians with the skills required to work in our increasingly

advanced economy.

The loss of PRC (People's Republic of China) students would substantially worsen the financial

.....> ***The loss of PRC students would substantially worsen the financial situation of Canadian higher educational institutions***

situation of Canadian higher educational institutions, in turn generating a need for higher tuition for Canadian students, or additional financial support from governments, or both. Likewise, by helping fill vacant seats in Canadian universities, international students are helping to prevent potential cutbacks and job losses.

On top of the economic and financial advantages, the ability to attract international students and researchers carries important implications for Canada on scientific, technological, and political levels, which in turn influences Canada's economy. Universities are more than a place for teaching and learning—they are hubs of research and innovation. Many countries around

the world now consider innovation a key driver for economic growth and global competitiveness. International students and researchers enrich the campus community and support Canada's innovative potential. As one of the leading sources of international students in Canada, China plays an important role in the globalization efforts of Canadian universities, which benefits Canadian society and the economy. This impact, however, is not directly measurable in dollar terms.

## THE CASE OF UBC

Recognized for hosting a large population of Chinese students, UBC exemplifies how tuition fees from foreign students impact universities' revenues, the uses to which these revenues are put, and the reliance on them as a substitute for government funding. UBC's approach and governance, in terms of recruitment, admission and financial terms pertaining to Chinese international students in particular, shows how most Canadian universities are pursuing increasingly aggressive profit-seeking strategies and ever higher international student fees. Because international enrollments have proven resilient to increases in tuition fees, it is unsurprising that universities, especially those attractive for Chinese students, are trying to maximize their revenues by increasing international tuition fees.

UBC's 2019/2020 budget revealed that international tuition accounts for approximately 19% (\$413 million) of its total operating revenue (\$2.2 billion).<sup>95</sup> Out of this, the 6,281 students with Chinese citizenship enrolled at UBC collectively paid \$184 million in tuition fees. Notably, while only accounting for

▶ *while only accounting for 34% of international students, Chinese students contributed 45% of international tuition*

34% of international students, Chinese students contributed 45% of international tuition. This reflects their greater concentration in more

costly academic disciplines and proportionally lower enrollment rate in less costly arts programs relative to international students of other nationalities.

The construction of Vantage College, an elite residency reserved for wealthy students that mainly targets Chinese and Indian students, is an example of a strategy aimed at addressing increasing financial pressure caused by expense growth exceeding government funding growth. Specifically, Vantage College caters to foreigners who do not meet the university's regular English-language requirements, but who are otherwise prospective full-fee-paying international students. This is especially attractive for Chinese students given that they commonly face significant language barriers studying abroad. For

over \$56,000, the residency program includes tuition, accommodation, and healthcare. While this is certainly appealing for wealthy international students, the 1000-unit exclusive residence, which cost UBC over \$127 million to construct, sparked controversy as local students face accommodation shortages, with 5,200 people on residency wait lists and a 20% housing fee increase over the period of Vantage's construction. However, as previously noted, it is this revenue that enables university service delivery to all students, including domestic students. Full-fee-paying foreign students now represent more than a fifth of all students at Canadian universities.

## **GOVERNMENT RESPONSE TO INTERNATIONAL STUDY**

Ottawa has recognized the “goldmine”<sup>96</sup> that international students represent and the particular opportunities for Chinese students to benefit Canada's economy. Immigration Minister Ahmed Hussen stated that “[Canada] will do whatever [it] can to increase the number of Chinese international students and preserve Canada's reputation as a multicultural and tolerant nation,”<sup>97</sup> a major selling point when marketing the nation to prospective students in China and overseas. Moreover, with well-established Chinese communities and active Chinese student associations on campuses, Canada remains a top destination for post-secondary education from a Chinese viewpoint. While retaining students in Canada post-graduation can be challenging, it may be a partial key to mitigating the economic strain of Canada's aging population. International students who have completed higher education here are ideal contributors to the country's labour force given that they are already here, trained in a national language, familiar with national standards in their field, and have many potentially productive (tax paying) years ahead, most likely in skill-intensive employment given their education.

As part of a strategy to retain and integrate more foreign students into the workforce following graduation, the Canadian government issued 24,000 new post-graduate work permits this year, 160% more than in the previous year. Furthermore, it opened a new pathway to permanent residency, aimed at welcoming 90,000 essential temporary workers and international graduates by November 2021.<sup>98</sup> To promote Canada's official languages, three additional streams with no intake caps were also launched to attract French-speaking or bilingual candidates.

## 1.5.2 TOURISM

While generating less revenue than education, the tourism industry also plays an important role in the economic and cultural dimensions of the China-Canada relationship. In 2018, nearly 700,000 Chinese visitors came to Canada, spending an average of \$2,600 per visitor, amounting to \$2 billion in total.<sup>99</sup> Over the same year, the Canadian Government estimates that foreign travellers collectively spent \$22 billion and supported some 700,000 jobs.<sup>100</sup> Chinese tourist expenditure accounted for 9.1% of the total, suggesting that about 63,700 jobs were supported by Chinese tourists in 2018. Beyond this, tourism is another factor that helps facilitate immigration, cultural exchange, and merchandise trade as Canadians and Chinese become more familiar with products endogenous to the other's culture or region.

Chinese tourism in Canada has undergone a rapid transformation in the past 10 years, with the number and spending of Chinese tourists in Canada increasing dramatically. In 2008, a mere 159,000 Chinese visitors entered Canada, spending about \$300 million, an average of \$1,889 per visitor.<sup>101</sup>

However, with recent tensions in the Canada-China political relationship and pandemic disruptions, the future of Chinese tourism to Canada has seemed uncertain. The number of Chinese tourists to Canada grew from 682,000 in 2017 to 737,000 in 2018, but fell in 2019 to 571,000.<sup>102</sup> It also fell to just over 100,000 in 2020, but this is largely due to the global pandemic.<sup>103</sup> However, even before the pandemic, comments made by Chinese officials alluded to the contingency of Chinese tourism on positive relations, which is not a given in the current bilateral political climate.<sup>104</sup>

### SECTORAL AND REGIONAL DIFFERENCES

Of the \$2 billion spent by Chinese travelers in Canada, the greatest portion, \$753.6 million, was spent in the Vancouver, Coast and Mountains region.<sup>105</sup> Not only is Western Canada more geographically proximal to China, but the Mountain region is in itself a major tourist destination. Comparatively, travellers from the United Kingdom and Australia spent only \$289.3 million and \$265.1 million in the Vancouver, Coast and Mountains region, respectively.

The Greater Toronto area attracted the second highest Chinese tourist expenditure, at \$381.1 million, representing about 12% of total tourist expenditure in the region. The Prairie provinces, including Alberta's Rocky Mountain region, also attracted a significant \$223 million in Chinese tourist expenditure over 2019.

22.6% of Chinese visitor expenditure was on accommodation, just two-thirds of the overseas visitor average of 33.8%. This likely reflects higher spending on other goods and services rather than lower spending on accommodation. Chinese visitors also had a greater total average expenditure while in Canada than those from other countries.<sup>106</sup> Canada is considered a relatively expensive destination for Chinese travelers and tends to attract those with high income or household wealth. Given the great distance between Canada and China, Chinese travelers with stricter budget constraints may be more likely to prefer ASEAN or other nearby countries.

## **LOCAL IMPACTS OF TOURISM ON CANADIANS - CASE STUDY**

While the total numbers—\$2 billion spent annually by Chinese tourists and 63,700 jobs supported—are impressive, they fail to convey the tangible benefits of tourism on individuals, communities, and small- and medium-sized enterprises.

In 2019, tourists, domestic and international, made 34.7 million visits to Alberta and spent \$8.2 billion. Of these, Chinese tourists numbered 118,000 and spent \$188 million, an average of \$1,593 per person. The higher spending of Chinese tourists is apparent, contributing 2.3% of total expenditures while making up only 0.34% of all tourists.<sup>107</sup>

The Alberta government has assessed the economic impacts of tourism using a value-added approach, including supported full-time equivalent employment, contribution to GDP, and tax revenue.<sup>108</sup> Assuming that China's share of impact is equivalent to its share of tourist spending, we estimate that Chinese tourism has the following impacts in Alberta:

- 1,564 jobs, full-time equivalent employment
- \$150 million contribution to Alberta's GDP, including \$89.7 million direct, \$34.5 million indirect, \$25.3 million induced
- \$25.3 million in tax revenue, broken down into:
  - \* \$12.2 million in federal revenues
  - \* \$8.5 million in provincial revenues
  - \* \$3.9 million in municipal revenues

To localize further, we replicate these estimates for the city of Banff. Banff is one of the most popular tourist destinations in Canada, especially for Chinese tourists. In particular, Chinese millennials seem attracted to the national park's scenic mountains, photo opportunities, and numerous outdoor activities.<sup>109</sup>

Lacking official data, we use an estimate of 50,000 Chinese visitors to Banff in 2016 from Dragon Tail International.<sup>110</sup> In 2016, 135,000 Chinese visitors spent \$136 million in Alberta. Assuming proportionality, we can estimate the 50,000 visitors to Banff spent about \$50 million dollars, or about \$1,000 per visitor. Note, their true spending figure may be higher due to the average being depressed by local (Canadian) visitors.

Using the same method for Banff as for Alberta, we estimate that Chinese visitors contributed the following to Banff in 2016:

- 415 full-time equivalent employment jobs
- \$39.6 million in GDP (\$23.8 million direct, \$9.1 million indirect, \$6.7 million induced)
- \$6.7 million in tax revenue
  - \* \$3.2 million in federal revenues
  - \* \$2.3 million in provincial revenues
  - \* \$1.0 million in municipal revenues

While Alberta is not typically the foremost destination for Chinese tourists in Canada, the government's economic impact analysis is useful for understanding the impacts of tourism across Canada. First, it illustrates that when using the value-added approach to GDP, which Statistics Canada often does, tourist spending will typically exceed its GDP contribution. It also highlights that direct GDP impacts from tourist spending are larger relative to their spin-off effects when compared to other industries. For example, in the exporting canola industry, indirect and induced impacts far outweighed the direct impact. This may reflect the fact that tourism supply-chains are less complex than supply-chains that support canola export, which is obvious considering tourism is largely a service industry and canola exporting requires major industrial organization. Likewise, the relatively lower induced impact partially reflects lower wages in tourist sector jobs than those in the canola industry.

These jobs are primarily in accommodation, restaurants, entertainment, clothing, gifts, and transportation. However, it would be an oversight to only consider these activities that support tourism directly. The indirect and induced impacts remind us that the tourism industry is reliant on other industries not typically considered tourism related. In a recently published report assessing the potential impacts of the pandemic on the tourism industry, Statistics Canada indicated that a GDP loss of \$16.3 billion in the tourism industry would correspond to a \$9.6 billion dollar loss across other industries.<sup>111</sup>

Furthermore, these estimates hint at community effects. For a town as small as Banff, or even the whole Banff National Park (which includes Canmore), 415 jobs is significant. Likewise, the \$1.0 million in municipal revenue represents

nearly 3% of Banff’s total revenue in 2016, contributing significantly to the city’s ability to provide community services like roads, transit, recreation, sanitation, and emergency services.

## DISCUSSION

China poses a great opportunity for Canada’s tourism sector. With a population greater than that of North America and Europe combined, as well as a growing middle class, the demand of Chinese tourists is immense and rising. These tourists create significant impacts on the communities they visit, supporting jobs, contributing to government revenues, and increasing GDP. Without China, tourism-dependent communities like Banff or Canmore would be poorer, have fewer jobs, and have fewer resources for essential public services. Therefore, it cannot be taken for granted that this demand will target Canada in the future, given disruptions in bilateral relations as well as the global pandemic.

Both logistical and political factors are important for ensuring the future success of the Canadian tourism industry’s appeal to Chinese travelers. One key logistic dimension is accessibility. Both geographic and language barriers can be obstacles for potential Chinese tourists. To accommodate both Chinese people living in, visiting, and connecting flights in Vancouver, for example, the Vancouver International Airport has installed Chinese signage alongside most of the existing English and French signage seen across Canada.

Bilateral tensions may also influence tourist flows. After news broke regarding Huawei CFO MENG Wanzhou’s arrest in Canada and the ensuing diplomatic fallout, “[t]ourist arrivals from China to Canada by air declined 9.6% in 2019 to 571,000.”<sup>12</sup> While this decline may not be fully attributable to these tensions, it is likely that they were at the very least a factor.<sup>13</sup> Moving forward, tourism will continue to be a sector to watch as politicians grapple with conflicting business and political interests.

## 1.6 TRADE: CONCLUSION

.....► *the total economic impact of exports to China was 2.064 times its direct trade value in 2019, at \$76.9 billion*

The value of China-Canada goods and services exports was \$38.6 billion and \$34.9 billion in 2019 and

2020, respectively. However, as we have explored, the true impact of this trade is far greater. We found that the total economic impact of exports to China was 2.064 times its direct trade value in 2019, at \$76.9 billion.

Furthermore, we estimated that 365,915 jobs were embodied in Canadian exports to China over the same period.

In the case of China and Canada, trade and immigration are inextricably linked. As we alluded, trade in merchandise and services facilitates social and

.....▶ ***365,915 jobs were embodied in Canadian exports to China over the same period***

cultural exchange that provides prospective immigrants a launching-off point. For example,

increasing numbers of international students are obtaining permanent residence and seeking immigration through express entry programs facilitated by universities and colleges.<sup>114</sup>

While the economic benefits of immigration are often given prominence by Canadian politicians, its real economic impact is poorly understood and much less reliably quantified than the effects of trade. However, to conceive the whole picture of China's economic impact on Canada, it is essential to include immigration. The following section will explore how immigration from China affects Canadian GDP and trade.

# Immigration

## OVERVIEW

Today, Chinese immigrants generate far reaching impacts across Canada's economic and social landscape. They are entrepreneurs, students, professionals, government employees, caregivers, community leaders, and much more. Their demand fuels businesses, and their businesses supply Canada. Moreover, they contribute to Canadian literature, politics, sports, entertainment, charity, education, spirituality, and, consequently, Canada's cultural ethos.<sup>15</sup>

Chinese-owned small businesses are now ubiquitous across Canada's major cities, providing employment and service diversity. The Chinese Professionals Association of Canada reports membership exceeding 30,000 in 2019, most of whom herald from the Greater Toronto Area alone. Likewise, a jobs website suggests that Chinese immigrants have a high presence in many skill-intensive jobs, including senior Java assistant, business development specialist, administrative assistant, migration assistant, and online teacher. The array of occupations and roles of Chinese immigrants in Canada attests to their now high level of integration and dispersion in Canada.

In this section, we discuss the qualitative impacts of first and second or higher generation Chinese immigrants in Canada on a demographic and regional basis. Then, we estimate the impact of first generation immigrants on Canadian GDP. Estimated impacts on the export of Canadian goods and services to China are also included in the Appendix.

## 2.1 NOTABLE DEMOGRAPHIC AND REGIONAL CHARACTERISTICS OF CHINESE IMMIGRATION

All time immigration from China, including both first and subsequent generations from mainland China and Hong Kong, amounted to nearly 1.8 million in 2016 according to census data. Comparatively, Indian immigration amounted to 1.4 million in 2016, despite Canada taking in more Indian permanent residents over the past decade. This reflects the long history of Chinese immigration to Canada. While life in Canada has vastly improved for many minority groups, inequality persists; for example, the poverty level of Chinese Canadians remains over double (20%) that of European Canadians (9.6%) according to the 2021 Labour Force Survey.<sup>116</sup>

Although Canada remains troubled by xenophobia, great strides have been made towards social and economic equity, allowing Chinese immigrants to meaningfully contribute to Canadian culture, society, and the economy. By and large, Canadian communities of Chinese heritage have retained and integrated cultural identities that enrich Canada as a whole. These communities also facilitate immense cultural and economic exchange with mainland China, Hong Kong, and Taiwan, serving as a strong transpacific linkage for Canada.

From 2010 to 2019, 287,089 new permanent residents were admitted to Canada from China. As of the census, 49% of Chinese Canadians lived in Ontario, British Columbia was home to 31%, while Alberta was third, with 9%.

According to the 2016 Census, 849,340 Chinese Canadians reside in Ontario. British Columbia, in second, is home to 540,155. However, at 11.84% of its population, British Columbia contains the highest per-capita number of Canadians of Chinese origin. This is due both to its relative geographical

.....► *the arrival of first generation immigrants to these cities added \$1.2 and \$1.1 billion to GDP, respectively, in 2017.*

proximity to China and its early role in importing Chinese labourers to construct the Canadian Pacific Railway in the 1900s.

Nova Scotia, with a total of 8,640 Chinese Canadians, hosts the largest Chinese community among the four Atlantic provinces. Chinese immigrants in Nova Scotia between the ages of 25 and 54 years old comprise 53% of the Chinese-Canadian population. Women also make up the bulk of the Chinese-Canadian population in Nova Scotia.

Toronto and the surrounding area, as the largest metro in Canada, is home to 631,050 Chinese Canadians and attracts the greatest number of new immigrants of any city. Although the total number of Chinese Canadians in metro Vancouver is less than in Toronto, at 474,655, their ratio to the total population is nearly 20%. On the coast furthest from China, metro Halifax hosts a mere 7,000 Chinese Canadians, accounting for only 1.7% of its total population. While Chinese immigrants have become significantly more dispersed and integrated across Canada in the 21st century, they remain concentrated in Vancouver and Toronto. In fact, from 2006 to 2011 the share of Chinese Canadians living in these two cities increased from 70%<sup>117</sup> to 74%.<sup>118</sup> Concentration may be as high as 77% now.

Consequently, the economic impact of new Chinese immigration is also concentrated in large cities, particularly Vancouver and Toronto. Based on our own analysis, the arrival of first generation immigrants to these cities added \$1.2 and \$1.1 billion to GDP, respectively, in 2017.

Regarding outcomes within Canada, second generation Chinese immigrants have a university completion rate of 61% among men, compared to an average of 33% for second generation men of all nationalities. Among women, second generation Chinese Canadians had the highest university completion rate of any nationality, at 72.6%. Accordingly, 45% to 50% of second generation Chinese Canadians work in high-skill occupations, compared with only 20% and 31% of third (or higher) generation European-Canadian men and women, respectively.<sup>119</sup> This is also higher than second generation immigrants from other countries by 12% for women and 18% for men.

In aggregate, second generation Chinese Canadians earn higher incomes than third-plus-generation European Canadians. However, it appears that Chinese Canadians are also overrepresented in low income deciles, suggesting that income inequality among Chinese Canadians is more drastic than for other groups.

## **IMPACTS ON AND OPPORTUNITIES FOR CANADA**

Generally speaking, immigration plays an important role in mitigating the challenges posed by Canada's aging population, a problem shared by many developed countries. Canada's birth rate has been below replacement levels since 1971,<sup>120</sup> meaning that more people are moving into retirement than are entering the workforce. New immigrants, including those from China, are disproportionately made up of working age and young people and thus help keep the labour force participation rate high. This helps maintain a healthier ratio of pension payers to payees and increases tax revenue that supports those leaving the labour force. Immigration alone is expected to account for all future labour force growth. Affluent immigrants also bring with them personal wealth,

which transfers money directly from China to Canada that then contributes to domestic demand. This is particularly the case with people who move to Canada for retirement since retirees tend to spend most of their savings.

These are a few reasons why the Canadian government continues to set increasingly aggressive immigration targets. Accordingly, Canada's immigration program prioritizes high-skilled migrants with high potential economic benefit. The aforementioned Express Entry program, for example, has primarily brought in new software engineers and designers, information systems analysts, computer programmers, financial auditors and accountants, and public relations professionals.<sup>121</sup>

China in particular presents Canada a great opportunity to grow this type of mutually advantageous immigration. As mentioned, Chinese immigrants tend to achieve relatively high economic outcomes contributing to broad positive economic impacts. Furthermore, a recent online survey conducted by Hamazaki Wong, RIWI, and Vivintel in mainland China and Hong Kong suggests that more than 60 million Chinese adults are interested in immigrating to Canada over the next two years.<sup>122</sup> Of course, Canada admits only as many immigrants as its targets allow; however, the survey results illustrate the vast potential of China as a source of immigration.

Notably, the survey data highlights that those who indicated a willingness to immigrate to Canada tended to be affluent and educated both generally and in the English language. The survey results indicate that: "1 in 2 Chinese adults considering a move to Canada have completed a Master's degree or higher, and nearly 3 in 4 have a Bachelor's degree or higher."

Furthermore, "[t]o 'retire' (36%), 'start a business' (28%) and 'pursue an education' (16%) are the top reasons to move to Canada as identified by mainland Chinese. For Hong Kong Chinese, to 'pursue an education' (22%) is their top reason to move, followed by 'retire' (21%) and 'start a new career' (19%). Lastly, adults looking to move from mainland China identify 'best place to start a new life' (17%), 'better climate' (17%), and 'political stability' (16%) as their primary reasons for wanting to move to Canada. Whereas Hong Kong Chinese identify 'public services' (28%), 'safer there' (19%), and 'political stability' (16%) as their primary reasons."<sup>123</sup>

In late October, the Canadian government increased its immigration targets as part of an overall strategy to combat the economic fallout of the pandemic. It plans to bring in 401,000 new permanent residents in 2021, 411,000 in 2022, and 421,000 in 2023.

India, China, and the Philippines will likely remain the top sources of new immigrants to Canada. If the new targets are met and the distribution of immigrants is similar to pre-pandemic trends, Canada can expect to welcome over 35,000 Chinese immigrants each year.<sup>124</sup> However, based on material reviewed herein, it may be worth considering strategies to incorporate greater numbers of Chinese immigrants.

## **2.2 GDP IMPACTS: QUANTITATIVE ANALYSIS**

Chinese immigration plays a complex role in Canada's economy, and its influence on GDP is multifaceted. In short, immigration contributes directly to GDP through consumption and investment spending, and indirectly by facilitating ease of communication and decreasing bilateral transaction costs through cultural bridging.

Chinese immigration also helps to grow Chinese tourism and international study by building Canada's reputation in China. The increased accessibility of China-related goods in Canada resulting from the growth of Chinese immigration further reduces adaptation costs for new tourists and international students from China. Therefore, Chinese immigrants also have positive impacts on Canadian exports of services to China.

Since access to census data from Statistics Canada or other data sources about the direct monetary impacts of migration related activities is limited, we have designed our own econometric analyses using regressions. Note that our analyses only assess the impact of first generation Chinese immigrants on the Canadian economy. Second generation or higher immigrants are excluded, because since they are native-born Canadians, neither Canadian nor Chinese policy designed to affect the flow of people between countries is likely to affect their impact in Canada. Lastly, due to their small size, the Territories are excluded in this section. For the full methodology and further results relating to exports see Appendix A.

### **2.2.1 RESULTS**

Figure 2.2.1 presents the GDP contribution of Chinese immigrants across each province. Chinese immigrants in British Columbia and Alberta have proportionally larger GDP contributions, reflecting the fact that these two provinces are among the top destinations of Chinese immigrants. Notably, new Chinese immigration to Ontario generates a relatively small percent of Ontario's GDP despite their large number. This is due mainly to Ontario's large overall population and thus lower per-capita effect of new immigrants.

In aggregate, the GDP contribution of Chinese immigrants increased from 2010 to 2019, decreasing only in 2020 amid pandemic impacts.

### ESTIMATED GDP CONTRIBUTION BY PROVINCE

GDP contributions of Chinese immigrants in Alberta increased overall from 2010 through 2020, despite dips from 2014 to 2016 and in 2020. Despite these decreases, GDP contributions in 2016 were 0.318% and 0.295% in 2020; both figures are still larger than 0.204% in 2010.

In British Columbia, the GDP contribution of Chinese immigrants grew from 2010 to 2019 and decreased slightly in 2020. The peak contribution reached 0.747% in 2019. The rest of Western Canada also follows this overall pattern of growth. From 2010 to 2020, the GDP contributions of Chinese immigrants in Manitoba increased, despite a minor decrease in 2020. For Manitoba, the peak value reached 0.188% in 2019. In Saskatchewan, GDP contributions of Chinese immigrants increased despite a minor decrease from 2014 to 2016 and from 2018 to 2020. The peak value reached 0.136% in 2018.

Ontario and Quebec present similar situations as the provinces above. The GDP contributions of Chinese immigrants in Ontario increased, with the exception of

FIGURE 2.2.1

### NEW CHINESE IMMIGRATION ANNUAL PERCENT CONTRIBUTION TO PROVINCIAL GDP

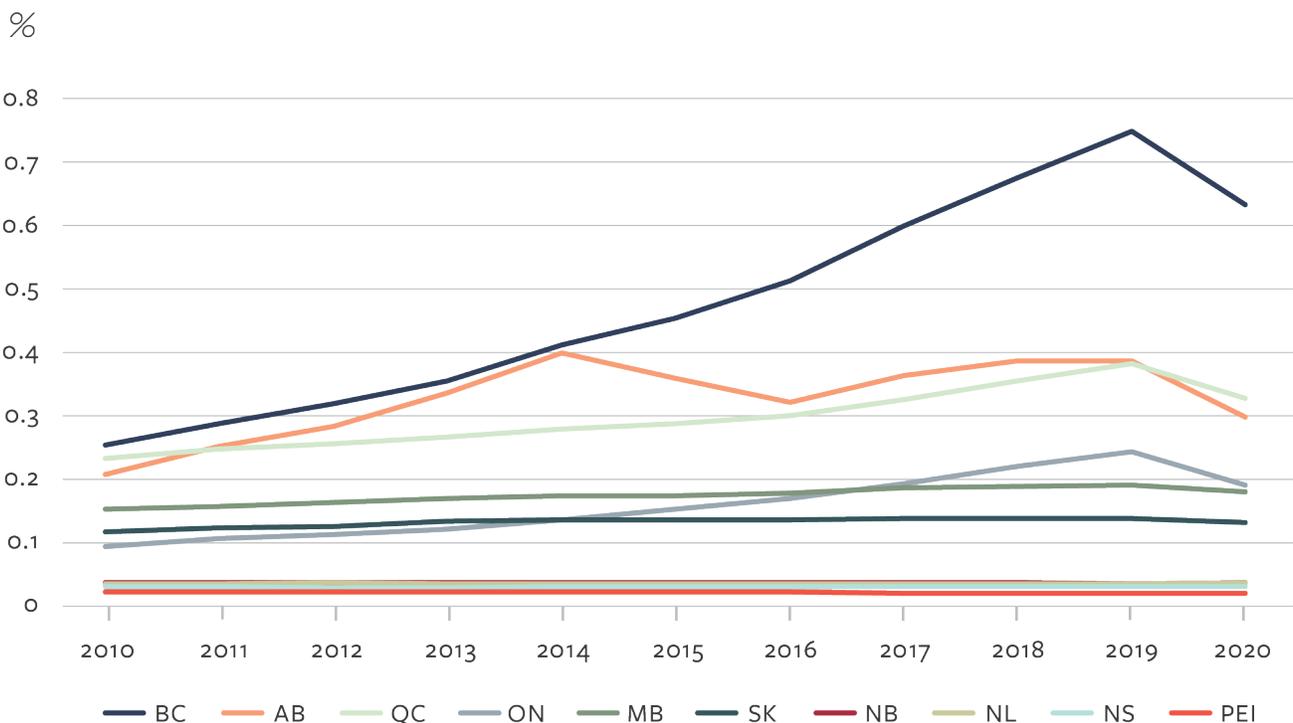


FIGURE 2.2.2

### ESTIMATED GDP CONTRIBUTION BY PROVINCE

AVERAGE ANNUAL PERCENT CONTRIBUTION OF NEW CHINESE IMMIGRATION TO PROVINCIAL GDP

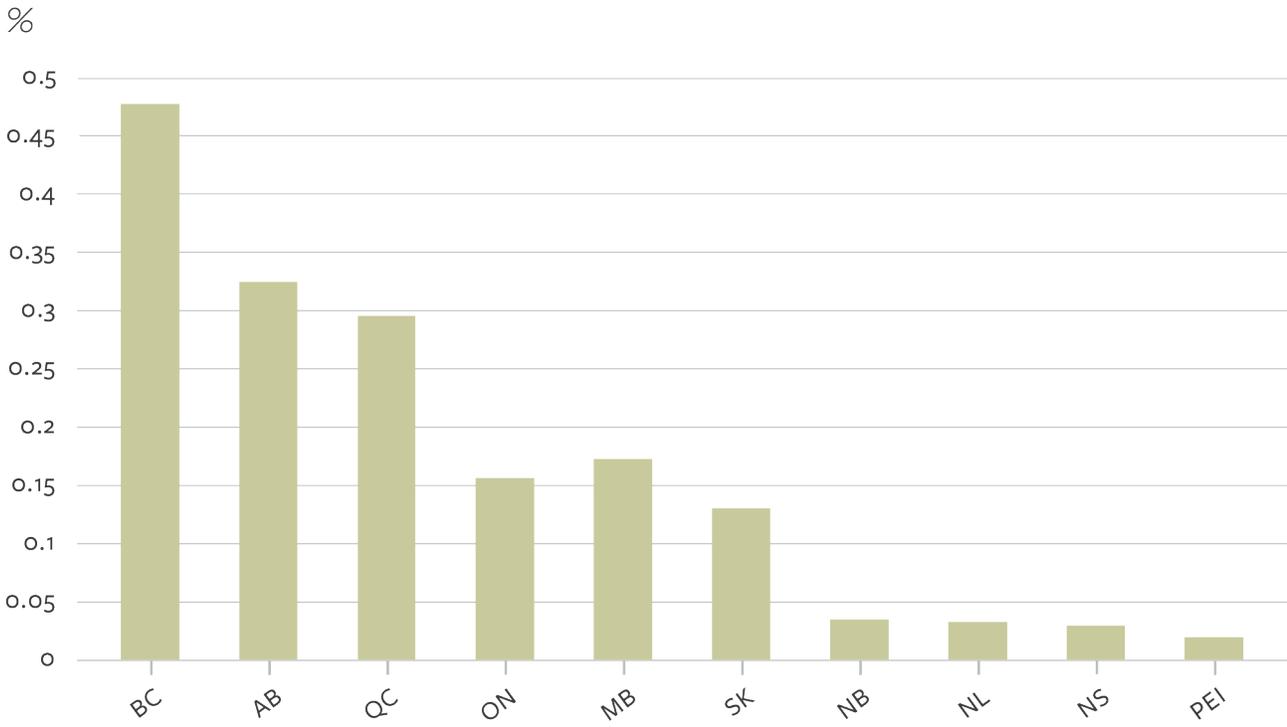
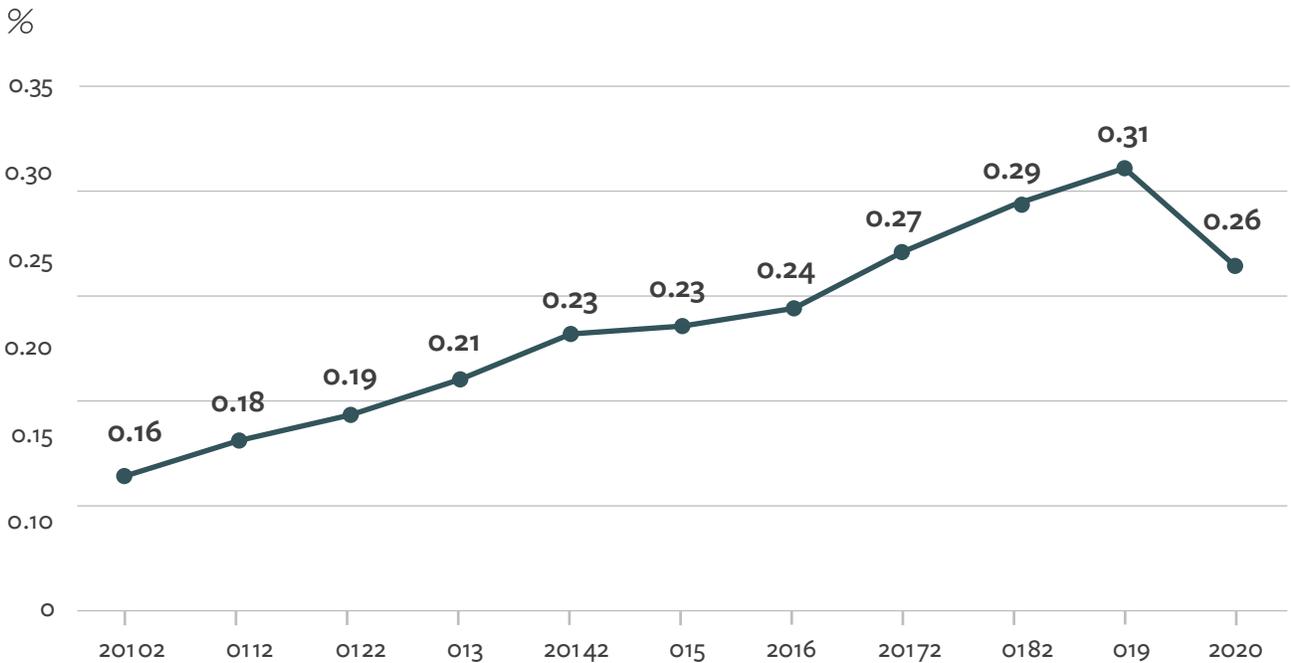


FIGURE 2.2.3

### ESTIMATED GDP CONTRIBUTION

NATIONAL AVERAGE



a minor decrease in 2020, reaching its peak value of 0.24% in 2019. In Quebec, the contribution of Chinese immigrants also increased despite a similar minor decrease in 2020, reaching its peak value of 0.38% in 2019.

Finally, a notable exception to the pattern of growth in the GDP contributions by Chinese immigrants are the Atlantic provinces. The contributions of Chinese immigrants in Atlantic Canada remained relatively stable between 2010 and 2020. Newfoundland and Labrador and New Brunswick saw greater impacts from Chinese immigration at an average GDP contribution of 0.032% and 0.033%, respectively. Chinese immigration in Nova Scotia and Prince Edward Island had lower share contributions, at 0.028% and 0.018%, respectively. However, in dollar terms, Nova Scotia realized the greatest impact, at over \$10 million in 2020. Halifax, where most Chinese immigrants in Nova Scotia are concentrated, accounted for over 90% of their impact in the province.

Altogether, Chinese immigrants in British Columbia have the largest average GDP contribution of 0.47%, followed by 0.32% in Alberta and 0.29% in Quebec. The GDP contribution of Chinese immigrants in the four Atlantic provinces is thus, by far, the lowest across the country. This is consistent with the

.....➔ ***The cumulative contribution of Chinese immigration in dollar terms from 2010 up to the beginning of 2021 amounts to \$48.95 billion***

difference in total number of Chinese immigrants and the ratio of Chinese immigrants to total population across each province. On a national level, the average GDP

contribution of Chinese immigrants in Canada increased from 2010 to 2019 and decreased slightly in 2020. This national average is consistent with the overall trend of increasing immigration into Canada from China. The peak national value of average GDP contribution reached 0.31% in 2019.

### **IN DOLLAR VALUES, CONCLUSION**

Finally, we use these coefficients to estimate the GDP impact of Chinese immigration on a dollar value basis. The cumulative contribution of Chinese immigration in dollar terms from 2010 up to the beginning of 2021 amounts to \$48.95 billion. This has been calculated using our estimated coefficients and data from Statistics Canada's expenditure-based seasonally adjusted GDP at current prices.<sup>125</sup>

From 2016 to 2020, Chinese immigration contributed \$4.6 billion, \$5.4 billion, \$6.1 billion, \$6.7 billion, and \$5.2 billion to the Canadian economy, respectively. This is up from just \$2.5 billion in 2010.

Monetarily, B.C. saw the largest GDP contribution in recent years at \$1.9 billion in 2019 and \$1.5 billion in 2020. Ontario realized contributions of \$1.8 and \$1.3 billion over the same periods, respectively. Quebec and Alberta garnered \$1.2 and \$0.9 billion in 2020, and \$1.4 and \$1.3 billion in 2019, respectively.

Manitoba and Saskatchewan came in an order of magnitude lower, at about \$100 million each per year over 2019 and 2020. The four Atlantic provinces each realized GDP contributions another magnitude lower, ranging from \$10 to \$10.5 million in 2020.

In general, we would not report dollar value contributions for this method of econometric analysis; however, we have done so in this section to help illustrate the impact of immigration in step with the rest of the report.

Importantly, the impact of Chinese immigration on the Canadian economy is significant and increasing rapidly. Excluding the pandemic troubled 2020, the estimated GDP contribution growth of Chinese immigration exceeded overall GDP growth on the national level. From 2011 to 2020, the GDP contribution

.....► ***From 2011 to 2020, the GDP contribution of Chinese immigrants grew an average of 9.0% per year, the overall Canadian GDP growth rate averaged just 1.52% over the same period according to the World Bank***

of Chinese immigrants grew an average of 9.0% per year, the overall Canadian GDP growth rate averaged just 1.52% over the same period according to the World Bank.<sup>126</sup> Overall, Chinese immigration presents an avenue for Canada to help prepare itself for a prosperous future, both economically and culturally. Chinese immigrants are often highly skilled and economically productive.

# Canadian Investment in China

## OVERVIEW

So far we have quantified, to the extent possible, the impact of trade and immigration on the Canadian economy. Investment is another key element of bilateral economic relations, bringing benefits to both its destination and source country. This section assesses the impacts of Canadian investment in China.

According to Statistics Canada, the stock of Canadian investment in China reached \$69.7 billion CAD in 2020, which comprised \$13 billion in direct investment and \$56.7 billion in portfolio investment.<sup>127</sup> Comparatively, Canadian investment stock sits at \$240 billion in the United Kingdom and nearly \$4 trillion in the United States. While this may make Canadian investment in China seem small, the reality is that Canadian investment in China is growing more rapidly than in most other countries. The investment relationship between Canada and China is also much younger. So, compared to other countries in Asia, like India, where Canada has only invested about \$30 billion, China fares quite well.

Canadian majority-owned affiliates also own assets worth \$22.1 billion in China as of 2018,<sup>128</sup> and a Global Affairs Canada trade report from September 2020 found that Canadian multinational corporations invested and operating in China had revenue totalling \$12.7 billion in 2017.<sup>129</sup> While neither this revenue figure nor the flow of investment to China would be included in Canadian GDP, the revenue generated from these investments would be reflected in Canadian Gross National Product (GNP). Despite not directly appearing in GDP, revenues from these ventures are used to fund other operations both in Canada and around the world.

Given these quantification challenges, the focus of this section is to provide a qualitative depiction of China-related investment decisions and examine the role of Canada to China investment in the Canadian economy.

## **3.1 FINANCIAL SECTOR**

Financial institutions such as banks, insurance companies, and pension funds are leading investors in China. Their investment decisions shed light on what the China market has to offer Canadian investors.

Of the “Big Five” Canadian banks, BMO can be characterized as the leader with respect to China and is the only Canadian bank with an incorporated subsidiary in China. Its ties to the world’s second largest economy date back to 1818, and it is a preeminent institutional link between the two countries. Scotiabank also has a large presence in China, holding assets worth \$4.48 billion in China, down from \$5.18 billion in 2019.<sup>130</sup> As of 2020, one of Scotiabank’s more significant investments is its \$926 million stake in the Bank of Xi’an.<sup>131</sup>

Importantly, the involvement of Canadian financial institutions in China is not localized to a few firms but is widespread. The Royal Bank of Canada (RBC), Canadian Imperial Bank of Commerce (CIBC), National Bank of Canada (NBC) and Toronto-Dominion Canada Trust (TD) all also have branches or representative offices in mainland China. Moreover, all have China-based investment products available for Canadians to buy and reap returns from growth in China’s markets. Collectively, Canadian banks have billions of dollars invested in China which support foreign banking operations as well as domestic financial products.

### **3.1.1 INSURANCE COMPANIES: MANULIFE AND SUN LIFE**

Given the country’s rapidly aging population and reforms to China’s pension system,<sup>132</sup> insurance can be a lucrative business in China. Canadian insurance companies are a core part of Canada’s financial system and asset management industry. Many of these companies, including the industry’s biggest names, now operate in China both as insurance providers and asset managers.

Manulife has a significant presence and history in the Asia-Pacific, including a presence in China for over 115 years.<sup>133</sup> The centrepiece of Manulife’s operations in China is Manulife-Sinochem, the first joint-venture (JV) life insurance company by a foreign company in China.<sup>134</sup> Until recently, foreign firms were not permitted to have a majority stake in JVs in China; Manulife-Sinochem was a unique exception to this trend owing to its extensive history

and good relations in China. According to Manulife, Manulife-Sinochem is responsible for 2 million insurance policies, has a presence in 51 Chinese cities and 14 provinces, and a workforce of 13,000 employees in China.

Manulife does not report China-related earnings; however, in Q1 2021, the company reported \$570 million in core earnings from Asia.<sup>135</sup> Manulife's 2020 annual report also declares \$932 million in contract liabilities measured at fair value, which "include certain investment savings and pension products sold primarily in Hong Kong and mainland China."<sup>136</sup>

Manulife Teda, a JV incorporated in 2002 manages mutual funds that serve Chinese customers. Likewise, Power Corporation of Canada holds a combined stake of 27.8% in China AMC, one of China's largest fund operators.<sup>137</sup>

Sun Life Financial, another major Canadian insurance brand with a significant presence in China, bills itself as a "top 10 life insurance company in China among multinationals."<sup>138</sup> The company formed a JV in 1999 with China Everbright Group, called Sun Life Everbright.<sup>139</sup> The JV offers a wide range of individual and group life, health and wealth products in China's most populous regions. It also provides asset management services through Sun Life Everbright Insurance Asset Management. Sun Life has also had a presence in Hong Kong since 1892. Sun Life Hong Kong, a wholly owned subsidiary, offers a broad range of insurance, retirement and investment products and services to both individual and corporate clients. Sun Life does not report earnings for China, but it reported Q2 2021 underlying net income of \$152 million for Asia as a whole.<sup>140</sup>

### **3.1.2 PUBLIC PENSION FUNDS**

Canada has many public pension funds in operation, which sustain the financial security in retirement of millions of Canadians. The pension fund industry has in recent times held up to 15% of all assets in the Canadian financial sector. The "big eight" pension funds are: the Canada Pension Plan Investment Board (CPP Investments), Caisse de dépôt et placement du Québec (CDPQ), Ontario Teachers' Pension Plan (OTPP), Healthcare of Ontario Pension Plan (HOOPP), Ontario Municipal Employees Retirement System (OMERS), British Columbia Investment Management Corporation (BCI), Public Sector Pension Investment Board (PSP Investments), and Alberta Investment Management Corporation (AIMCO). These funds manage over \$1.75 trillion in net assets for their contributors and beneficiaries / members. While each pension fund has unique holdings, all are sustaining investments in the Asia Pacific region, including China.

This trend emerged as early as 2008 when CPP Investments established an office in Hong Kong to build regional investment expertise and partnerships

for Greater China and the broader Asia Pacific region. The fund continues to invest in China as part of its globally diversified strategy covering both key developed and emerging markets. OMERS holds over \$3 billion worth of Chinese RMB in its portfolio, a holding that has returned tens of millions of dollars in recent years. Even the smallest of the “big eight,” HOOPP, has committed to investing heavily in markets such as India and China to drive growth, and already has over \$5 billion invested in the Asian market, a number which is almost guaranteed to grow.

Another indicator of the growing importance of China to these funds is the number of offices being opened in the region. CPP Investments, OTPP and PSP Investments already have offices in Hong Kong, and several of the other funds explicitly mentioned in their most recent annual report that considerations are being made about opening offices in China. This highlights the importance the biggest Canadian pension funds place on their Chinese investments. For instance, when comparing the 2019 and 2021 CPP Investments annual reports, the share of the fund invested across Asia has increased by several percent to just under 24%, reflecting growth into emerging markets among which China is a key player. Other funds have undertaken similar moves. For example, OTPP increased the value of its holdings in Chinese Renminbi from just over \$1 billion in 2019 to over \$7 billion in 2021.<sup>141, 142</sup>

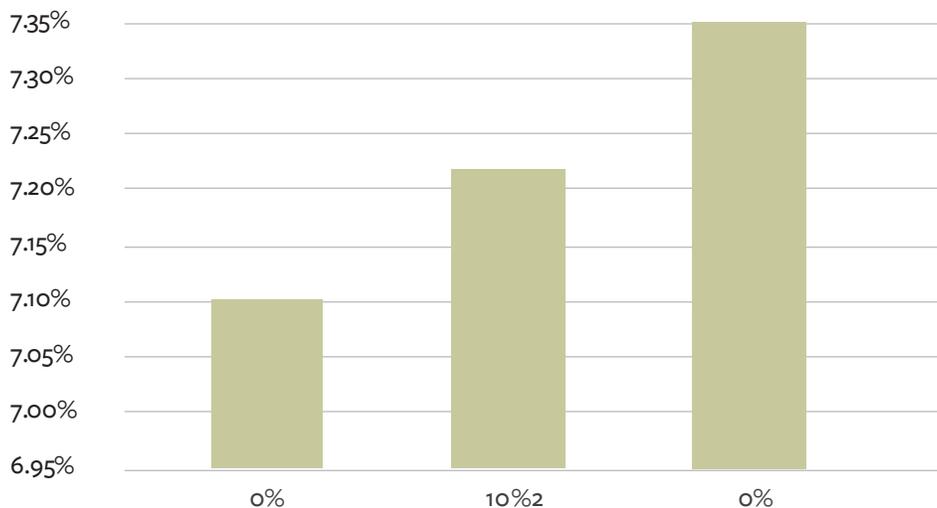
To meet expectations on returns, all pension funds need to consider their allocation to China relative to China’s share of global equity markets. According to Blackrock projections, Chinese Equities are expected to be the second best performing Equity on the market over the next five years, trailing only European Equities by a small margin.<sup>143</sup> An important caveat of these estimates is that Chinese Equities have a far larger uncertainty range, as high as 20%, and as low as -2%, over the next five years. In comparison, European Equities have a potential return ranging between 3.1% and 11%. While this makes investing in China potentially highly lucrative, it also heightens risk, which these funds must mitigate. However, to not invest in China is ultimately to miss out on potentially higher returns. Figure 3.1.3 below shows a hypothetical fund with various levels of exposure to Chinese A Shares, demonstrating the higher expected returns of China-exposed funds. A fund could also accrue a higher rate of return with targeted strategic investment in China. CPPIB, for example, has achieved an annualized rate of return of over 11% in the past 10 years, considerably higher than the most recent 10-year average Toronto Stock Exchange (TSX) return.

While these percent increases may seem small, their impact is inarguable when dealing with the sums that pension funds are managing, representing changes in the hundreds of millions or billions of dollars. This makes a significant difference for individual retirees who rely on these pension funds for retirement income.

FIGURE 3.1.3

### EXPECTED RATE OF RETURN OF FUND

0%, 10% AND 20% EXPOSURE TO CHINESE A-SHARES



Source: Blackrock Investment Institute<sup>144</sup>

Some of the larger pension funds in Canada have pursued global diversification strategies, to access gainful investments across a range of key markets outside Canada in order to pursue risk-adjusted growth over time in the service of their contributors and beneficiaries or members. Exposure to China as the world's second largest economy represents an important component of a diversified approach that sustains the longevity of the funds – some of which are built to serve financial needs

over multiple generations. Even small increases in returns can have substantial impact on the viability and longevity of pension funds, and funds that do not carefully consider Chinese investments risk missing out on valuable returns.

### FINANCIAL SERVICES: TAKEAWAY

Differences in financial reporting between companies and the complexity of revenue streams make the aggregate benefits of investing in China

difficult to quantify.

Nonetheless, interest and engagement illustrates that there are great opportunities for business growth and asset management in China. As previously

➤ *Exposure to China as the world's second largest economy represents an important component of a diversified approach that sustains the longevity of the funds*

noted, revenue of Canadian multinationals in China amounted to \$12.7 billion in 2017. While a significant sum, it is unknown what portion of this revenue is repatriated to Canada.

However, what is clear is that Canadian financial entities are broadly invested in China aiming both at service delivery in China and at using Chinese assets for

service delivery in Canada. So, not only do these companies benefit in China, but Canadians benefit through access to Chinese based asset funds. In 2020, assets under management (AUM) in China grew by 34%.<sup>145</sup> These returns, which exceed those in most other markets, are why fund managers look to tap into China for growth, which is reflected in the personal wealth of mutual fund stakeholders in Canada. Some retirees even borrow money against the value of their life insurance, highlighting an interplay between insurance and investment that links the success of insurance firms to personal financial agility and stability. Furthermore, the performance of many Canadian firms is in some way linked to China, which can impact the dividends or premiums that apply to their Canadian clients.<sup>146</sup>

### **3.2 RETAIL AND SERVICE INDUSTRY INVESTMENT**

Like financial institutions, some of Canada's most iconic companies from the services and retail sectors are also increasingly expanding into the Chinese market through investments, operations, and partnerships with Chinese companies.

Canada Goose, for example, is an iconic Canadian retail brand known for its premium apparel. The company is set to open six new stores in the 2021-2022 fiscal year, bringing its total presence in China to 18 stores. Canada Goose has only one other Asia Pacific store, in Tokyo. While COVID reduced tourism and thus Chinese spending on popular Canadian brands, those with stores in China have fared relatively well throughout this pandemic disruption.

However, Canada Goose's China expansion has not been without issues. After the detainment of Huawei CFO MENG Wanzhou in Canada in late 2018, Canada Goose's stock plunged on fears of brand and investment instability. The drop was catalyzed by reports that Chinese consumers were boycotting Canadian brands, and Canada Goose in particular, in response to Ms. MENG's detainment. Two and a half years later, Canada Goose is thriving in China with revenue now topping \$1 billion amid online sales and China demand.<sup>148</sup>

China is clearly seen as a growth market and one of the most significant opportunities for expansion. Canada Goose is not alone. Tim Hortons, for example, operates 4,800 stores worldwide and plans to open a staggering 2,750 new stores in China over the coming decade, with 200 stores already in China.<sup>149</sup> While Tim Hortons merged with Burger King and is thus only partially Canadian owned, the growth potential is clear. Likewise, with its headquarters in BC, Arc'teryx is another notable Canadian brand whose presence has grown in Greater China, opening a flagship store in Shanghai in September 2020 in

addition to multiple outlets in Hong Kong and Macau.<sup>150</sup> Although ownership has shifted from Canadian to European to Chinese (it became a subsidiary of Chinese sportswear company Anta in 2019), Arc'teryx still maintains and promotes its Canadian identity.

Notably, unlike Canadian financial institutions, such Canadian retailers are newcomers to China; Lululemon entered China in late 2016, Canada Goose in late 2018, and Tim Hortons in early 2019. With a rapidly growing middle class, China remains a promising market for Canadian firms with products and services that appeal to Chinese consumers.

### **3.3 MANUFACTURING AND SUPPLY-CHAINS**

So far, the examples provided have illustrated the opportunities present in China's consumer and asset markets for Canadian retail and investment firms. However, China's biggest impact on Canadian businesses and consumers may be realized through its role as a key manufacturing centre.

China has now been a global leader in manufacturing for several decades. Many Multinational Enterprises (MNEs), including those based in Canada, have established factories in China to leverage relatively low labour costs and an increasingly skilled workforce. Over decades, "Made in China" labels became ubiquitous as China was increasingly embedded in global supply-chains, as we mentioned in the "imports" section of this report.

Two Canadian companies bridging the gap between manufacturing and retailing in China are Lululemon and Herschel Supply. Both companies have long operated factories or sourced production in China to supply international markets, largely in North America, and only began seeking retail market share in China in the latter half of the 2010s.

From February 2020 to August 2021, Lululemon opened 43 new stores worldwide, 25 of which were in China. In August 2021, Lululemon had 534 stores across the world with 60 in mainland China and Hong Kong.<sup>151</sup> The company reports sourcing 18% of its fabrics from China and deriving 7% of its manufactured product from China.<sup>152</sup> Although with its expanding retail presence in China, most Lululemon products manufactured or sourced in China now stay in China. Likewise, Herschel, named after a small Saskatchewan town, operates 15 apparel factories in China that supply over 4,000 stores worldwide.<sup>153</sup> The company has been manufacturing most of its products in China since its inception in 2009 but has only sold its products in China since 2017.

Herschel's co-founder and Managing Director Lyndon Cormack characterized China's manufacturing environment favourably, saying that "[t]he factories and the amount of technologies in China they've been investing in to ensure they're cutting-edge and leading is far superior to what we've seen in other countries ... We want to make our products in the best place we can and it happens to be right here in China."

PriMED is another example of a prominent Canadian manufacturer whose factory operations are based in China. PriMED, the primary supplier of personal protective equipment (PPE) to Canadian healthcare, has operated its Chinese factories as Wholly Foreign Owned Enterprises (WFOE) since 2005.<sup>154</sup> It only began selling its products in China at the onset of the COVID-19 pandemic under the direction of the Chinese government. While its primary target market remains Canada, it is still more efficient to manufacture its products in China. Not only is this in PriMED's interest but it leads to lower prices on PPE for Canadian healthcare as a whole, which in turn improves healthcare for Canadians.

Despite these proven benefits, the pandemic raised concerns regarding supply-chain reliance on China. In particular, it quickly became evident that the surge in demand for PPE across the world could not be met by domestic supply alone. Facing global supply shortages, countries without domestic productive capacity were thus at risk of shipment delays as countries with robust PPE manufacturing were focusing on meeting their own needs. In light of this, PriMED moved to develop a Canadian PPE manufacturing plant in Ontario in mid 2020. The company purports that the new factory will be able to comprehensively supply acute care surgical masks in Canada and significantly increase production on short notice, if necessary.

PriMED's story and Cormack's comments hint at some of the factors that make China such a competitive manufacturing centre, which contributes to the challenge of diversification. In addition to attractive labour costs and workforce skills, China has the infrastructure and industry clustering necessary to support large manufacturing enterprises. Such enterprises often require many nearby input suppliers to avoid high shipping costs in production. In Canada, there are traditional manufacturing clusters around the automotive, aerospace, and food processing industries.<sup>155</sup> Comparatively, China has a far broader and more highly developed array of industrial clusters giving manufacturing centres in different regions particular advantages in access to raw materials, component parts, logistics, and specialized labour.<sup>156</sup> This is one reason why diversifying or repatriating supply-chains is a persistent challenge for those aiming to reduce their reliance on China. From another perspective, China's competitive advantage in many manufacturing areas illustrates the potential benefits investors and consumers reap from China-involved supply chains.

Another key takeaway from Lululemon and Herschel's China experience is the market opportunity for Canadian investors to make *and* sell products in China. Not only is China well suited for much manufacturing, its consumer base has grown exponentially. Canadian firms report that to be a competitive global supplier to major customers, they must have a presence in China, and many firms' first entry to China was done to follow their customers. Electric vehicle (EV) sales help to illustrate this fact.

China has become the largest national EV market, at 41% of global sales in 2020.<sup>157</sup> While Chinese companies dominate their domestic market, many

→ ***Canadian firms report that to be a competitive global supplier to major customers, they must have a presence in China***

foreign-owned enterprises rely on China for significant revenue streams. Tesla, for example, greatly reduced the cost of deploying its products in the Chinese market

by building its first manufacturing centre in China in 2019. The company has since ramped up production and sales in China, which now contributes 30% of Tesla's revenue. Likewise, 40% of Volkswagen cars are now sold in China.<sup>158</sup> Volkswagen Group China (which includes Audi) operates several factories in China through its joint venture (JV) partnerships with FAW Group and SAIC Motor. A quote from Canada's own Magna, one of the world's leading manufacturing and technology companies, encapsulates it best: "The sheer size and potential of the Chinese market is remaking the automotive world landscape."<sup>159</sup> This, of course, applies broadly outside of the auto industry as well.



# Chinese Investment in Canada

## OVERVIEW

The following section will discuss Chinese investment in Canada and quantify its impacts. Chinese investment has received heightened attention from regulators and the media in recent years as increased investment flows and global disruptions, including the pandemic, spurred policy makers to revisit Canada's investment regulation.

Notably, the political, and thus regulatory environment in Canada has become more difficult for Chinese companies in recent years. The Chinese government also implemented legislation to slow capital outflow in 2016 and 2017 after years of rapid FDI expansion from Chinese investors. Consequently, Chinese investment in Canada has decreased significantly after 2017.

Moreover, this climate has led some companies to feel caught in the crossfire, casualties of national politics. A few examples of proposed deals that have failed or face significant push-back include Shandong Gold's proposed purchase of a Nunavut gold mine, which was blocked on national security grounds, and the proposed Xinyi Glass manufacturing plant in Ontario, which faced a combination of resistance from local government and communities.

## SUMMARY DATA

The China-Canada Investment Tracker from the China Institute at University of Alberta (CIUA), the most comprehensive and conservative database of Chinese investment in Canada, reports that Chinese entities invested \$7.6 billion in

Canada in 2016, \$9.9 billion in 2017, \$2.3 billion in 2018, \$4.1 billion in 2019, and \$2.0 billion in 2020. Given that these numbers reflect only known deal values and that many deals close without publishing such information, the true flow of investment exceeds these estimates. Additionally, the whole economic impact of investment in Canada far exceeds what is captured in annual flow figures.

The effect of Chinese investment in Canada in a given year amounts to the direct, indirect, and induced impacts of new investment made that year plus the ongoing impact of business operations in Canada based on investments made in previous years.

TABLE 4.0.1

### NEW CHINESE INVESTMENT IN CANADA BY YEAR

Year	Investment Value <i>millions of dollars, CAD</i>
2020	1,980
2019	4,055
2018	2,331
2017	9,936
2016	7,593

Source: China-Canada Investment Tracker, China Institute (CIUA)

However, investment from China does not contribute directly to GDP. While investment is recorded in the expenditure model of GDP ( $Y=C+I+G+NX$ ),<sup>160</sup> FDI does not always correspond to the particular types of investment included in the model. Investment constitutes a GDP contribution when it contributes to domestic production, through, for example, the acquisition of productive capital (such as machinery or factory capacity). FDI, on the other hand, is not always used in ways that contribute to production and might simply represent equity transfer. Therefore, the flow of investment as recorded by the CIUA Investment Tracker is not considered a direct GDP impact.

However, where foreign firms introduce new manufacturing techniques and technologies, there can be a delayed contribution to GDP as these innovations are implemented. Additionally, where foreign investments, including PRC investments, lead to the inclusion of Canadian production in new supply chains, the potential exists for the expansion of Canadian domestic production. Given the rapid growth of Chinese supply chains as part of the PRC's role as the largest trading nation, this potential is substantial since many Canadian firms have operated primarily or exclusively through North American supply chains, centred in the US.

Statistics Canada uses data gathered through financial reporting to assess the revenue, jobs, and GDP contribution of Multinational Enterprises (MNEs) operating in Canada, one of the major forces implementing foreign investment. In 2018, Statistics Canada reported<sup>161</sup> that mainland Chinese MNEs already operating in Canada contributed \$5.2 billion to Canadian GDP.<sup>162</sup> The dataset shows that Hong Kong MNEs, which Statistics Canada records separately from mainland China, contributed \$4.2 billion over the same period.

Therefore, the GDP contribution of Chinese investment in Canada over 2018 is at least \$9.4 billion, with an additional \$2.3 billion<sup>163</sup> in broad economic impact stemming from the flow of new investment over the same period.

While the reported GDP contribution of mainland Chinese and Hong Kong MNEs operating in Canada in 2018 is \$5.2 and \$4.2 billion respectively,

TABLE 4.0.2

### ACTIVITIES OF CHINESE BASED MULTINATIONALS IN CANADA

Year	Operating Revenue <i>millions of dollars, CAD</i>		Jobs		GDP at basic prices <i>millions of dollars, CAD</i>	
	Mainland China	Hong Kong	Mainland China	Hong Kong	Mainland China	Hong Kong
2018	18,572	11,838	24,100	22,295	5,223	4,212
2017	14,823	N/A	22,747	25,626	3,174	2,900
2016	11,135	9,704	14,083	25,917	2,476	2,746

Source: Statistics Canada<sup>164</sup>

data shows MNE revenue is significantly greater, at \$18.6 and \$11.8 billion, respectively. The total revenue of Chinese MNEs in Canada amounted to \$30.4 billion in 2018. Mainland Chinese and Hong Kong MNEs also contribute to R&D, with the total value of intellectual property produced by them in 2018 amounting to \$85 and \$407 million, respectively. Furthermore, the number of jobs directly supported by the operations of mainland Chinese and Hong Kong MNEs in Canada was 24,100 and 22,295, respectively, and 46,395 collectively. Assuming wages earned at these jobs are consistent with the Canadian average, the wage effect of jobs directly supported by Chinese MNEs in Canada is \$2.3 billion in 2018.

As we have addressed in the trade section, there are also indirect and induced effects from investment. Unfortunately, the economic impact of investment is extremely case dependent. Unlike with exports, multipliers of economic activity are not reasonably applicable, and FDI will not necessarily lead to domestic economic growth. However, a case study on Huawei Canada's operations illustrates that the same indirect effects apply to certain types of investments in the same way they do to trade.

## 4.1 INDIRECT AND INDUCED IMPACTS: HUAWEI

Huawei is a notable investor in Canada for several reasons. In December 2018, Huawei's Chief Financial Officer was detained at the Vancouver airport at the request of the U.S. government, sparking a political debacle between China, Canada, and the U.S.. In what Ottawa has viewed as “hostage diplomacy,”<sup>165</sup> China detained two Canadians, Michael Kovrig and Michael Spavor in 2018; they were recently released just as MENG Wanzhou was allowed to return to China following a plea deal.<sup>166</sup> Huawei has also faced controversy surrounding intellectual property and its funding activities at Canadian universities.

Despite this, Huawei plays an increasingly important role in Canada, supplying equipment for Canadian 4G and other networks. It is also a significant source of research and development funding in science and technology for universities as well as through the direct employment of Canadians at its offices in Ottawa, Vancouver, Edmonton, Waterloo, Markham, and Montreal.<sup>167</sup>

Huawei contracted Oxford Economics, a prominent forecasting and quantitative analysis provider, to conduct an economic impact analysis of its Canadian operations. Their report concluded that Huawei's total contribution to Canadian GDP in 2018 amounted to \$690 million.<sup>168</sup> This comprised a \$304 million direct contribution by Huawei Canada's own operations, an indirect impact along its supply-chain of \$154 million, and an induced spending impact of \$231 million resulting from employee compensation at Huawei and along its supply-chain. In the same year, Huawei Canada's reported revenue totalled \$566 million.<sup>169</sup>

The report also estimates that Huawei's activities indirectly supported and induced employment of 3,800 Canadian workers over and above Huawei's own Canadian employees, bringing their total employment impact to 4,760 in 2018. Furthermore, Huawei's activities in Canada catalyze innovation through significant research and development spending. Huawei collaborated with 22 universities and research institutes in 2018, generating current and future “spillover benefits” through the transfer of knowledge and skills that occur between business, employees, or research organizations.

In early 2020, Huawei also reported that it intended to invest \$2.6 billion more into its Canadian R&D operations over five years.<sup>170</sup> This would increase its workforce of 1,000 Canadian employees, 500 of which are designated researchers, by 200. Notably, these jobs also have a substantial wage premium relative to average Canadian incomes. As mentioned earlier, average income in Canada remains under \$50,000 per year. In 2018, Huawei Canada's average weekly employee wage was \$3,500, about \$180,000 per year, more than

three times the Canadian average. This, in part, explains Huawei's outsized contribution to Canadian GDP and innovation in particular.

Whatever one thinks of the company, Huawei Canada exemplifies the great benefit Canada reaps from foreign R&D investment. Even for the size of its investment, Huawei's impact on Canada has been significant. It has generated GDP growth, employment growth, provided infrastructure for the operation of Canada's information economy, and general innovation that will continue to serve Canada in the long term. To understand Huawei's investment impact in the context of all Chinese investment in Canada it is important to distinguish between types of investment and sectors of operations. It could be argued, for example, that CNOOC's acquisition of Nexen in the energy sector in 2013 for nearly \$20 billion (including the assumption of debts) had a much smaller impact per dollar of investment. Huawei's investment was greenfield, which established novel operations in Canada under its own name. Other investments, like the Nexen deal or other mergers and acquisitions, may have more subtle effects on the business landscape. Nonetheless, all investment contributes to the business environment and company operations in Canada.

Moreover, the report commissioned by Huawei highlights that investment activities spur indirect and induced impacts. Extrapolating this to the data on MNEs presented at the onset of this section suggests that a significantly larger economic impact underlies the reported \$9.4 billion dollar GDP contribution.

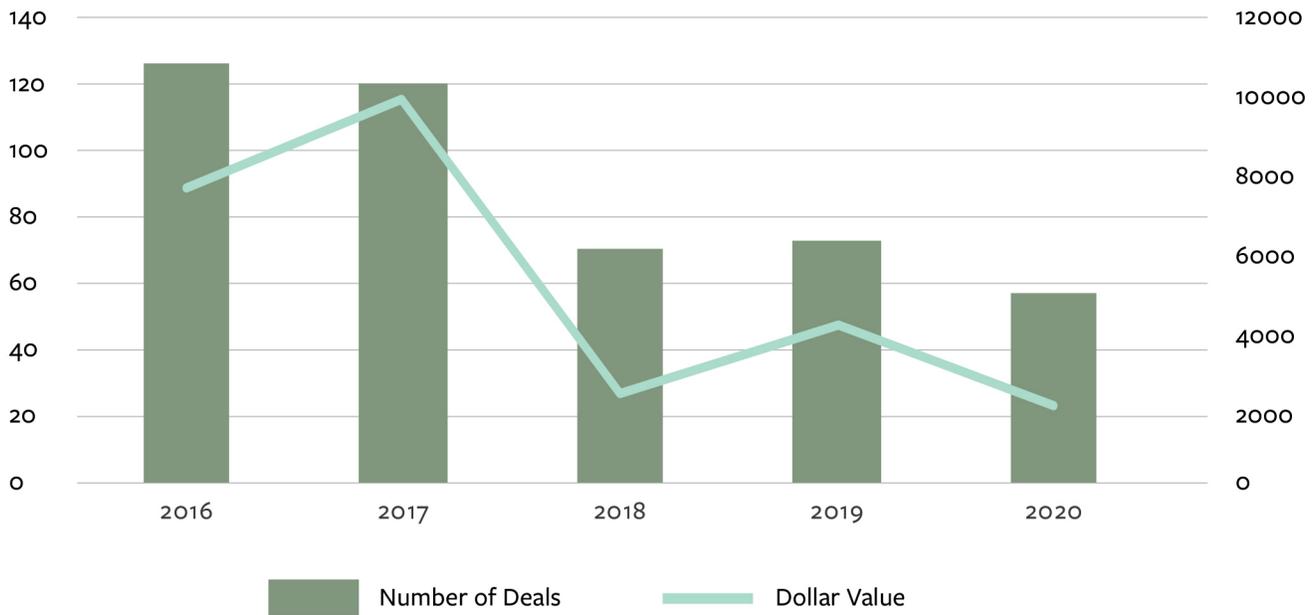
## **4.2 SECTORAL CHARACTERISTICS OF CHINESE INVESTMENT IN CANADA**

According to the China Institute's (CIUA) China-Canada Investment Tracker, China's investment in Canada has recently declined both in number of transactions and in investment value. As shown in Figure 4.2.1, a sharp decline occurred in 2018, which corresponds to the start of the U.S.-China trade war and follows the tightening of Chinese capital outflow restrictions in 2017.<sup>171</sup>

The Canadian metals and minerals sector has attracted, in the last 5 years, the most Chinese investment by total deal value. While total investment in the Canadian metals and minerals sector is not even half that of energy, its value dwarfs that of other sectors. As significant outliers in terms of total value invested from China, it is no surprise that energy and metals and minerals share several similarities. These include types of investor (large SOEs), scale of investment deals (often in the hundreds of millions or billions of dollars), and operative structure. Energy sector figures are boosted by significant investments in the early 2010s.

FIGURE 4.2.1

## CHINESE INVESTMENT IN CANADA OVERVIEW



Source: China-Canada Investment Tracker, China Institute (CIUA)

Real estate was the second largest draw of Chinese investment in recent years. Several commercial shopping malls have been purchased by Chinese investors, and Chinese investment in Canadian real estate has grown rapidly over the past decade.

The consumer products and services sector is another key investment area due to its role in commercial and societal linkage between China and Canada. Investments made here can have a great impact on public perceptions. Investment from China has been increasing in this sector since 2016, making 2019 the most active year on record.

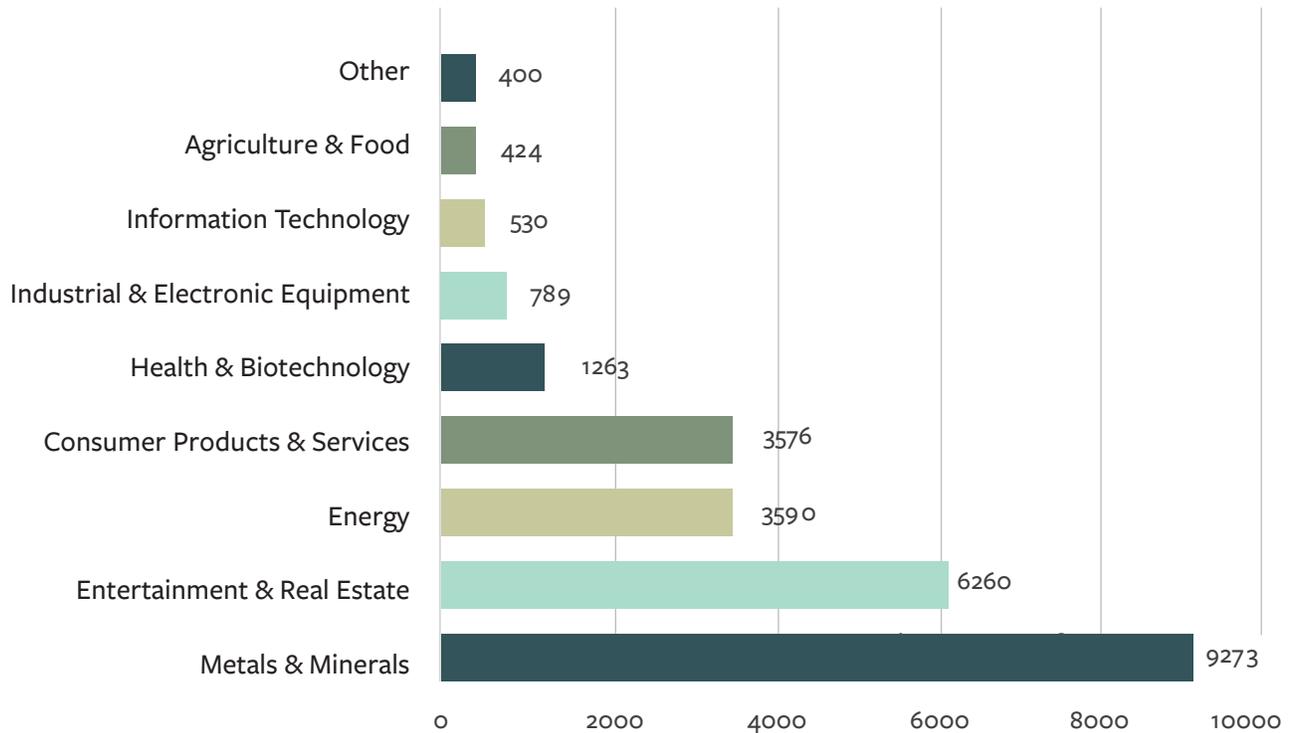
A significant portion of China-Canada investment in consumer products and services currently contributes to English educational institutions. Another sizable share goes towards restaurants, retail outlets, and product services. A notable example is the acquisition of Reliance LP, an air conditioner repair company, by CK Hutchison Group of Hong Kong. Notably, the consumer products and services sector receives virtually no SOE investment.

The Health & Biotechnology sector in Canada has also attracted a significant sum of Chinese investment. It has brought in more deals than any other sector, excluding consumer products and services, and more investment by deal value than any sector excluding metals and minerals since 2018.

FIGURE 4.2.2

## CHINESE INVESTMENT IN CANADA BY SECTOR

2016-2020, IN MILLIONS CAD



Source: China-Canada Investment Tracker, China Institute (CIUA)

### 4.3 REGIONAL BREAKDOWN OF INVESTMENT

Over the last five years, Chinese companies primarily chose to invest in British Columbia and Ontario. British Columbia received the greatest number of investments and had the highest investment value at just over \$12 billion. Ontario was second at \$9.6 billion, and Alberta third at \$3.5 billion.

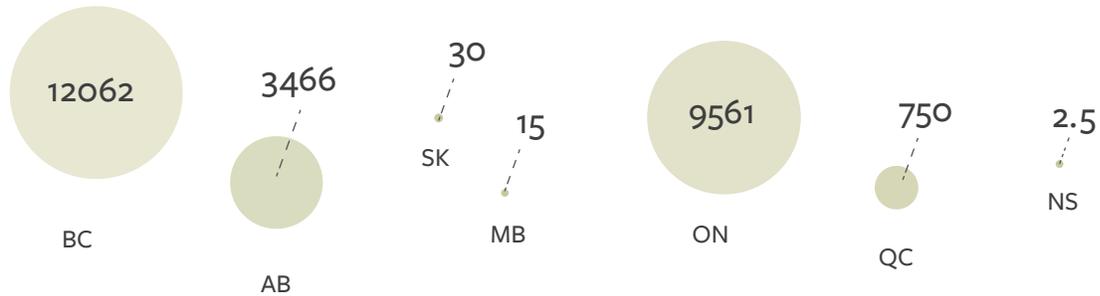
Figure 4.3.2 also shows that, over the same period, B.C. received nearly 200 unique investments. Ontario received 124, while Alberta and Quebec received 51 and 48, respectively. Though the number of investments received in Alberta and Quebec were similar, the value of investment was far greater in Alberta due to larger deals in the energy sector.

While data for the previous five years shows strong investment in Ontario, the situation over the past three years is less favourable. As Figure 4.3.3 below illustrates, large investments made in Ontario in 2016 and 2017 have skewed the five-year data. B.C. has received the vast majority of investment by deal value since 2018.

FIGURE 4.3.1

### INVESTMENT VALUE BY TARGET PROVINCE

2016-2020, IN MILLIONS CAD

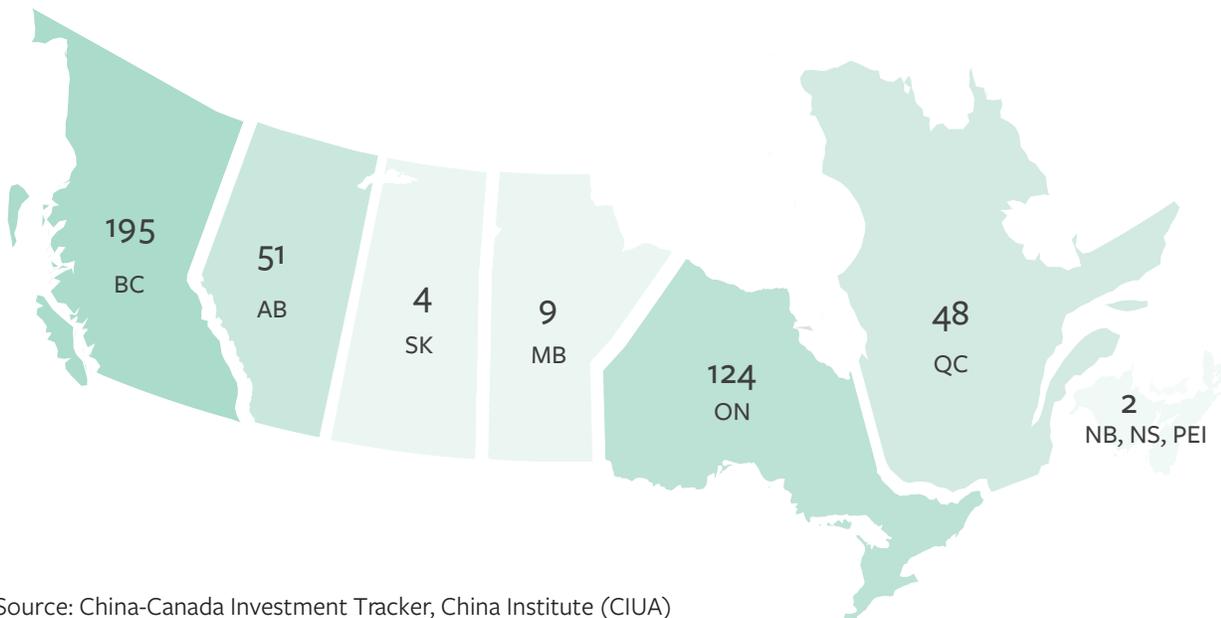


Source: China-Canada Investment Tracker, China Institute (CIUA)

FIGURE 4.3.2

### NUMBER OF DEALS BY PROVINCE

2016-2020



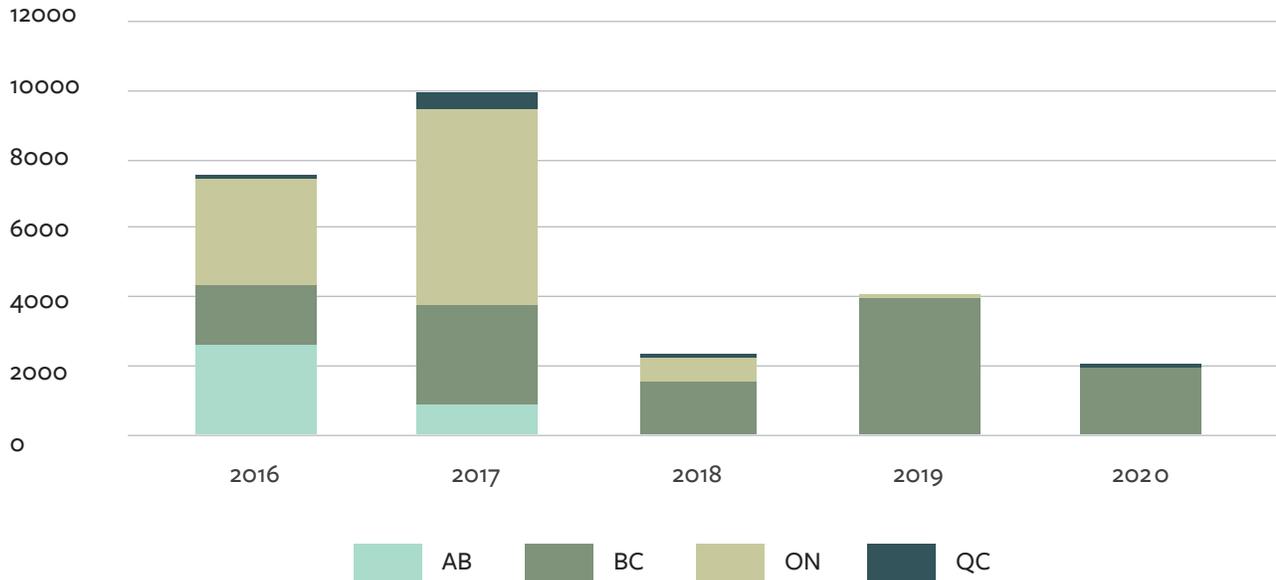
Source: China-Canada Investment Tracker, China Institute (CIUA)

British Columbia has several advantages over other Canadian regions in attracting Chinese investment. It is the most geographically proximal province to China and serves direct flights to many Chinese cities through the Vancouver airport. It also has a sizable Chinese-Canadian community, which, as discussed in the section on immigration, can ease transaction costs and help facilitate bilateral business.

FIGURE 4.3.3

## CHINESE INVESTMENT IN CANADA BY YEAR

PROVINCE, IN MILLIONS CAD



Source: China-Canada Investment Tracker, China Institute (CIUA)

Furthermore, Figure 4.3.4 illustrates the sector breakdown of investment by province for the period of 2016-2020. As noted, most metals and minerals investment flowed to British Columbia and Ontario, with B.C. taking the lion's share. Notably, Chinese investment in Ontario is the most diverse, with the majority going to consumer products and services, metals and minerals, health and biotechnology, information technology (for which Huawei is largely responsible), industrial and electronic equipment, and agriculture and food. Investment in B.C. is less diverse, with metals and minerals and real estate accounting for about 95%.

Looking at the total time horizon of the CIUA Investment Tracker, which records its first investment in 1993, the provincial shares of total Chinese investment stock in Canada stand at 55% in Alberta, 25% in British Columbia, 16% in Ontario, and 4% in Quebec. In total, the China-Canada Investment Tracker has recorded 410 investments in B.C., 285 in Ontario, 145 in Alberta, 85 in Quebec, and 55 across the rest of Canada.

As for the Chinese province of origin of investment, Hong Kong stands out as the preeminent source of deals by number. However, with the changing landscape of regional roles in China, this may shift in the future to other cities.

FIGURE 4.3.4

### INVESTMENT BY MAJOR SECTOR AND PROVINCE

2017-2020, IN MILLIONS CAD

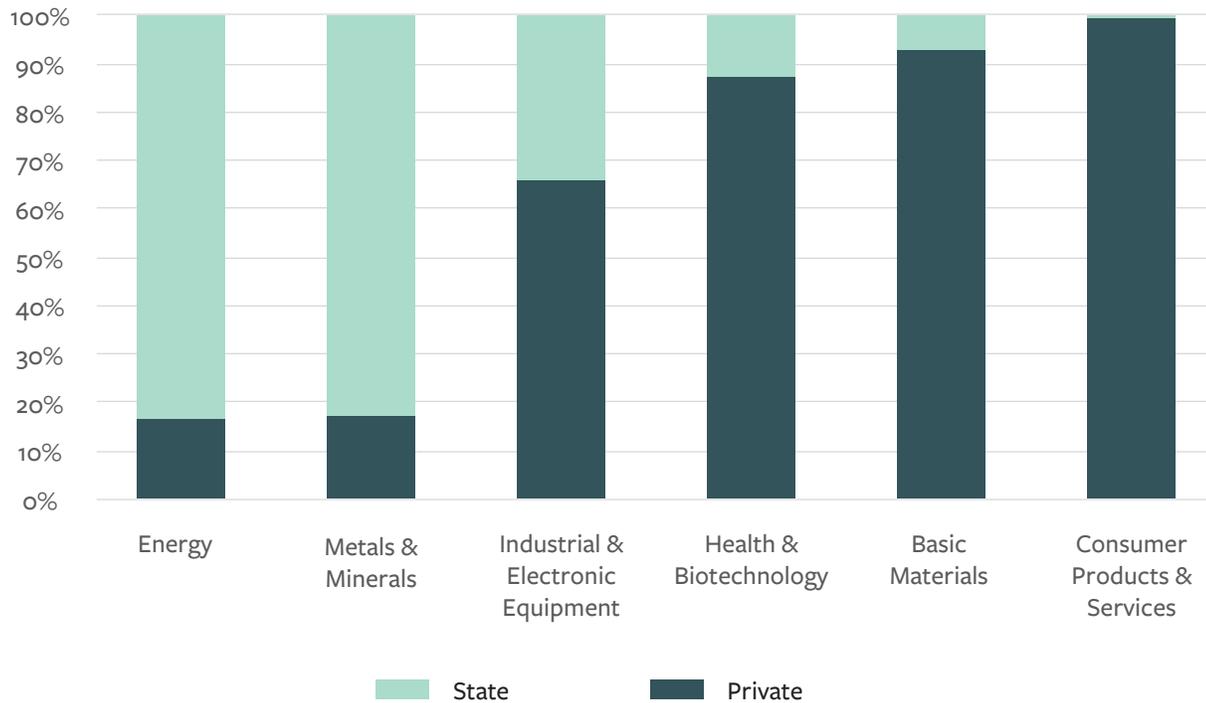


Source: China-Canada Investment Tracker, China Institute (CIUA)

FIGURE 4.3.5

## SHARE OF INVESTMENT SOURCE BY OWNERSHIP

1993-2020



Source: China-Canada Investment Tracker, China Institute (CIUA)

Overall, nearly 60% of all Chinese investment in Canada by deal value since 1993 has flowed from Beijing; this is due to many large Chinese SOEs being based there. Hong Kong is second at over 20%, the provinces of Fujian and Shandong are third and fourth at 2% each. By number of investments, Hong Kong is first at 343, Beijing is second at 146, Shanghai is third at 62, and Guangdong is fourth at 53. Over the same three-decade period, we have recorded 702 private Chinese investments in Canada with a cumulative known value of \$29 billion, and 225 SOE investments worth \$65 billion.



# Conclusion

China is without a doubt important for Canada, and Canada's economy in particular. This report has assessed the impacts of China-Canada trade, immigration, and investment on GDP, employment, and general economic activity. China is Canada's second most important economic partner after the U.S., and China's rapid growth on a national and partner level is highly relevant to both Canadians and Canadian businesses.

The known GDP impacts for the above-mentioned activities amounted to \$38.6 billion for exports and \$6.7 billion for immigration in 2019. In 2018, the GDP contribution of exports was \$42.6 billion, for immigration it was \$6.1 billion, and for Chinese multinational enterprises invested and operating in Canada it was \$9.4 billion.<sup>172</sup> Altogether, the combined GDP impact of these effects likely exceeded \$55 billion in 2018.

Furthermore, this report found that exports to China generated an economic impact over two times greater than its direct export value. In 2019, the total economic impact of exports to China amounted to \$76.9 billion based on industry specific data from the Canadian International Merchandise Trade Database<sup>173</sup> and Statistics Canada's international transactions in services tables.<sup>174</sup> Likewise, the general economic impact of Chinese investment in Canada exceeded its known \$9.4 billion GDP contribution in 2018. In the same year, an additional \$2.3 billion in new investment also flowed to Canada from China, and Chinese MNEs posted revenue of \$30.4 billion while producing intellectual property worth \$492 million in Canada.

This report estimates the impact of exports to China on Canadian employment at 365,915 jobs in 2019. Statistics Canada also reports that 46,395 jobs were supported by Chinese investment and enterprise operations in Canada in 2018. The wage effects of total jobs embodied in exports to greater China in 2019 amounted to \$18 billion. Additionally, the wage effect of jobs directly

supported by Chinese MNEs in Canada totalled \$2.3 billion in 2018. Altogether, it is likely that Chinese investment and exports to China supported over 400,000 jobs in Canada in 2019.

Economic impacts of China-Canada commerce not quantified in this report include imports from China as well as Canadian investments in China. In 2017, Canadian multinational enterprises in China reported \$12.7 billion in revenue; however, it is unknown what portion of this may have been repatriated. Additionally, imports from China were shown to be crucial for Canadian supply chains in several industries, particularly electrical equipment. Thus, Canadian consumers benefit greatly from lower prices for goods from China and the business activity supported by imports of Chinese capital and intermediate goods. As well, lower priced Chinese inputs can be a key pricing advantage for Canadian exporters.

Trade between Canada and China was one of the few Canada-China connections that was not devastated by the political and diplomatic chill that has dominated relations between Ottawa and Beijing for almost three years. China trade, in all of its complexity, remains a key driver of Canadian prosperity, while still falling well short of its full potential. Unlike many of the world's leading economies, including the United States, Japan, Germany and Australia, China is not Canada's leading trade partner. But with an economy that ranks second only to the United States (although number one by purchasing power parity), China remains the leading option for export diversification for Canada.

Altogether, Canada-China economic ties help support hundreds of thousands of Canadian jobs and likely spur economic activity worth more than any figure presented within this report. Additionally, the knowledge, skills, and cultural exchange that occurs as a result of trade, immigration, and investment can profoundly alter the business and societal landscape, particularly for an economy such as Canada's, which is highly trade dependent. The future of Canada and China are deeply interconnected, and understanding the dynamics and nuances of this complex bilateral relationship is critical to charting a path forward that serves Canada's long-term interests.



# Appendix

## Trade, Immigration and Investment

### 1.1 ECONOMIC IMPACT OF EXPORTING TO CHINA

All data for goods and services trade is gathered from Statistics Canada. Country-level data is presented on a seasonally-adjusted balance of payments (BoP) basis in Canadian dollars. Province, region, industry, and product specific data is, conversely, presented on a customs basis (also in Canadian dollars). For industry-specific data, the relevant 5-digit NAICS code is used. For product-specific data, the relevant HS-4 (product groupings) code is used to identify products.

Applying the expenditure model of GDP to assess the impact of trade:

GDP and total economic impact estimates are based on exports only. Imports are not subtracted from the impact of exports to avoid misleading readers to believe that trade with China has a negative impact on GDP or general economic activity. In the expenditure model of GDP, consumption spending (C), Investment (I), Government spending (G), and net exports (exports minus imports: NX) are summed to estimate GDP (Y), which represents total domestic production of goods and services. Imports (M) are subtracted in this equation because they are also counted within consumer spending in (C). The net effect is to exclude imports from GDP altogether. However, expressing imports within net exports may give the impression that trade with China actually has a negative impact on Canadian GDP since imports exceed exports and net exports to China are negative. Therefore, we have excluded imports from this quantitative analysis of trade to avoid confusion regarding the real economic impact of trade with China. Theoretically, this report considers the expenditure model of GDP as  $Y = (C - M) + I + G + X$ .

While Statistics Canada does provide multipliers on the provincial level, this report employs only nationally calculated multipliers. This is because “for some industries, the number of data points at the provincial level can be insufficient to make an accurate assessment of the multiplier effect. Induced effects are not estimated at the provincial level, but are available only at the national level.”<sup>175</sup>

## **1.2 EMPLOYMENT AND WAGE EFFECTS OF EXPORTING TO CHINA**

Note, we have used data on the share of domestic employment rather than domestic employment by the number of jobs so that we could extrapolate these estimates to later years using the change in the total number of jobs in Canada to estimate the change in employment embodied in foreign final demand. Using OECD data on domestic employment by number of jobs for the same calculation yields us an estimate of 142,704 jobs embodied in Chinese demand in 2015. The difference between this and our previous estimate is 98.9% proportional to the difference between the OECD and Statistics Canada record of the total number of Jobs in Canada in 2015.

### **1.3.2 CANADIAN USE OF CHINESE IMPORTS/INPUTS**

The North American Industry Classification Systems (NAICS) is an industry classification system used by Canada, the United States, and Mexico. It is designed to “provide common definitions of the industrial structure of the three countries and a common statistical framework to facilitate the analysis of the three economies.” In general, the NAICS employs five-digit codes at the most detailed industry level. The first 2 digits indicate the sector, the 3rd digit the subsector, the 4th digit indicates the industry group, and the 5th digit the industry. Note that there are slight national differences in the NAICS system; this report uses the system developed by Statistics Canada.

HS codes are derived from the Canada Export Classification, which is based on the World Customs Organization Harmonized Commodity Description and Coding System. HS codes are six digits. When only the first 2 digits (HS-2) are used, it refers to the chapters goods are classified in (for example, 27 refers to the chapter of “Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes”). 4 digit codes (HS-4) refer to product

groupings within a particular chapter (2709 refers to “Petroleum oils and oils obtained from bituminous minerals, crude,” for example). Finally, all 6 digits (HS-6) refer to products (270900 refers to “Crude Petroleum Oils and Oils Obtained from Bituminous Minerals”).

## **2.0 IMMIGRATION METHODOLOGY**

To estimate the contribution of Chinese immigrants to Canadian GDP and Canadian exports of both goods and services to China, three steps of analysis are involved. First, we run regressions based on datasets combining GDP, export of goods, export of services and immigration data, respectively, to obtain the estimated coefficients for the percent growth contribution of immigration on these factors. Second, we calculate the estimated GDP, estimated exports of goods, and estimated exports of services using the estimated coefficients in the first step. Third, we calculate the contribution as the ratio of estimated values divided by the actual values.

The GDP contribution equals the ratio of estimated GDP over total GDP; the contribution to exports of goods equals the estimated exports of goods over total exports of goods; and the contribution to exports of services equals the estimated exports of services over total exports of services.

## **2.2 RESULTS: CONTRIBUTION TO EXPORTS OF GOODS AND SERVICES**

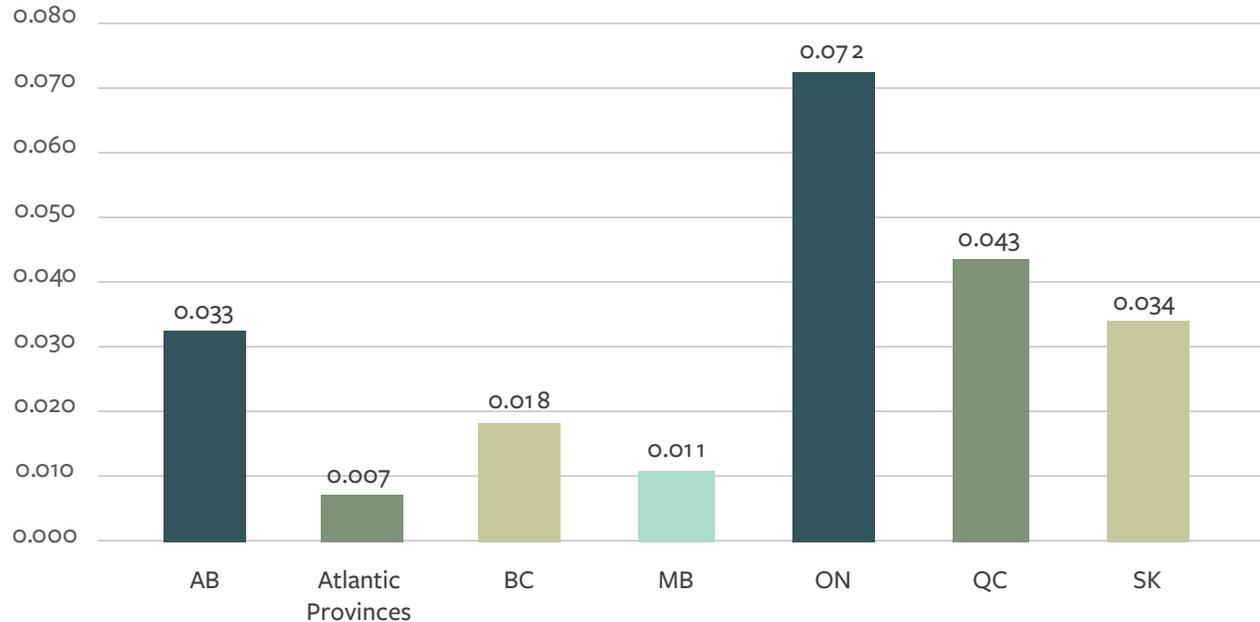
The contribution to exports of goods to China by Chinese immigrants in Alberta increased over the analysis period. The fastest increase in Alberta was from 0.015% in 2016 to 0.083% in 2018.

In British Columbia, the contribution of Chinese immigrants to exports of goods to China exhibits an inverted W-Shaped trend. The two peaks were 0.025% in 2013 and 0.027% in 2018. In comparison, the bottom values were 0.006% in the initial year (2011), 0.013% in 2016 and 0.014% in the final year (2020).

The contribution of Chinese immigrants to exports of goods to China from Manitoba remained stable through the study period, despite some fluctuations between 2016 and 2019. In Manitoba, the contribution rose to 0.016% in 2017 from 0.0101% in 2016 and dropped to 0.0048% in 2019.

## CONTRIBUTION TO EXPORTS OF GOODS

### PROVINCE AVERAGE



Saskatchewan, in contrast, has seen a gradual increase in the contribution of Chinese immigrants to exports of goods to China. Overall, Saskatchewan has seen the contribution increase gradually, despite a major decrease from 0.05% in 2018 to 0.034% in 2019. In 2020, Saskatchewan saw a contribution of 0.045% in 2020, much larger than 0.018% in the initial year studied (2011).

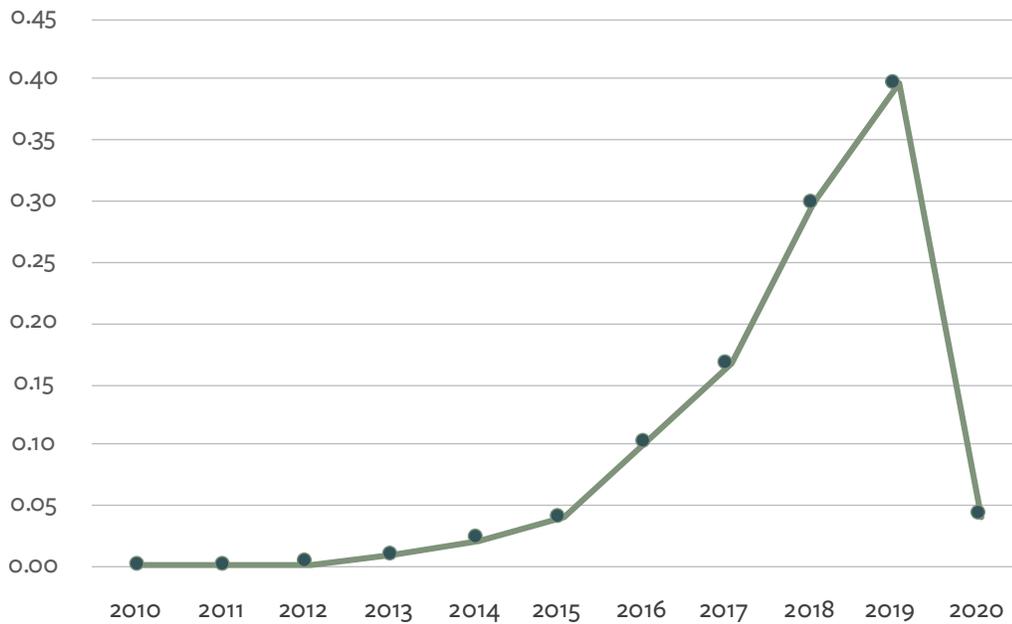
In Ontario, the contribution of Chinese immigrants to the export of goods to China began to increase in 2015, reaching 0.063% in 2017. This was followed by a much larger increase of 0.382% in 2018. It decreased to 0.091% in 2019 and 0.043% in 2020, though it remained larger than its 2011 and 2016 levels. In Quebec, the contribution of Chinese immigrants to exports of goods to China remained stable until 2018 when it increased 0.059%, and 2020 when it increased 0.144%.

Chinese immigrants in Ontario had the largest average contribution to exports of goods to China with a value of 0.072%, followed by 0.043% in Quebec, 0.034% in Saskatchewan and 0.033% in Alberta. The lowest contribution was found in the four Atlantic provinces. Chinese immigrants in British Columbia seemed to have a relatively low contribution given their large number. For Canada as a whole, the largest increase was in 2018 with the increase from 0.029% in 2017 to 0.089% in 2018. The large increase in 2018 was mainly driven by exports from Ontario.

The overall national contribution trend of Chinese immigrants to Canadian exports of services to China increased from 2010 to 2020. This increase accelerated in 2014 and jumped to 0.397% in 2019. It experienced a dramatic decrease to 0.041% in 2020, which could be attributed to the decrease in exports of tourism and education due to pandemic related travel restrictions.

## CONTRIBUTION TO EXPORTS OF SERVICES

NATIONAL AVERAGE





# Endnotes

<sup>1</sup> Statistics Canada. *Table 36-10-0594-01 International merchandise trade for all countries and by Principal Trading Partners, monthly (x 1,000,000)*, (Ottawa, August 5, 2021), <https://doi.org/10.25318/1210001101-eng>.

<sup>2</sup> Please see Appendix A for an explanation of data sources.

<sup>3</sup> We consider both mainland China and Hong Kong when referring to China's economic impact on Canada. However, Statistics Canada de-aggregates mainland China and Hong Kong in most of its data. Therefore, we will often present separate data for both regions when discussing these topics.

<sup>4</sup> In the expenditure GDP model imports are subtracted from GDP but are also recorded in "C" (Consumption). The net effect is to disclude the value of imported goods from GDP to ensure that the figure only represents domestic production.

<sup>5</sup> Scott A. Wolla, "How Do Imports Affect GDP?," Page One Economics® (St. Louis: Federal Reserve Bank of St. Louis, September 2018), <https://research.stlouisfed.org/publications/page1-econ/2018/09/04/how-do-imports-affect-gdp>.

<sup>6</sup> Statistics Canada. *Table 36-10-0594-01 International merchandise trade for all countries and by Principal Trading Partners, monthly (x 1,000,000)*, (Ottawa, August 5, 2021), <https://doi.org/10.25318/1210001101-eng>; Statistics Canada, *Table 36-10-0007-01 International transactions in services, by selected countries, annual (x 1,000,000)*, (Ottawa, October 15, 2020), <https://doi.org/10.25318/3610000701-eng>.

<sup>7</sup> Statistics Canada, *International merchandise trade for all countries and by Principal Trading Partners, monthly (x 1,000,000)*; Statistics Canada, *International transactions in services, by selected countries, annual (x 1,000,000)*.

<sup>8</sup> All presented \$ value terms are in Canadian dollars unless otherwise specified.

<sup>9</sup> Notably, net exports are not discussed herein. For an explanation of how this report employs the expenditure model of GDP, see Appendix A, Trade 1.2.

<sup>10</sup> Statistics Canada, *Table 36-10-0594-01 Input-output multipliers, detail level*, (Ottawa, November 23, 2020), <https://doi.org/10.25318/3610059401-eng>; Statistics Canada, *Canadian International Merchandise Trade Database*, (Ottawa, accessed June 1, 2021), <https://www5.statcan.gc.ca/cimt-cicm/home-accueil?lang=eng>.

<sup>11</sup> Statistics Canada, *Input-output multipliers, detail level*.

<sup>12</sup> The most recent year for which these coefficients are available is 2017; therefore, it is understood that when used with trade data for later years the multipliers are assumed to be the same as they were in 2017. Therefore, the accuracy of output, GDP, and jobs estimates generated with these multipliers is decreased in years following 2017.

<sup>13</sup> See Appendix A, 1.12, for an explanation of why provincial-level multipliers are not used.

<sup>14</sup> For example, the export categories "vegetable products" and "textiles and textile articles" are assigned multipliers designated "Crop production (except cannabis, greenhouse, nursery and floriculture production) [BS11A00]" and "Textile and textile product mills [BS31A000]," respectively, with one multiplier per export category. While this will not produce as accurate an estimate as a multi-faceted analysis of every exporting industry, it will provide a clearer picture of the overall impact of Canadian exports to China on Canada.

<sup>15</sup> Statistics Canada, *Canadian International Merchandise Trade Database*.

<sup>16</sup> Statistics Canada, *Canadian International Merchandise Trade Database*.

<sup>17</sup> OECD, *Trade in employment (TiM): Principal indicators*, accessed June 1, 2021, [https://stats.oecd.org/Index.aspx?DataSetCode=TIM\\_2019\\_MAIN](https://stats.oecd.org/Index.aspx?DataSetCode=TIM_2019_MAIN).

<sup>18</sup> Statistics Canada, *Table 14-10-0023-01 Labour force characteristics by industry, annual (x 1,000)*, January 25, 2021, <https://doi.org/10.25318/1410002301-eng>; *Canada Trade Summary 2019*, World Integrated Trade Solution, (World Bank, accessed June 1, 2021), <https://wits.worldbank.org/CountryProfile/en/Country/CAN/Year/LTST/Summarytext>.

<sup>19</sup> Methodological note: see Appendix A, Trade 1.2.2

<sup>20</sup> Colin Scarffe, *The Canada-China Global Commerce Picture and Supply Chain Links*, (Ottawa: Global Affairs Canada, September 2020), 14, <https://www.international.gc.ca/trade-commerce/economist-economiste/analyse-analyse/china-canada-2020-commerce-chine.aspx?lang=eng>.

<sup>21</sup> Colin Scarffe, *The Canada-China Global Commerce Picture and Supply Chain Links*, 13.

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- <sup>24</sup> Statistics Canada, *Table 11-10-0239-01 Income of individuals by age group, sex and income source, Canada, provinces and selected census metropolitan areas*, (Ottawa, March 23, 2021), <https://doi.org/10.25318/1110023901-eng>.
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- <sup>26</sup> Merchandise trade with Hong Kong is addressed in an addendum to the core report.
- <sup>27</sup> Statistics Canada. *Table 36-10-0594-01 International merchandise trade for all countries and by Principal Trading Partners, monthly (x 1,000,000)*
- <sup>28</sup> Note the difference in data sources as compared to Table 1.3. For an explanation of the differences in data sources, please see Appendix 1.1.
- <sup>29</sup> Statistics Canada, *Trade Data Online*, (Ottawa, accessed August 2021), <http://www.ic.gc.ca/eic/site/tdo-dcd.nsf/eng/Home>.
- <sup>30</sup> Statistics Canada, *Trade Data Online*.
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- <sup>32</sup> Statistics Canada, *Trade Data Online*.
- <sup>33</sup> Statistics Canada, *Trade Data Online*.
- <sup>34</sup> The difference in national total between this table and Table 1.3 stems from the difference between balance of payments and customs data.
- <sup>35</sup> Statistics Canada, *Trade Data Online*.
- <sup>36</sup> Statistics Canada, *Trade Data Online*.
- <sup>37</sup> Statistics Canada, *Trade Data Online*.
- <sup>38</sup> Statistics Canada, *Trade Data Online*.
- <sup>39</sup> Statistics Canada, *Trade Data Online*.
- <sup>40</sup> Statistics Canada, *Trade Data Online*.
- <sup>41</sup> Statistics Canada, *Trade Data Online*.
- <sup>42</sup> Statistics Canada, *Trade Data Online*.
- <sup>43</sup> Statistics Canada, *Trade Data Online*.
- <sup>44</sup> Statistics Canada, *Trade Data Online*.
- <sup>45</sup> Statistics Canada, *Trade Data Online*.
- <sup>46</sup> Statistics Canada, *Trade Data Online*.
- <sup>47</sup> Statistics Canada, *Trade Data Online*.
- <sup>48</sup> Please note that Table 1.14 is denoted in Canadian dollars, not in millions of Canadian dollars like the other figures in this section, due to the small export numbers in the Territories.
- <sup>49</sup> Statistics Canada, *Trade Data Online*.
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- <sup>57</sup> For an explanation of HS-6 codes, please see Appendix A, 1.12.
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- <sup>61</sup> Colin Scarffe, *The Canada-China Global Commerce Picture and Supply Chain Links*, 12.

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- <sup>64</sup> “Canadian Canola Exports – Current Year,” Canola Council of Canada, 2021, <https://www.canolacouncil.org/markets-stats/exports/>.
- <sup>65</sup> “Profiles of Canada’s Leading Canola Markets,” Canola Council of Canada, accessed July 2021, <https://www.canolacouncil.org/markets-stats/top-markets/>.
- <sup>66</sup> Frank Gunstone, “Major Producing and Consuming Countries/Regions,” (Dundee, SC: 2021, <https://lipidlibrary.aocs.org/resource-material/market-trends/major-producing-and-consuming-countries/regions>.
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