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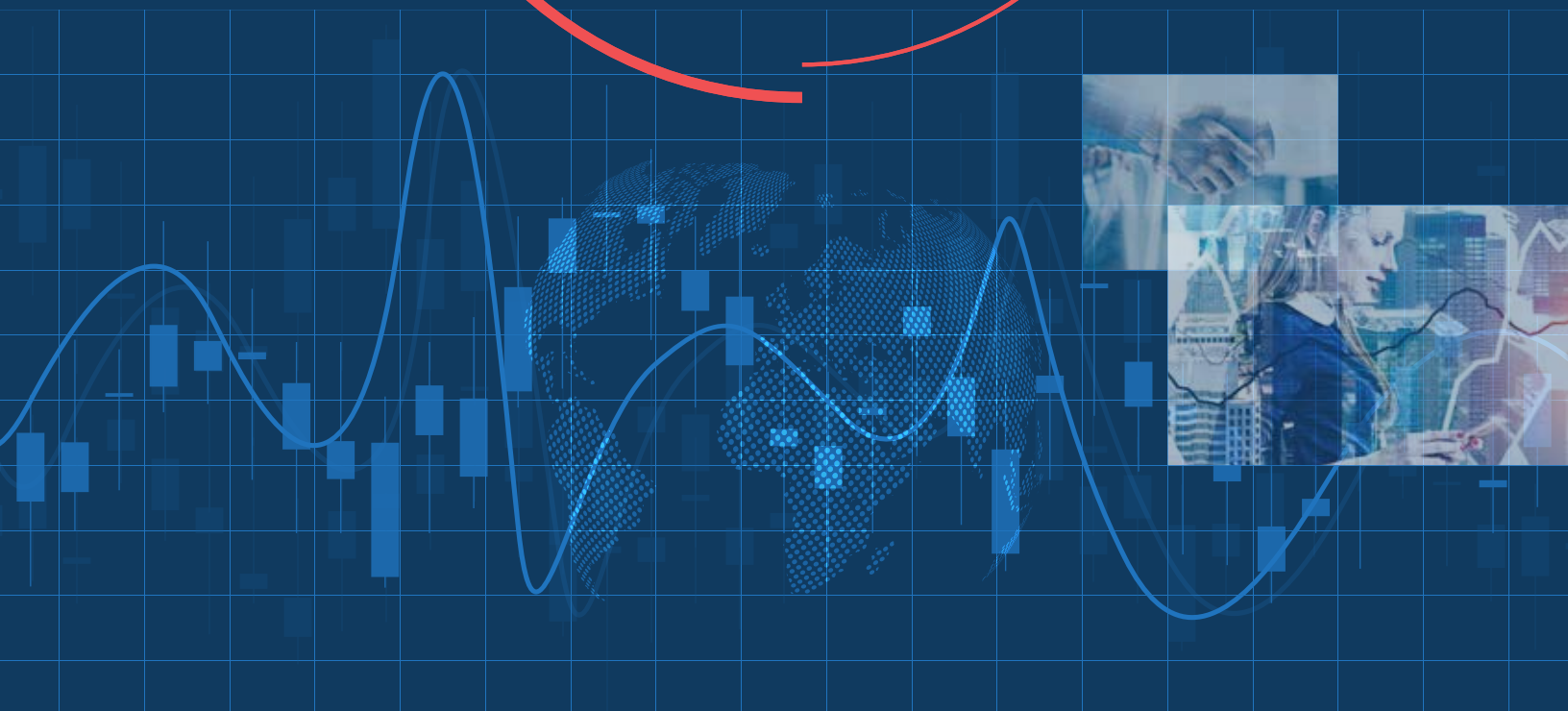


OFFICE OF  
THE CHIEF  
ECONOMIST

Global Affairs Canada

**2020** **CANADA'S  
STATE OF  
TRADE**

The early impacts  
of COVID-19  
on trade



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sur le commerce

## MINISTER'S MESSAGE

As Canada's Minister of Small Business, Export Promotion and International Trade, I am pleased to present the Canada's State of Trade 2020 report on behalf of the Government of Canada. This report gives Canadians a snapshot of our economic activities in 2019 while recognizing the unprecedented global uncertainty of 2020 amid the COVID-19 pandemic.

Over the last few months, countries around the world have come together to fight the global pandemic, working to ensure the health and safety of our people while mitigating the economic impact of the pandemic. During this difficult time, we have seen entrepreneurs, workers, and all Canadians come together to support one another. Our businesses have shown incredible flexibility and creativity to adapt and find innovative solutions to the challenges they faced.

This report highlights how Canadian innovation and resilience has allowed our businesses to continue to compete in the global marketplace and our government's commitment to supporting trade through turbulent times.

As COVID-19 swept the world, many countries responded by closing their doors to trade in an effort to protect their people. But COVID-19 should not—cannot—be used as an excuse to stop trading or to turn inward.

Trade remains crucial to the prosperity of Canadians, accounting for nearly two thirds of our national economy and supporting 3.3 million Canadian jobs before COVID-19. We are recognized globally as a strong, stable, and reliable trading nation and one of the best places in the world to invest and start a business.

But global supply chains are under pressure now more than ever. That is why, through our Export Diversification Strategy, our government recommitted to finding new ways to serve and better support Canadian business owners and entrepreneurs to succeed in the global marketplace.

Free trade agreements, such as the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), Comprehensive and



Progressive Agreement for Trans-Pacific Partnership (CPTPP), and Canada—United States—Mexico Agreement (CUSMA), also known as the new NAFTA, expand and diversify market opportunities. This gives our Canadian businesses access

to 1.5 billion customers around the world and creates more opportunities and jobs for Canadians. Our approach to strengthening Canada's trade relationships includes discussions with Mercosur, the Pacific Alliance, and potentially, the Association of Southeast Asian Nations.

As we work toward our economic recovery, we will continue to work with our international partners and take a leadership role to keep supply chains open, strengthen and diversify trade relationships, and support rules-based trade for the 21<sup>st</sup> century. We need to strengthen multilateral institutions, such as the World Trade Organization, which are vital to supporting rules-based trade and giving our businesses the stability they need to grow globally.

The global economic recovery depends on inclusive and sustainable cooperation and collaboration on trade. This means ensuring that traditionally under-represented groups, including women entrepreneurs, small business owners, and Indigenous-led businesses, can access the benefits of trade. Diversity of thought and talent leads to greater innovation, building businesses that are more resilient and able to weather turbulent economic times. That is why our government will continue to create opportunities that benefit Canadians and Canadian businesses from coast to coast to coast.

A handwritten signature in black ink that reads "Mary Ng".

The Honourable Mary Ng

Minister of Small Business, Export Promotion and International Trade



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# ACRONYMS

<b>\$B:</b>	Billion dollars	<b>NAFTA:</b>	The North American Free Trade Agreement
<b>\$M:</b>	Million dollars	<b>OCE:</b>	Office of the Chief Economist, Global Affairs Canada
<b>Can\$:</b>	Canadian dollar	<b>OECD:</b>	Organisation for Economic Co-operation and Development
<b>CDIA:</b>	Canadian direct investment abroad	<b>R&amp;D:</b>	Research and development
<b>CETA:</b>	Canada-European Union Comprehensive Economic and Trade Agreement	<b>SME:</b>	Small and medium-sized enterprise
<b>CPTPP:</b>	Comprehensive and Progressive Agreement for Trans-Pacific Partnership	<b>UNCTAD:</b>	United Nations Conference on Trade and Development
<b>CUSMA:</b>	Canada-United States-Mexico Agreement	<b>U.S.:</b>	United States (used adjectivally)
<b>EU:</b>	European Union	<b>US\$:</b>	United States dollar
<b>FDI:</b>	Foreign direct investment	<b>WCS:</b>	Western Canada Select
<b>GDP:</b>	Gross domestic product	<b>WEO:</b>	World Economic Outlook
<b>HS:</b>	Harmonized System	<b>WTI:</b>	West Texas Intermediate
<b>ICT:</b>	Information and communication technologies	<b>WTO:</b>	World Trade Organization
<b>IMF:</b>	International Monetary Fund	<b>YOY:</b>	Year-over-year
<b>M&amp;A:</b>	Mergers and acquisitions		

# EXECUTIVE SUMMARY

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Economic events thus far into 2020 are being dictated by the COVID-19 pandemic. The resulting downturn marks the end to the economic expansion that began in mid-2009 following the 2007-2008 global financial crisis. However, even before the pandemic took hold in countries around the world, 2019 was shaping up to be a rough year for the global economy marked by rising global tensions, trade policy uncertainty between the United States and China, and the BREXIT process. These conditions were exacerbated by mixed economic signals. Consequently, the outlook for growth in the world economy for 2019 continued to be downgraded—to the point of reaching the lowest rate (2.9%) since the recession that followed the 2007-2008 global financial crisis—while the world’s trade and investment performance in 2019 either stagnated or slightly declined.

**Despite the uncertain world economic conditions, Canada’s trade and investment performance for 2019 was marked by growth.**

Canada’s exports of goods and services were \$729 billion in 2019, up 2.2% compared to 2018. Goods exports were up 1.7% while service exports grew by 4.4%. Canada’s top 3 goods exports—energy products, motor vehicles and parts, and consumer goods—accounted for over 45% of exports and all grew faster than the 1.7% for total goods exports. Foreign direct investment in Canada and Canadian direct investment abroad also experienced solid growth with 2 large transactions contributing to the increases.

Canada continues to have strong trading ties to the United States, the European Union and China, its top 3 trading partners. Goods exports to the United States and the European Union grew well, supported by free trade agreements with these partners. In particular, the Comprehensive Economic and Trade Agreement, in its second year of provisional application, continues to support Canadian exports to the European Union. There are, however, indications that the agreement is not being fully utilized by Canadian exporters and importers, which suggests that further effort may be needed to promote the agreement.

By contrast, Canadian exports to China, Canada’s third most important trading partner, had a much different pattern in 2019. Rather than increasing, Canadian goods exports to China experienced a sharp 16% drop. Underlying this drop were the trade measures China imposed on Canadian food products. This setback was, however, far from being representative of China’s trade relationship with Canada over the 2010s. Between 2010 and 2019, Canada’s goods exports to China grew on average 6.3% per year while imports from China grew 6.6%.

Although influenced by the difficult global context, Canadian results for trade and investment in 2019 were good overall when compared to the global results. **Canada’s 2019 trade results, however, were generally lower than the annual average over the past decade.** The 2019 results will most likely be overshadowed down the road by the impact of COVID-19, a global challenge 2020 ushered in that no country escaped and that is expected to leave unprecedented economic and trade impacts.



The containment measures to restrict the spread of the virus affected every aspect of international trade. This year's State of Trade assesses the early impacts of COVID-19 on Canadian trade. Starting in Asia in January 2020, the virus spread really quickly in a few European countries in February to finally affect every region of the world, including Canada, in March. Early results suggest that the impacts on Canadian trade were unevenly distributed. Early impacts can be observed for Canada's goods exports to China and South Korea with drops of 13% and 26%, respectively, for the first quarter of the year compared to the first quarter of 2019. While declines cannot be fully attributed to COVID-19, **by March 2020, overall Canadian goods exports had dropped by 7.9% and goods imports by 8.4%**, compared to March 2019. But the drops were uneven; exports and imports of some goods and with some trading partners were heavily impacted while others seemed almost untouched or even improved.

Canada's top goods exports, energy exports, were hit by the impact of COVID-19 as well as by the precipitous drop in oil prices leading to a decline of 21% in March 2020 compared to the same month in 2019. Industries that rely on international supply chains were also hit especially hard as demonstrated by declines of exports and imports of automotive products (23% and 18%, respectively), machinery (11% and 10%, respectively), and electronics (26% and 13%, respectively). In contrast, Canada's agriculture exports improved in March 2020 compared to the year prior. Agriculture exports rose 13% led by higher exports of oil seeds (60%) and exports of vegetables (49%).

As COVID-19 gradually affected different regions and countries of the planet, likewise the various trade impacts emerged gradually. Although the direct link between COVID-19 and the trade results at any time during the

first 3 months of 2020 with a specific trading partner is uncertain, a general trend emerges: Canada saw its trade with most of its top 10 trading partners impacted from COVID-19 to some degree. In March 2020, drops in Canadian exports ranged from 3.2% (Japan) to 35% (the United Kingdom) while drops in Canada's imports ranged from 5.1% (Japan) to 24% (China). While trade with the United States was on average mildly affected with declines of about 6% for both exports and imports, trade with some individual states was strongly affected due to the highly integrated supply chains in some industries. The impact of the pandemic was particularly evident for trade with Michigan driven by declines of automobile exports and imports. Exports to New York, Texas and Washington also declined significantly in March 2020.

The COVID-19 crisis highlights the critical role of global supply chains and the many choke points that may disrupt exports and imports. The report discusses these choke points and explores the Canadian industries most and least vulnerable to global disruptions. **Many manufacturing sectors emerge as particularly vulnerable to global shocks due to their reliance on both foreign suppliers for inputs and foreign markets for sales.** On the other hand, retail and other service industries may be less vulnerable to disruption because they rely more on domestic markets and suppliers. But in the end, the risks associated with international supply chains must be weighed against the many benefits: more competitive and productive enterprises that pay higher wages to workers and offer lower prices to consumers. Looking forward, the challenge will be to coordinate global supply and demand—an ongoing lesson for the world's economies as they ease restrictions and get back to business in the shadow of COVID-19.

## 1.1 Global economic, trade and investment environment

Even before the worldwide spread of the COVID-19 virus, the year 2019 promised to be a rough year for the global economy. Trade tensions and disputes, geopolitical tensions, rising social unrest in several countries and more frequent and more intense weather-related disasters weighed on business confidence, investment decisions, industrial production and global trade—and in turn created challenging conditions for Canadian trade.

As the events of 2019 unfolded amid rising and intensifying global tensions, the effects began to show up in the economic data and forecasts. Each year, the International Monetary Fund (IMF) produces biannual economic forecasts for global GDP and growth for the current year and the following one. Back in October 2018 the IMF projected global economic growth for 2019 to be 3.7%—a rate similar to the average for the period spanning 2011 to 2018. The IMF’s October 2018 estimate used economic data that showed the upswing in growth that had started in late 2016 and lasted for approximately 2 years. What the October 2018 estimate could not capture was the gradual slowing of the global economy that had begun in the second half of 2018. By April 2019, however, the data started reflecting this slowdown, and the IMF revised its estimate for 2019 growth down to 3.3%—0.4 percentage

point lower than its October 2018 estimate. Further global trade and geopolitical tensions combined with macroeconomic and financial stress in emerging markets throughout 2019 prompted the IMF in October 2019 to further downgrade its growth estimate to 3.0%. By April 2020, the IMF predicted that global economic growth for 2019 would be 2.9%: the lowest rate since the 2009 recession that followed the global financial crisis that began in 2008 (Figure 1.1).

In the latter half of 2019, many central banks responded to the weak global economy by lowering interest rates to provide monetary stimulus in their domestic markets. However, in many advanced economies, this option was limited by interest rates that were already low, which left little room for conventional monetary stimulus.

The weak global economic conditions did not affect labour markets in the same way as they affected trade. The labour markets remained remarkably strong in many of the world’s major economies. Indeed, many exhibited record low or near-record low unemployment rates, a positive development amid the global uncertainty. In May 2019, the unemployment rate in Canada reached its lowest level since 1976, which created challenges for those seeking qualified labour in many parts of the economy.

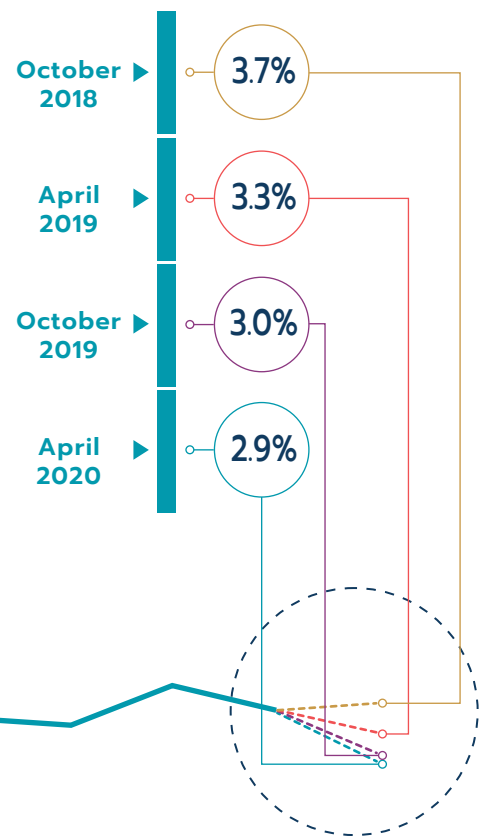
**1.1 GLOBAL ECONOMIC, TRADE AND INVESTMENT ENVIRONMENT**

Trade is an important component of the world economy, and so it follows that the same events and trends—such as trade tensions, geopolitical and social events and natural disasters—that affect trade also affect the world’s economy. Taking into account the developments throughout the year, the World Trade Organization (WTO) successively downgraded its projections for goods trade volume. Its April 2020 estimate projects a decline of goods trade for 2019, the first decline since 2009.

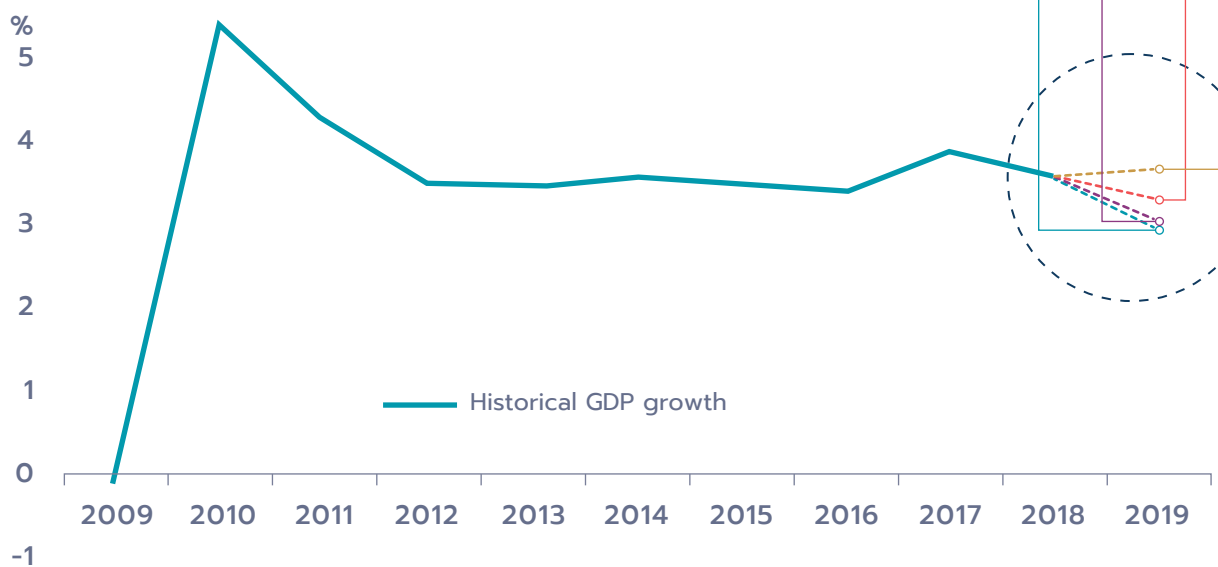
overall impact on world GDP and trade growth is expected to be negative. By the end of 2021, global GDP could be 1.2% lower (Bank of Canada Monetary Policy Report, January 2020). As well, the U.S. GDP growth rate could be 0.5 percentage point lower (from 1.6% to 1.1%) while China’s could be lower by as much as 1 percentage point, down from 5.0% to 4.1% (Chen and Bennett, 2019).

The ongoing U.S.-China trade tensions, which started in 2018, contributed to weak global economic conditions and trade in 2019. While some countries might have benefited in the short term from the realignment of supply chains and transshipments arising from the trade tensions between the 2 countries, the

**Growth projections for 2019**



**FIGURE 1.1 Annual global economic growth**



Data source: [IMF World Economic Outlook - April 2020](#). Retrieved on April 15, 2020.

Furthermore, over the longer term, trade tensions between the United States and China could reduce bilateral trade between the 2 countries by about two thirds. A welcome development was the signing of phase one of the Economic and Trade Agreement between the Government of the United States of America and the Government of the People's Republic of China. This agreement paused the escalating trade tensions between the 2 countries. On the other hand, this agreement could create trade diversion effects for other countries as an agreement between any 2 countries increases the bilateral trade for a specific good between those countries and reduces the demand for that good from other countries.

As with global trade, global foreign direct investment (FDI) flows are estimated to have declined by 1.0% in 2019 against the backdrop of weak economic conditions, uncertainty and trade tensions (United Nations Conference on Trade and Development, 2020). Most of the decline can be attributed to weak flows to developed countries, while FDI flows to developing economies remained unchanged. Of note, FDI flows to the United Kingdom and Hong Kong declined due to uncertainty from BREXIT in the former and political tensions and protests in the latter. Global FDI flows into China and into the United States remained essentially flat amid trade tensions between the 2 countries.

## 1.2 Canadian trade performance

### OVERVIEW

Canadian trade<sup>1</sup> was weak in 2019 compared to the average trend between 2010 and 2019. However, given the challenging global trade environment, Canadian trade performed well compared to global trade.

Canadian **exports** of goods and services combined reached \$729 billion in 2019, up 2.2%; goods exports alone were up 1.7%, while services exports were up 4.4% (Figure 1.2). This overall growth in goods and services exports was weak compared to the last decade when goods and services exports grew annually on average 4.6%. Although services exports account for 18% of Canadian exports, they averaged 5.7% annual growth between 2010 and 2019, outpacing the 4.4% annual growth in goods exports, which account for the much larger share (82%) of Canadian exports. Growth in services exports has also been less volatile than growth in goods exports: annual growth for services exports ranged between 1.4% and 6.9% during the decade while for goods exports it ranged between -1.0% and 13%.

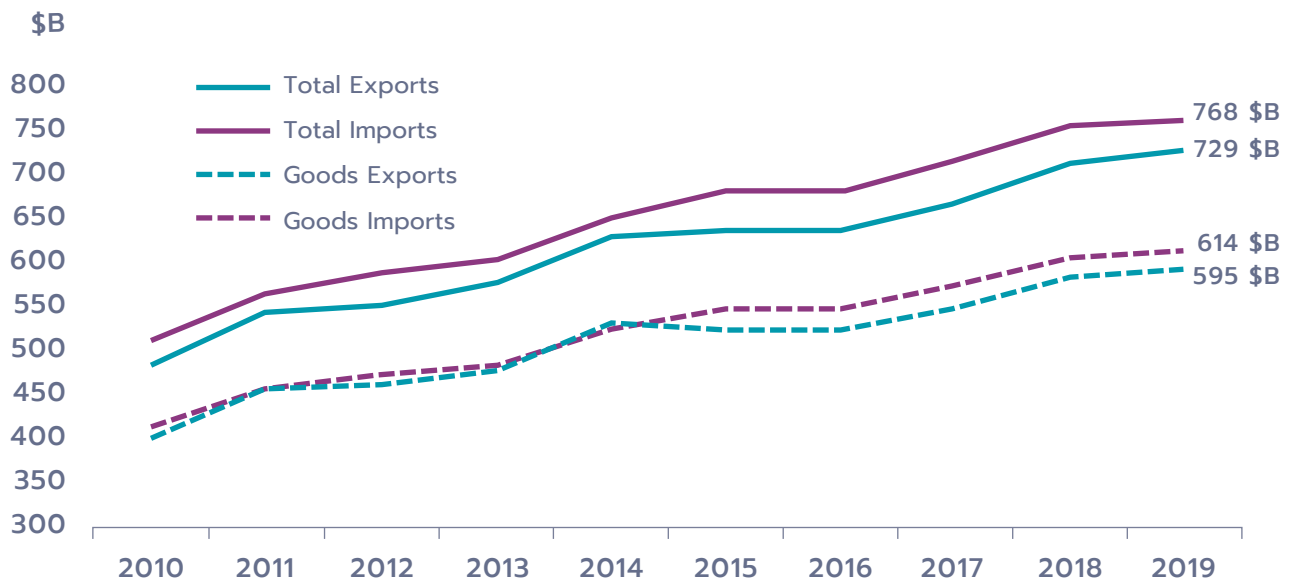
<sup>1</sup> This section discusses international trade in goods and services using data on a balance of payments basis. For a detailed analysis using data on a customs basis (e.g. merchandise trade), see [Jiang \(2020\)](#).

## 1.2 CANADIAN TRADE PERFORMANCE

Canadian **imports** of goods and services increased to \$768 billion in 2019, up 1.5% from 2018. As with the growth in exports, the growth in imports of goods and services in 2019 was weak compared to the 4.5% average annual growth over the last decade. Growth in services imports has also been less volatile over the decade than growth in goods imports.

Canada's trade deficit widened in the latter half of the decade, attributable to exports in goods lagging imports in goods. The improvement of the services trade deficit over the same period partially mitigated the overall trade deficit. By contrast, the primary income deficit has narrowed significantly, resulting in a smaller current account deficit. As a result, Canadian net borrowing from current and capital accounts has decreased over the last decade. Likewise, Canadian net borrowing from the financial account has declined as net acquisitions of financial assets outpaced net incurrence of liabilities over the period.

**FIGURE 1.2**  
Canadian exports and imports



Data source: Statistics Canada, [Table 36-10-0014-01](#). Retrieved on May 28, 2020.

**1.2 CANADIAN TRADE PERFORMANCE**

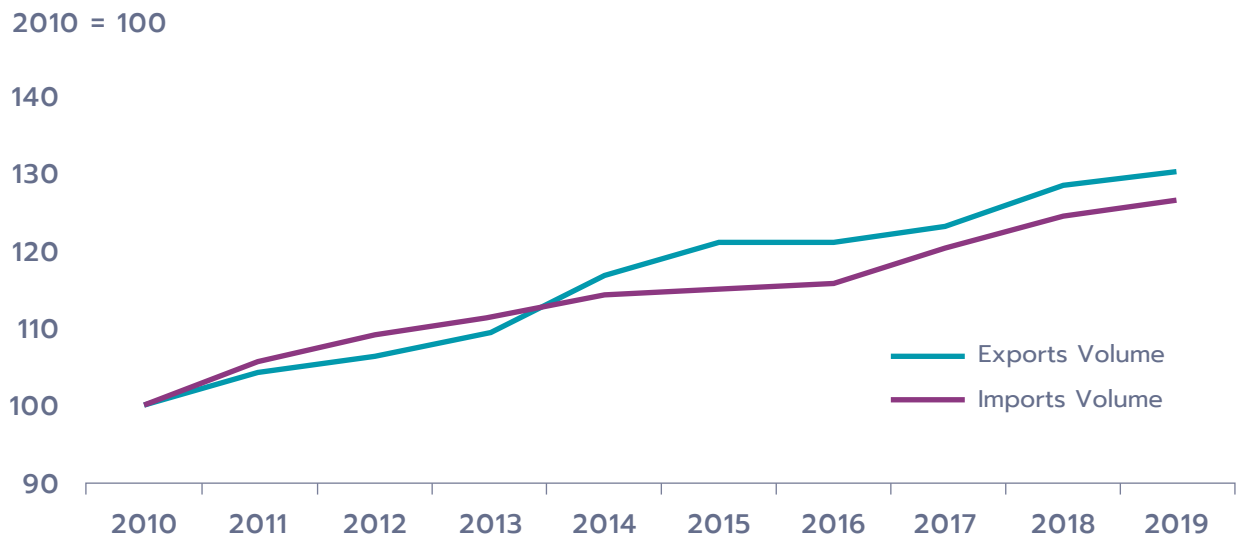
**TRADE VOLUME VERSUS PRICE**

Trade values encompass volume and price effects. Volume is an expression of quantity, or how much of something was traded, which excludes fluctuations in price. Sometimes it is useful to express trade in terms of price, that is, to compare the currency value of a unit of exports to the value of a unit of imports.

As with trade expressed in terms of value, 2019 was a weak year for Canadian trade expressed in terms of volume compared to the average over the past decade. In 2019, the volume of goods exports expanded 1.3%, and the volume of imports expanded 1.3%. Both expanded more slowly than their annual

average growth over the decade of 3.0% and 2.6%, respectively. Over the first part of the decade, the volume of goods exports grew a little more slowly than the volume of goods imports, but by the second half of the decade the situation reversed (Figure 1.3). This was because energy products, Canada’s largest goods export, increased in volume by 5.7% annually over the decade, while consumer goods, Canada’s largest goods import, increased in volume by 1.8% annually. The 2.5% annual growth in the volume of consumer goods exports also contributed to growth in the overall volume of goods exports outpacing growth in the volume of imports.

**FIGURE 1.3**  
Canadian goods trade volume index



Note: The trade volume index is using Laspeyres fixed weight.

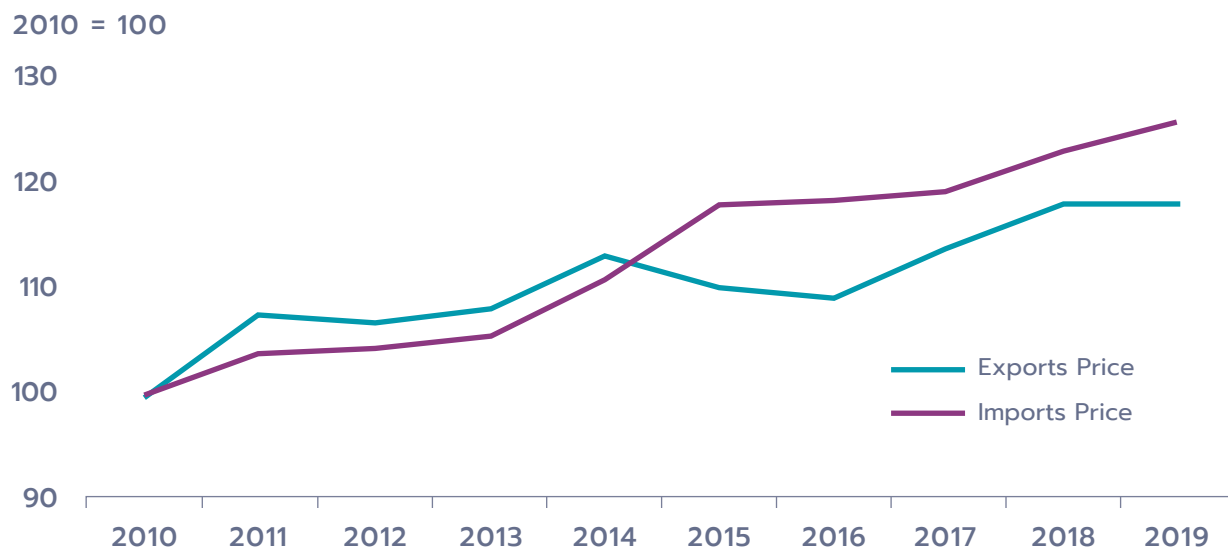
Data source: Statistics Canada, [Table 12-10-0126-01](#). Retrieved on May 28, 2020. Calculation of the OCE.

## 1.2 CANADIAN TRADE PERFORMANCE

The trend in trade export and trade import prices over the last decade is the opposite of the trend in trade volumes: over the first part of the decade prices for goods exports outpaced prices for goods imports, but by the second half of the decade that situation had reversed (Figure 1.4). This is partly attributable to the sharp decline in the export price of energy products between 2014 and 2016. Export prices of energy products partially recovered in 2017 and 2018, only to decline by a small amount in 2019. The export price of energy products did not return to its 2014 high at any point in the second half of the decade.

The export price for metal ores and non-metallic minerals also declined over the last decade. As a result, Canada's terms of goods trade has declined over the past decade. Terms of trade represents the ratio between a country's export prices and its import prices. It can also be thought of as the number of units of exports required to purchase a single unit of imports. The declining terms of goods trade over the past decade implies that Canada has had to sell more exports to acquire the same quantity of imports.

**FIGURE 1.4**  
Canadian goods trade price index



Note: The trade price index is using Laspeyres fixed weight.

Data source: Statistics Canada, [Table 12-10-0126-01](#). Retrieved on May 28, 2020.  
Calculation of the OCE.

## 1.2 CANADIAN TRADE PERFORMANCE

### GOODS TRADE PERFORMANCE: EXPORTS

In 2019, the top 3 Canadian goods exports in terms of total value were energy products, motor vehicles and parts, and consumer goods (Table 1.1). These 3 sectors together account for almost 47% of Canada's goods exports.

**Energy products** was the top goods exports sector, accounting for close to 20% of Canada's total exports for the past decade. Although exports of energy products grew a little faster than Canadian exports overall in 2019, the sector experienced the third-slowest growth rate among goods exports in the last decade. As mentioned above, after experiencing strong growth in the first half of the decade, Canadian energy exports experienced a drastic decline between 2014 and 2016. While Canadian energy exports have increased every year after 2016, they have yet to return to their 2014 peak.

**Motor vehicles and parts** was Canada's second-largest exports sector in the decade. Unlike exports of energy products, exports of motor vehicles and parts experienced strong growth between 2010 and 2019, exhibiting the second-fastest annual average growth

rate among goods exports. This strong annual growth was the result of the growth between 2010 and 2016, which was then followed by negative growth between 2016 and 2018. The year 2019 was the first year for positive growth after 2 years of declines.

**Consumer goods** began the decade ranking fourth among Canada's largest goods exports and ended the decade ranking third, overtaking exports of metal ores and non-metallic mineral products.

The **aircraft and other transportation equipment** sector is small, accounting for less than 5% of Canadian goods exports; however, this sector experienced the fastest growth over the last decade, including in 2019. The fastest growth took place between 2013 and 2015. In contrast, exports of **chemical, plastic and rubber products** declined in 2019, and had the lowest average annual growth rate among goods sectors in the last decade.





## 1.2 CANADIAN TRADE PERFORMANCE

### GOODS TRADE PERFORMANCE: IMPORTS

The ranking of Canada's top goods imports remained constant over the decade, with consumer goods ranking number one, followed by motor vehicles and parts, and electronic

and electrical equipment and parts. These 3 goods imports together made up a little more than 50% of Canada's goods imports in 2019.

**TABLE 1.1**  
Value of Canadian goods trade  
in 2019 by product

	VALUE (\$B)	ANNUAL GROWTH	
		2019 (%)	AVERAGE 2010–2019 (%)
<b>EXPORTS</b>			
Aircraft, and other transportation equipment and parts	28	8.9	6.3
Basic and industrial chemical, plastic and rubber products	34	-2.3	1.9
Consumer goods	71	6.2	5.6
Electronic and electrical equipment and parts	30	2.1	3.2
Energy products	114	2.7	3.2
Farm, fishing and intermediate food products	38	-4.4	5.4
Forestry products and building and packaging materials	42	-10	4.0
Industrial machinery, equipment and parts	41	5.0	5.3
Metals ores and non-metallic mineral products	65	1.0	3.7
Metals ores and non-metallic minerals	21	8.3	3.5
Motor vehicles and parts	93	3.0	5.7
<b>TOTAL</b>	<b>595</b>	<b>1.7</b>	<b>4.4</b>
<b>IMPORTS</b>			
Aircraft, and other transportation equipment and parts	26	11	9.0
Basic and industrial chemical, plastic and rubber products	45	-5.0	5.5
Consumer goods	125	3.3	5.0
Electronic and electrical equipment and parts	72	1.2	3.4
Energy products	37	-1.8	-0.3
Farm, fishing and intermediate food products	21	4.6	6.1
Forestry products and building and packaging materials	27	0.1	4.5
Industrial machinery, equipment and parts	69	1.8	5.7
Metals ores and non-metallic mineral products	40	-4.5	1.3
Metals ores and non-metallic minerals	14	-1.4	6.2
Motor vehicles and parts	115	1.1	5.5
<b>TOTAL</b>	<b>614</b>	<b>1.1</b>	<b>4.5</b>

Data source: Statistics Canada, [Table 36-10-0020-01](#). Retrieved on May 28, 2020.  
Calculation of the OCE.

## 1.2 CANADIAN TRADE PERFORMANCE

**Consumer goods**, which ranked number one for imports, had good growth in 2019 at 3.3% compared to the 1.1% growth rate for Canada's goods imports as a whole. This sector also grew steadily over the past decade, posting positive growth every year (up 5% on average annually).

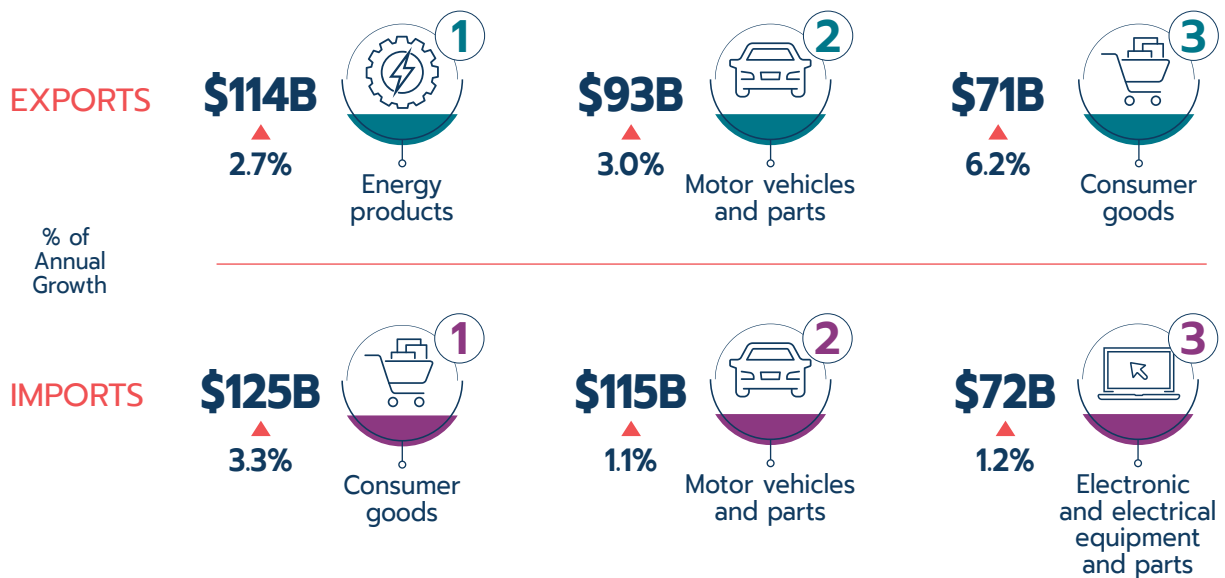
Growth in imports of **motor vehicles and parts** declined in the past 2 years compared to their annual average growth rate in the last decade. Due to the integrated nature of the North American auto supply chain, where parts and unfinished products cross the borders many times before becoming a finished product, the growth trends for both exports and imports of Canadian motor vehicles and parts are often similar.

Although Canadian imports of **electronic and electrical equipment and parts** continued to be Canada's third-largest imports in 2019, the sector posted the third-lowest growth rate over the past decade.

**Aircraft and other transportation equipment and parts** account for a small share of Canadian goods imports just as they do for goods exports, nevertheless, imports of these products grew the fastest percentage wise among goods imports over the last decade, including in 2019.

Canadian imports of **energy products**, which declined in 2019, were the only goods imports to decline over the last decade.

### TOP TRADING SECTORS IN 2019



## 1.2 CANADIAN TRADE PERFORMANCE

### GOODS IMPORT SOURCES AND EXPORT DESTINATIONS

In 2019, Canada’s top trading partners for both goods exports and imports were the United States, the European Union and China (Table 1.2). Of Canada’s main trading partners, the European Union<sup>2</sup> and India were 2 of Canada’s trading partners for which growth of both goods imports and goods exports was positive and significantly above their respective total growth (1.1% and 1.7%) in 2019. Canadian goods exports to the European Union

<sup>2</sup> The statistics for the European Union include the United Kingdom since it was still part of the union in 2019.

increased 7.7% in 2019, the fourth consecutive year of growth, after experiencing a period of volatile upswings and downswings earlier in the decade. The provisional application of the Comprehensive Economic and Trade Agreement (CETA) since September 2017 has provided underlying support for Canadian exports to the European Union. On the other hand, Canadian goods imports from the European Union only grew 4.2% in 2019, the second calendar year after the provisional application of CETA, down from the first year of CETA when Canadian goods imports from the European Union grew 11.9%.

### Are Canadian exporters and importers taking advantage of CETA?

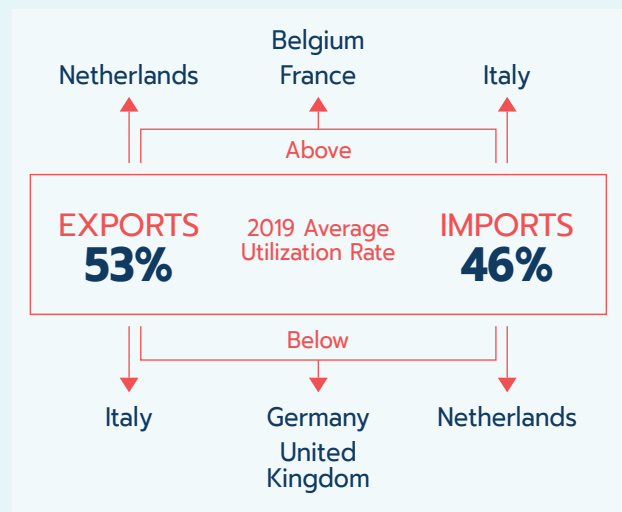
It’s been 2 years since the provisional application of the Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union, which raises an important question: are Canadian exporters and importers making extensive use of the preferential tariffs offered by the agreement? Determining the extent to which importers and exporters have already embraced these preferential tariffs will tell the Canadian government whether it needs to step up its campaign to promote CETA to more Canadian companies.

Based on a metric known as the utilization rate, it seems that so far not all Canadian exporters and importers are taking full advantage of CETA. The utilization rate indicates the proportion of eligible goods and services for which a preferential tariff was used. In 2019, the second year of CETA, the average utilization rate for Canadian exports to the EU overall was 53%, but for imports it was only 46% (Yu, 2020). The good news is both rates were up from 2018, CETA’s first year: up 3 percentage points for exports and almost 9 percentage points for imports.

While the annual utilization rates for both exports and imports are trending up for the EU overall, the rates differed for individual EU trading partners. For example, both rates were below the EU

average for Germany and the United Kingdom—Canada’s two largest EU trading partners. On the other hand, both utilization rates were above average for France.

These findings suggest that further promotion efforts are needed, with special attention to some markets like Germany and the United Kingdom, to increase the utilization rates.



## 1.2 CANADIAN TRADE PERFORMANCE

Due to various trade measures by China that have impacted Canadian canola, soybeans, meat and other food products, Canadian exports to China declined 16% in 2019. Despite the setback in 2019, Canadian exports to China grew on average 6.3% each year between 2010 and 2019. Canadian goods imports from China grew at a weak rate in 2019 (up 1.1%) compared to the average annual growth rate of 6.6% in the last decade (Table 1.2).



**TABLE 1.2**  
Value of Canadian goods trade  
in 2019 by partner

	VALUE (\$B)	ANNUAL GROWTH	
		2019 (%)	AVERAGE 2010-2019 (%)
<b>EXPORTS</b>			
United States	443	2.5	4.6
European Union	50	7.7	3.3
China	24	-16	6.3
Japan	13	-2.8	3.2
Mexico	8.4	-12	2.5
South Korea	5.8	-5.9	4.3
India	5.0	13	9.8
Hong Kong	4.2	2.4	8.6
Other Countries	41	3.7	2.5
<b>TOTAL</b>	<b>595</b>	<b>1.7</b>	<b>4.4</b>
<b>IMPORTS</b>			
United States	392	0.3	4.7
European Union	66	4.2	5.6
China	47	1.1	6.6
Japan	12	-2.4	2.4
Mexico	20	-2.0	4.4
South Korea	8.5	2.4	6.8
India	4.1	4.1	10.8
Hong Kong	4.2	-1.5	-0.9
Other Countries	59	4.4	1.4
<b>TOTAL</b>	<b>614</b>	<b>1.1</b>	<b>4.5</b>

Data source: Statistics Canada, [Table 36-10-0023-01](#).  
Retrieved on May 28, 2020.  
Calculation of the OCE.

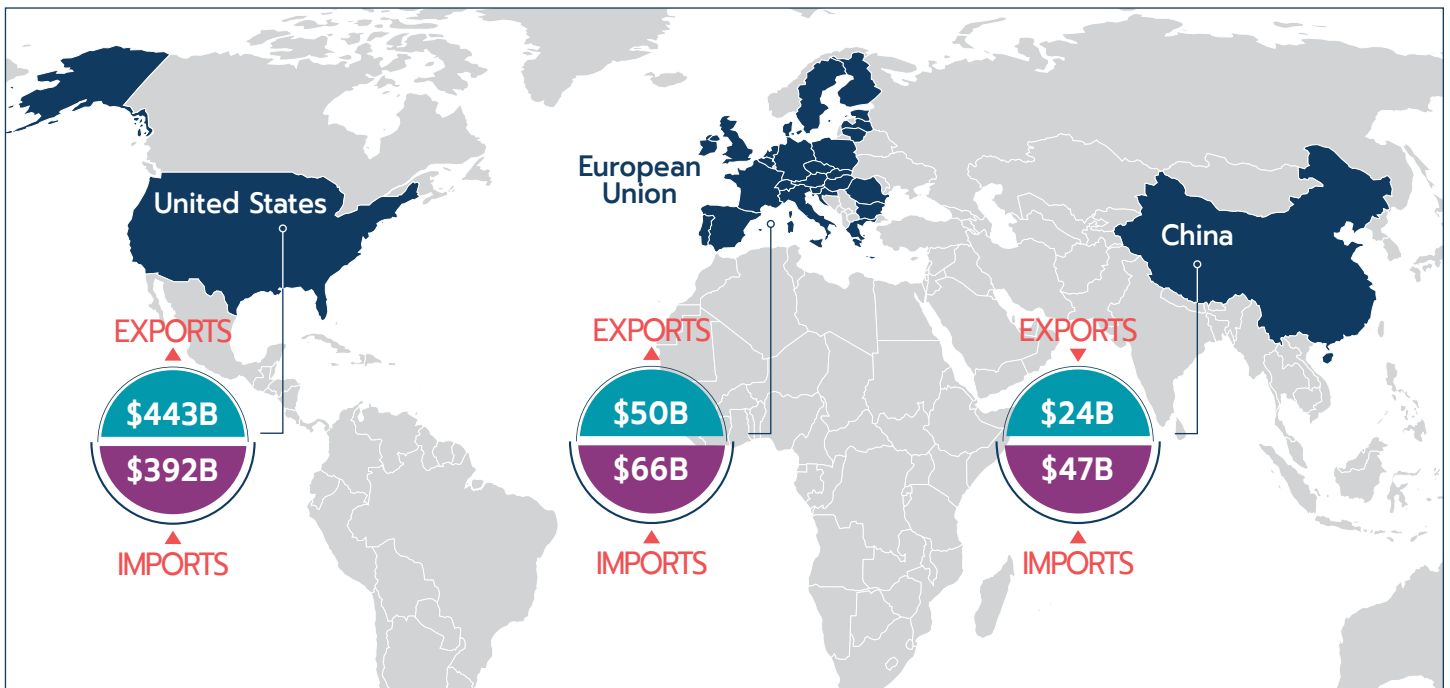


## 1.2 CANADIAN TRADE PERFORMANCE

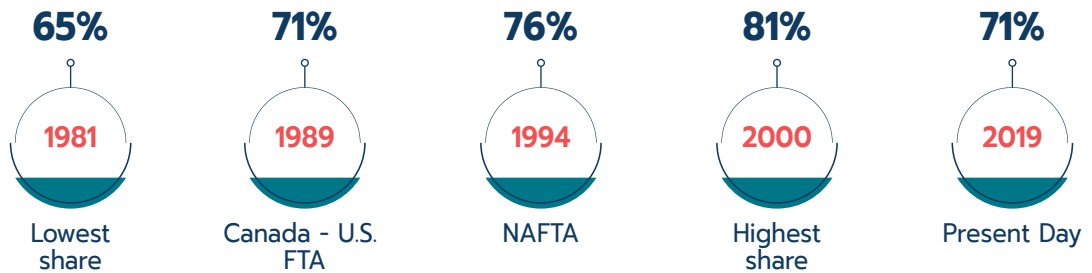
Although growth in Canadian exports to India has been volatile and inconsistent over the last decade, Canadian exports to this partner have nevertheless been growing at a fast pace overall, with 12.6% growth in 2019. Likewise, goods imports from India continued to grow at a strong rate over the last decade, including in 2019, with positive growth every year.

Growth in the Canadian goods trade with the United States has slightly outpaced the overall Canadian goods trade in the last decade, thereby increasing the U.S. share of Canadian trade. However, most of the growth in the Canadian goods trade with the United States occurred in the first half of the decade; the U.S. share of the Canadian goods trade has been on a downward trend since 2014.

### TOP 3 GOODS TRADING PARTNERS



### U.S. SHARE OF CANADIAN EXPORTS IN THE LAST 4 DECADES



## 1.2 CANADIAN TRADE PERFORMANCE

### SERVICES TRADE PERFORMANCE

In 2019, the value of Canadian services exports grew for all major sectors, although growth in transportation services was slightly slower (3.9%) than the others (Table 1.3). Over the last decade, Canadian exports of travel services experienced a high growth rate, but in the last 2 years growth has moderated. Similarly, growth in exports of commercial services was stronger earlier in the decade than recently.

As with exports, the value of imports grew for all services sectors in 2019, but at different rates. Most notably, annual growth for transportation imports was significantly less (1.0%) than for each of the other services imports while imports of government services saw the strongest growth rate (7.4%) in 2019. Over the decade, the average annual growth of travel services exports (7.8%) outpaced total services exports (5.7%). In contrast, the average annual growth of travel services imports lagged behind total services imports in the last decade. Finally, commercial services imports grew faster than other type of services over the last decade (5.1%), although growth tapered off in 2018 and 2019.

TABLE 1.3

Value of Canadian services trade in 2019 by type

	VALUE (\$B)	ANNUAL GROWTH	
		2019 (%)	AVERAGE 2010–2019 (%)
<b>EXPORTS</b>			
Commercial	77	4.4	5.3
Travel	36	4.7	7.8
Transportation	19	3.9	4.4
Government	1.7	5.5	0.3
<b>TOTAL</b>	<b>134</b>	<b>4.4</b>	<b>5.7</b>
<b>IMPORTS</b>			
Commercial	74	2.3	5.1
Travel	47	5.1	4.1
Transportation	32	1.8	4.3
Government	1.4	7.4	1.2
<b>TOTAL</b>	<b>154</b>	<b>3.1</b>	<b>4.6</b>

Data source: Statistics Canada, [Table 36-10-0014-01](#). Retrieved on May 28, 2020. Calculation of the OCE.

### TOP SERVICES SECTOR IN 2019



## 1.2 CANADIAN TRADE PERFORMANCE

### SERVICES IMPORT SOURCES AND EXPORT DESTINATIONS

As with its goods trade, Canada's services trade is concentrated on the U.S. market, which accounted for just over 50% of Canada's overall services trade in 2019. Growth in services trade with the United States was weak in 2019 compared to the annual average over the last decade. It also lagged total services trade, causing the U.S. share of Canadian services trade to decline slightly.

Even though it has slowed in recent years, Canadian services trade with China grew at a tremendous pace over the last decade (Table 1.4). Most of this growth was driven by services exports to China, which averaged just under 16% annual growth over the decade, while average annual growth of imports was only 5.9%.



**TABLE 1.4**  
Value of Canadian services trade  
in 2019 by trade partner

	VALUE (\$B)	ANNUAL GROWTH	
		2019 (%)	AVERAGE 2010–2019 (%)
<b>EXPORTS</b>			
United States	72	2.9	5.7
European Union	22	3.3	4.6
China	8.0	8.1	16
Japan	1.8	7.6	4.1
Mexico	1.6	2.3	7.3
South Korea	1.6	5.1	4.2
India	2.3	8.4	18
Hong Kong	1.9	9.7	7.4
Other Countries	22	8.4	3.9
<b>TOTAL</b>	<b>134</b>	<b>4.4</b>	<b>5.7</b>
<b>IMPORTS</b>			
United States	84	3.1	4.0
European Union	27	0.7	5.0
China	3.0	5.8	5.9
Japan	2.7	5.1	6.1
Mexico	3.9	1.6	6.5
South Korea	0.6	0.0	4.9
India	1.7	4.3	13
Hong Kong	5.3	2.1	6.2
Other Countries	26	5.6	4.9
<b>TOTAL</b>	<b>154</b>	<b>3.1</b>	<b>4.6</b>

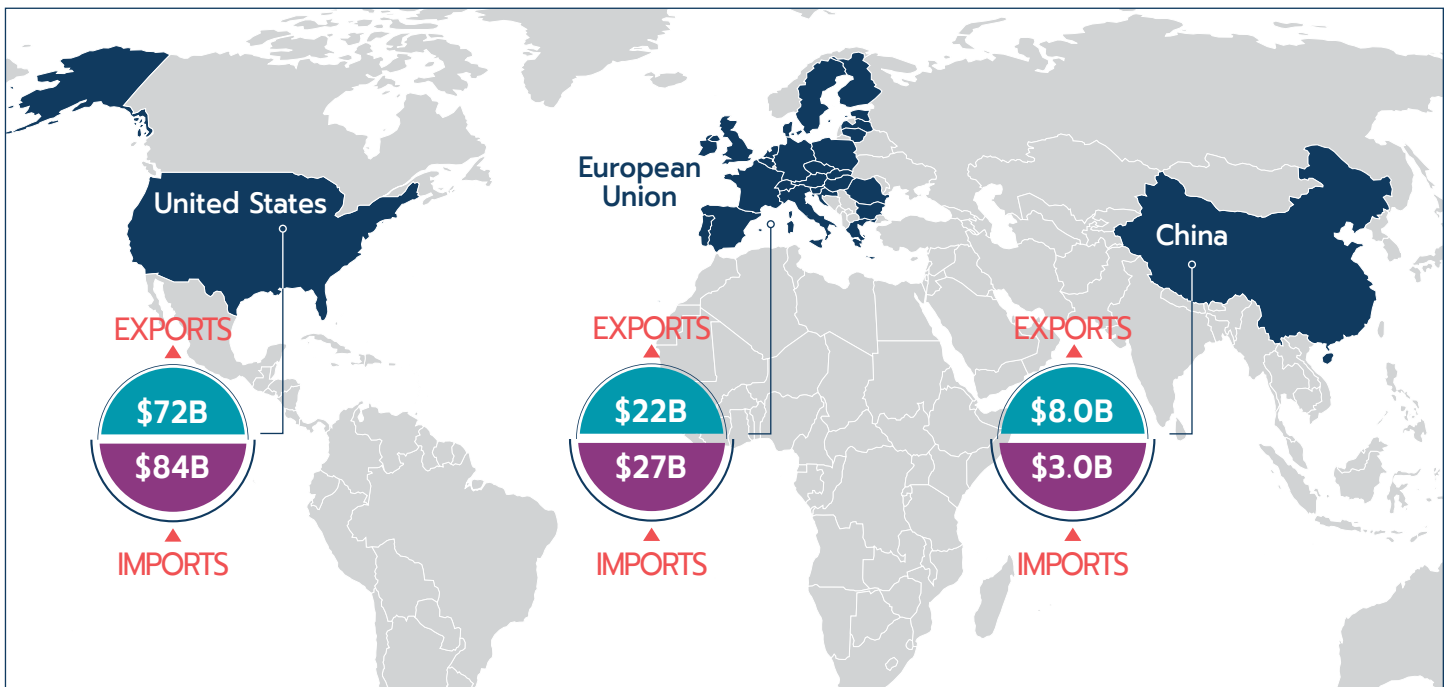
Data source: Statistics Canada, [Table 36-10-0024-01](#).  
Retrieved on May 28, 2020.  
Calculation of the OCE.

## 1.2 CANADIAN TRADE PERFORMANCE

Canada's services trade with India has also grown at a fast pace over the last decade, but similar to many other aspects of Canadian trade, has slowed in the latter part of the decade.

Likewise, growth in 2019 of Canadian services trade with the European Union was weak compared to the average annual growth for the last decade. The services trade deficit with the European Union has also increased over the last decade, as growth in services imports (5.0%) has outpaced growth in services exports (4.6%).

### TOP 3 SERVICES TRADING PARTNERS





### Visible minority exporters

Recent global protests have put the spotlight onto existing inequalities throughout society, including anti- Black racism. Global Affairs Canada is committed to an inclusive trade agenda that supports all segments of society in taking advantage of the economic opportunities flowing from trade. Supporting businesses owned by visible minorities and other underrepresented groups is therefore a priority for the department.

While visible minorities<sup>3</sup> account for 22% of Canada’s population, they only account for 12% of small and medium-sized enterprises (SME) owners (in terms of majority ownership), which reflects a substantial underrepresentation of visible minorities in SME ownership. Furthermore, among SMEs that export only 11% are owned by visible minorities—a modest gap in the propensity to export compared to other SMEs, but one that has persisted over several years.<sup>4</sup>

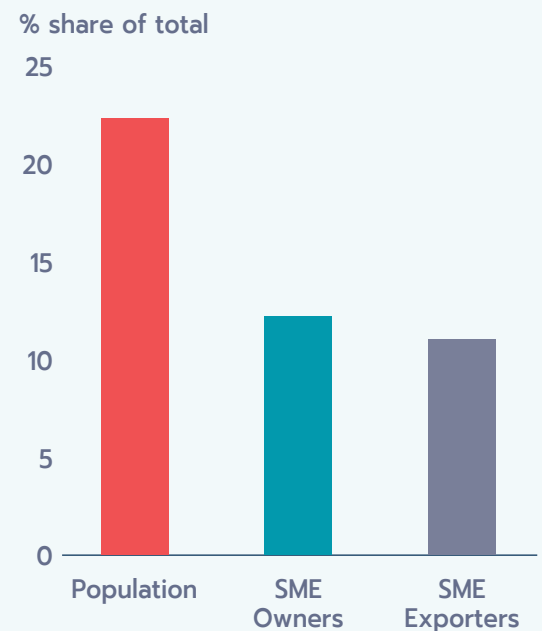
The characteristics of SMEs owned by visible minorities differ from those not owned by visible minorities in several key areas. They are more likely to be majority-owned by women compared to firms not owned by visible minorities (23% vs. 14%), and the primary decision maker tends to be more highly educated and younger. Moreover, these firms have a slightly higher propensity for innovation: 61% reported implementing a process, product or sales innovation, compared to 56% of firms that were not owned by visible minorities.

3 Visible minorities are those who are non-white and not indigenous, as defined in the *Employment Equity Act*.

4 The 2011, 2014 and 2017 survey results from Statistics Canada’s Survey on Financing and Growth of Small and Medium Enterprises report percentage point gaps ranging between 0.8 to 1.3 in the propensity to export of SMEs owned by visible minorities versus other exporters.

Understanding the key characteristics of SMEs owned by visible minorities helps decision makers develop policies and programs that support the trade ambitions of these business owners and complements the past analysis on women exporters and Indigenous exporters highlighted in the 2019 edition of Canada’s State of Trade. This group of young, highly educated innovators with significant women representation bodes well for Canada’s commercial future abroad.

### VISIBLE MINORITY SHARE OF...



Data Source: Statistics Canada, Census 2016 and Survey on Financing and Growth of Small and Medium Enterprises, 2017. Calculation of the OCE.

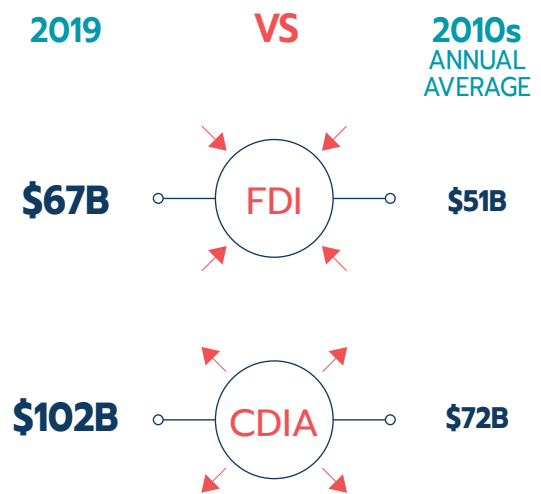
### 1.3 Canadian foreign investment performance

In 2019, Canada’s foreign investment performance<sup>5</sup> was good despite the global context, with flows of foreign direct investment (FDI) and Canadian direct investment abroad (CDIA) increasing. The United Nations Conference on Trade and Development (UNCTAD) estimated a slight decline in world FDI flows (1.4%) for 2019 due to weaker global macroeconomic performance and general uncertainty for investors. In contrast, for Canada both FDI and CDIA flows increased from the previous year and were each well above their respective decade averages. FDI flows in 2019 stood at \$67 billion versus a \$51-billion average for the decade, while CDIA flows were \$102 billion compared to a \$72-billion average (Figure 1.5).

As noted in the section 1.1 “Global economic, trade and investment environment”, most of the global decline was associated with weak flows into developed countries. In contrast, FDI flows to Canada increased by \$11 billion or 19% in 2019. CDIA was also opposite to the global trend: CDIA grew in 2019 and has been and continues to be mostly destined for developed economies. Indeed, less than 10% of CDIA stock is destined for developing countries where it is largely concentrated in countries of Central and South America (Yergeau 2019). Overall, CDIA flows rose by \$37 billion or 57% in 2019, albeit after an equally important decline between 2017 and 2018.

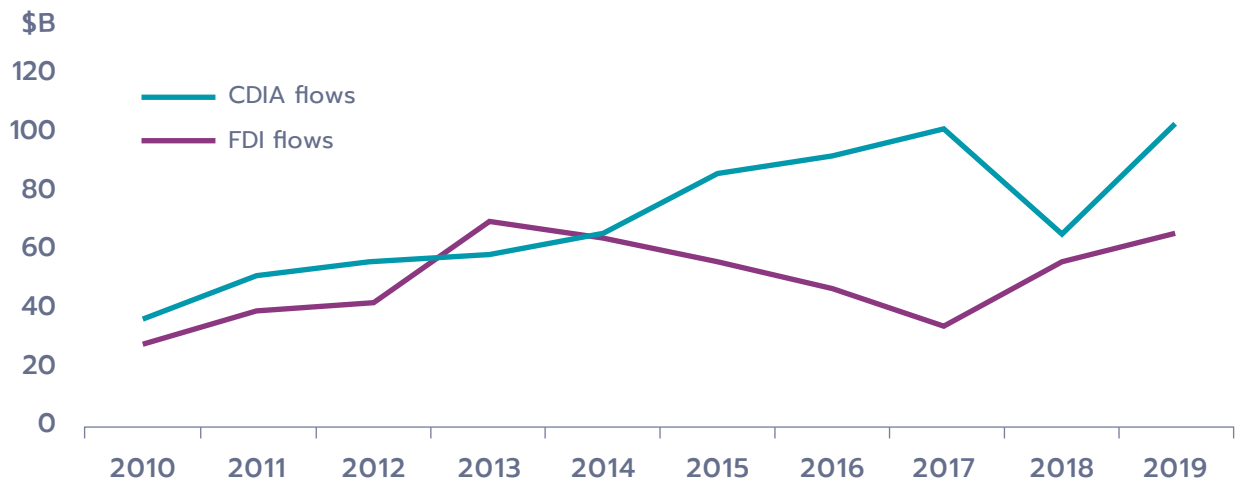
As Figure 1.5 shows, both CDIA and FDI flows can be quite volatile, since 1 or 2 large transactions can greatly influence the results for a given year. For example, the low level of FDI in 2017 was partly attributable to 2 large acquisitions by Canadian companies of foreign subsidiaries in the energy sector. These acquisitions represent divestitures (or declines in FDI flows), and yet Canadian interests were maintained in terms of production and economic activity. Excluding these 2 large transactions from the data for flows for that year means that FDI flows were approximately \$45 billion—just over 30% (or about \$11 billion)—higher than the reported \$34 billion in official statistics.

#### INVESTMENT FLOWS



<sup>5</sup> The COVID-19 health crisis has prompted Statistics Canada to postpone the publication of the 2019 stock of direct investment to and from Canada. The Office of the Chief Economist may publish an analysis of 2019 stock data when it becomes available.

FIGURE 1.5  
Canadian flows of direct investment



Data source: Statistics Canada, [Table 36-10-0025-01](#). Retrieved on May 28, 2020.

In 2019, there was some consolidation in the mining sector, including 1 large transaction affecting the FDI flows and another affecting CDIA flows. The first transaction involved the purchase of Canadian Goldcorp Inc. by the U.S. firm Newmont Mining Corp. in a deal valued at \$10 billion. This merger acquisition contributed to the increase in FDI flows in 2019. The second transaction was the biggest deal in the gold mining industry’s history: Barrick Gold Corp. (a Canadian company) bought Randgold Resources Ltd. from the Channel Islands for \$18 billion, creating the world’s largest gold mining company by value and output.

In terms of composition, the 2019 FDI flows had similar shares of reinvested earnings and mergers and acquisitions (M&As) compared to the average shares for the past decade. Some 40% of the flows were from reinvested earnings and about 30% from M&As. The remaining 30% is attributable to the category “Other flows,” which encompasses loans and repayments of loans between parent companies and their subsidiaries as well as flows that relate to the financing of new (“greenfield”) investments. The 2019 share of M&As in CDIA flows was notably lower than the average annual share for the decade (that is, about 38% versus 52%) while the share of reinvested earnings stood about the same as the average for the decade at roughly 45%. It should be noted that just as flows themselves are volatile, the composition of the flows can also vary greatly from year to year.

### FDI AND CDIA SECTORAL COMPOSITION

Most of the \$37-billion increase in CDIA flows in 2019 can be attributed to the management of companies and enterprises sector (a notable \$24-billion increase), followed by the other industries sector. Furthermore, the management of companies and enterprises sector also was the recipient of the largest portion of CDIA flows, with the finance and insurance sector ranking second. As explained above, flows can be quite volatile, and as such there is little clear pattern over the decade for CDIA flows by sector with which to compare 2019. The only clear decade trend is that the finance and insurance sector had positive CDIA flows every year, while other sectors had 1 or 2 years of negative flows. The finance and insurance sector either ranked first or second in terms of largest flows in every year of the decade.

In 2019, the energy and mining sector received the largest FDI flows into Canada followed by the manufacturing sector. For FDI flows by sector, there are no clear sectoral patterns for the decade.

TABLE 1.5  
Canada's CDIA and FDI flows by sector (2019)

	LEVEL (\$B)	SHARE (%)
<b>CDIA</b>		
Energy and mining	20	20
Finance and insurance	30	29
Management of companies and enterprises	31	30
Manufacturing	3.7	3.6
Trade and transportation	14	13
Other industries	4.0	3.9
<b>TOTAL</b>	<b>102</b>	<b>100</b>
<b>FDI</b>		
Energy and mining	19	29
Finance and insurance	9.1	14
Management of companies and enterprises	9.4	14
Manufacturing	18	27
Trade and transportation	2.6	3.9
Other industries	8.3	12
<b>TOTAL</b>	<b>67</b>	<b>100</b>

Data source: Statistics Canada, [Table 36-10-0026-01](#). Retrieved on May 28, 2020. Calculation of the OCE.

## 1.3 CANADIAN FOREIGN INVESTMENT PERFORMANCE

### FDI SOURCES AND CDIA DESTINATIONS

In 2019, the United States was the recipient of more than one third of CDIA and was also associated with about half of the FDI flows into Canada. Although the U.S. share of flows in both directions fluctuated over the last decade, the United States remains Canada's main investment partner. The 2019 flows from the United States were above the decade's annual averages, which was \$25 billion for FDI flows.

Excluding the "all other countries" category, the investment partner ranking second was different for FDI and CDIA in 2019. The United Kingdom ranked second for CDIA in 2019 while Switzerland was the second-largest source of FDI. The United Kingdom was ranked second as a destination of CDIA every year over the last decade<sup>6</sup> except for 2013. In contrast, the country ranking second as a source of FDI flows changed every year over the decade.

<sup>6</sup> The breakdown for non-U.S. countries is only available since 2012. In this paragraph, all references to "last decade" refer to the period between 2012 and 2019.

Since FDI may transit by intermediary countries, FDI flows capture the last country the investment was in before entering Canada. Statistics presented on an ultimate investing country basis identify the country in which investors are located. This measure is available for stock data but unfortunately not for flows data. Stock data on an ultimate investing country basis indicates that countries such as the Netherlands and Luxembourg are not as important sources of FDI for Canada as flows could suggest. Meanwhile, countries such as the United States, Brazil and China hold larger stocks on an ultimate investing country basis, and thus their importance to Canada as sources of FDI may be understated by flows. Until new FDI stock data is published, the 2019 edition of the State of Trade presents FDI stocks both on an intermediate and ultimate investing country basis.

### THE U.S. IS CANADA'S MAIN INVESTMENT PARTNER

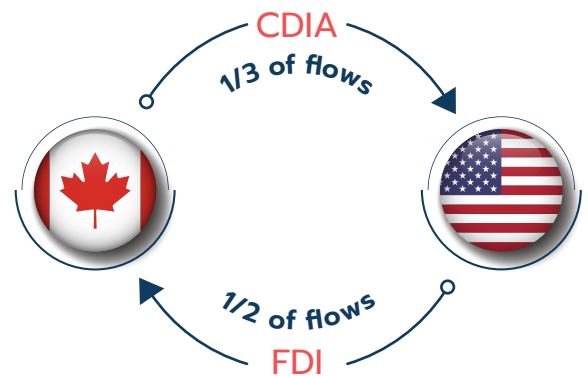


TABLE 1.6  
Canada's CDIA and FDI flows by destination  
and source (2019)

	LEVEL (\$B)	SHARE (%)		LEVEL (\$B)	SHARE (%)
<b>CDIA BY DESTINATION COUNTRY</b>			<b>FDI BY SOURCE COUNTRY</b>		
United States	37	36	United States	32	48
United Kingdom	7.6	7.5	Switzerland	7.8	12
Luxembourg	6.8	6.7	Netherlands	5.4	8.0
Switzerland	6.6	6.5	Cayman Islands	4.1	6.1
Cayman Islands	3.1	3.0	Luxembourg	3.1	4.7
Barbados	2.1	2.1	United Kingdom	2.6	3.8
Netherlands	1.8	1.8	Australia	2.3	3.4
France	1.8	1.7	France	1.9	2.8
Mexico	1.6	1.6	Brazil	1.5	2.2
Hong Kong	1.4	1.4	China	1.2	1.7
Germany	1.0	1.0	Barbados	0.4	0.6
China	0.6	0.6	Germany	0.4	0.6
Brazil	0.3	0.3	Japan	0.1	0.1
Japan	-0.1	-0.1	Mexico	0.0	0.0
Australia	-1.0	-1.0	Hong Kong	-0.7	-1.0
All other countries	31	31	All other countries	5.2	7.8
<b>TOTAL</b>	<b>102</b>	<b>100</b>	<b>TOTAL</b>	<b>67</b>	<b>100</b>

Data source: Statistics Canada, [Table 36-10-0473-01](#). Retrieved on May 28, 2020.  
Calculation of the OCE.

Note: Statistics Canada provides data by country for 15 selected countries.

### Has Canada benefited from the Comprehensive and Progressive Agreement for Trans-Pacific Partnership?

When a free trade agreement such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is implemented, the most frequently asked question is: Has the free trade agreement improved trade performance?

The answer to that question lies in calculating the extent to which growth in trade affected by the free trade agreement has changed. This calculation requires imports data—typically provided by the free trade agreement partners—that includes utilization of preferences as well as the quantity and the value of goods traded by tariff lines affected by the free trade agreement.<sup>7</sup>

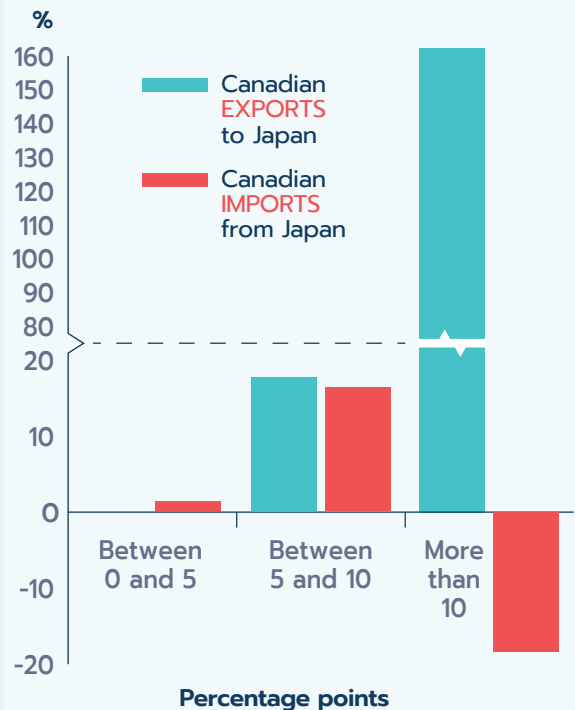
In the first year of CPTPP, 7 countries including Canada had ratified the agreement. Canadian merchandise exports to the ratified countries (excluding Mexico) in 2019 decreased slightly (by 0.1%) when compared to 2018—a combination of lower exports in wood, aluminum, and oilseeds and higher exports of meat, cereals, and machinery. Canadian merchandise imports from the ratified countries (excluding Mexico) advanced 5.7% in 2019, mainly driven by increased imports of electronics.

Japan is currently the only CPTPP member for which we have imports data by value and tariff lines, and consequently the only partner whose trade performance with Canada can be analyzed. Canadian exports to Japan that were affected by the CPTPP showed strong growth, especially for products with large tariff reductions. There was increased trade - both exports and imports - for products with tariff reductions of 5 percentage points or more. Of particular note were exports of products with reductions in tariffs of more than 10 percentage points, mainly frozen and fresh beef, which showed exceptionally strong growth of 162%.

<sup>7</sup> Affected products are products that are given tariff reductions under an FTA. The growth in trade of these products shows to a certain extent the effectiveness of an FTA when more advanced analysis cannot be carried out.

So has the CPTPP supported Canadian trade? Although it is early days, based on Canada’s trade with Japan it is clear that Canadians are benefiting from the tariff reductions associated with this agreement and trade in those products with significant tariff reductions is growing. The true impact of the CPTPP, like any trade agreement, must be examined over time as tariffs and other barriers are eliminated and importers and exporters adjust supply chains to reflect new opportunities.

GROWTH IN TRADE WITH JAPAN BY TARIFF REDUCTION



**The new Canada-United States-Mexico Agreement is now in force!**

The North American Free Trade Agreement (NAFTA) has served Canada’s commercial interests well. Since its implementation in 1994, NAFTA has contributed to an unprecedented increase in trade flows across North America. Between 1993 and 2019, total merchandise trade between Canada and the United States tripled, and total merchandise trade between Canada and Mexico grew almost 10-fold. Overall, total trilateral merchandise trade (the total of each country’s imports from one another) had risen to reach nearly US\$1.1 trillion in 2019.

The modernized NAFTA entered into force on July 1, 2020. The new Agreement preserves key elements of NAFTA, modernizes disciplines to address modern trade challenges, reduces red tape at the border, and provides enhanced predictability and stability for workers and businesses across the integrated North American market. Overall, the modernization of NAFTA marks an important milestone in Canada’s economic relationships with the United States and Mexico.

The Office of the Chief Economist estimates that the implementation of the CUSMA outcome secures Canada’s overall GDP gains of \$6.8 billion (US\$5.1 billion), or 0.249%, which would be lost if the United States withdrew from NAFTA. From a labour perspective, CUSMA secures nearly 38,000 jobs that would otherwise be lost while preserving real wage gains for Canadian workers, particularly machinery operators, manual labourers and sales workers. For more details, see [The Canada-United States-Mexico Agreement: Economic Impact Assessment](#).



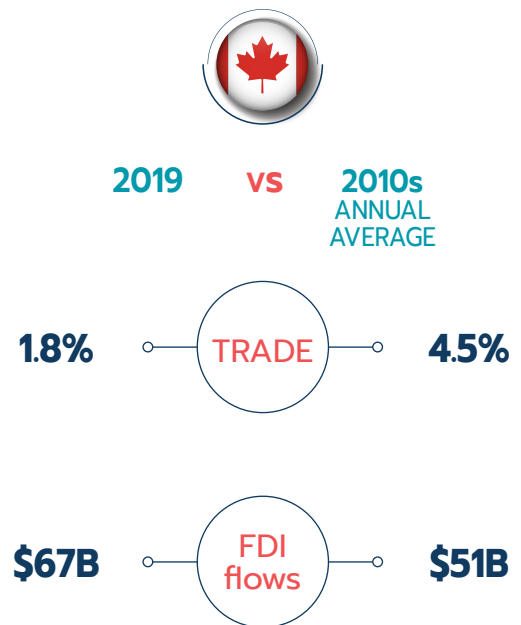
### Take-home message 1

The year 2019 was marked by growth and solid performances for Canadian trade and investment even while the world's trade and investment performance either stagnated or slightly declined.



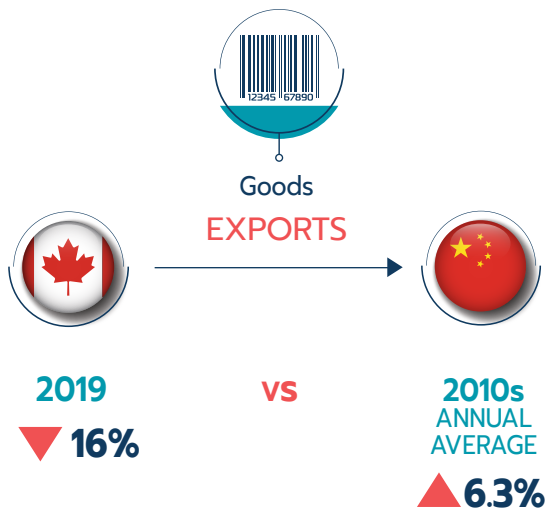
### Take-home message 2

Canada's 2019 results were mixed compared to the recent decade; growth in trade in 2019 was lower than the annual average over the decade while investment flows in 2019 exceeded the average for the decade.



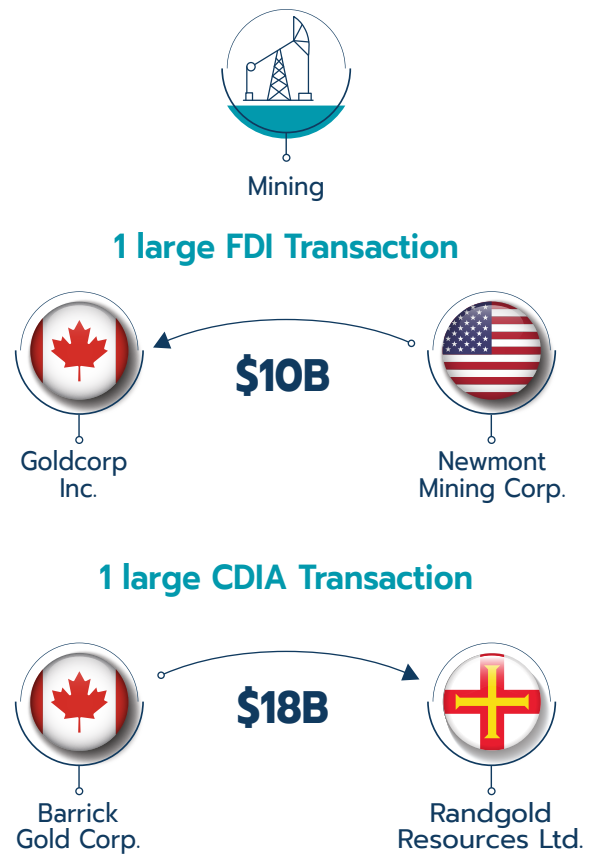
### Take-home message 3

Despite the 16% decline in 2019, Canadian goods exports to China grew 6.3% per year on average between 2010 and 2019.



### Take-home message 4

Both FDI and CDIA flows increased in 2019, in part due to 2 large transactions in the mining sector; the first increased FDI, and the second increased CDIA.



# EARLY IMPACTS OF COVID-19 ON CANADA'S INTERNATIONAL TRADE

The year 2020 started with what at first appeared to be a localized health crisis caused by a viral disease. During the first 3 months of 2020, however, this disease—eventually named COVID-19—would spread, provoking profound effects on the global economy and trade. At the end of February, the World Health Organization reported cases in almost 60 countries, with over 90% of the cases in China. By the end of March, COVID-19 had spread to over 190 countries, but by that time, only about 10% of the reported cases were in China.

National governments reacted to the appearance of COVID-19 cases in their jurisdiction by introducing containment measures. As COVID-19 affected countries at different times and at different speeds, the onset of containment measures was spread throughout January, February and March 2020. These containment measures affected every aspect of international trade, including transportation and the sourcing of inputs. Following the release of March 2020 goods trade data,<sup>8</sup> the early impacts of COVID-19 and the effect of the worldwide shutting down of factories and businesses and stay-home measures on Canada's international trade could be quantified. The varying timing of containment measures from country to country implies that effects on Canadian's international trade are most likely different by trading partner.

<sup>8</sup> This chapter uses non-seasonally adjusted trade data on a customs basis under the Harmonized Commodity Description and Coding System (HS). This is used instead of balance of payments data because data broken down by trading partner and by detailed product is more readily available.

This chapter begins by analyzing how Canada's trade in different sectors in Canada was impacted by COVID-19 during these early months and then identifies changes in Canada's trade patterns by partner and by mode of transportation. The chapter concludes by showing how Canada has fared relative to other countries.

Many of Canada's trading partners introduced their containment measures in March 2020. As international trade flows are susceptible to monthly and seasonal fluctuations, this chapter focuses on year-over-year (YoY) comparisons in the first quarter of 2020, specifically concentrating on the month of March, the last month of the first quarter, to highlight the impact from the pandemic.

Comparing trade data for March 2020 with the results for the first quarter overall allows us to distinguish the global effects of COVID-19 from other events that might have affected trade during the first quarter.

2.1 IMPACTS BY SECTOR

2.1 Impacts by sector

GOODS TRADE

Overall, Canadian goods trade decreased 3.5% in the first quarter of 2020 compared to the same period in 2019, as exports were down 1.2% and imports fell 5.7% (Table 2.1). Declines were concentrated in March 2020, when shutdowns and physical distancing measures were first implemented in Canada and in many of its principal trading partners. Canadian exports fell by 7.9% and imports by 8.4% YoY in March 2020. However, individual sectors in Canada were impacted in different ways. Table 2.1 lists the top 10 export and import product sectors for Canada in the first quarter of 2020.

TOP TRADING SECTORS MOST AFFECTED IN MARCH 2020

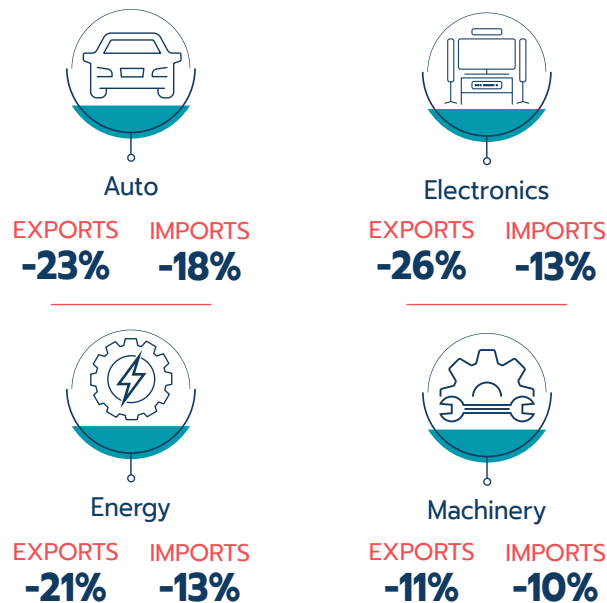


TABLE 2.1  
Top 10 Canadian export and import product sectors in Q1 2020

	Q1 2020		MARCH 2020	
	(\$B)	(YOY Δ%)	(\$B)	(YOY Δ%)
<b>EXPORTS</b>				
Aircraft & Parts	3.6	24	1.4	23
Aluminum	2.8	11	1.0	14
Automotive	17	-11	5.5	-23
Electronics	3.9	-23	1.4	-26
Energy	30	3.3	9.1	-21
Machinery	11	-4.4	3.8	-11
Pharmaceuticals	2.8	17	1.1	35
Plastics	4.2	-3.7	1.6	-0.1
Precious Stones & Metals	7.4	6.9	2.4	12
Wood	3.7	-3.6	1.5	3.4
<b>TOTAL</b>	<b>139</b>	<b>-1.2</b>	<b>48</b>	<b>-7.9</b>
<b>IMPORTS</b>				
Aircraft & Parts	3.1	-30	1.1	-13
Automotive	22	-11	7.9	-18
Electronics	12	-10	4.3	-13
Energy	10	4.7	3.0	-13
Iron or Steel Products	3.1	-9.3	1.1	-12
Machinery	22	-5.1	7.7	-10
Pharmaceuticals	4.7	2.5	1.7	1.5
Plastics	5.2	-5.1	1.9	-1.5
Precious Stones & Metals	3.6	8.5	1.2	-0.7
Scientific Instruments	4.0	-4.1	1.4	-11
<b>TOTAL</b>	<b>139</b>	<b>-5.7</b>	<b>49</b>	<b>-8.4</b>

Data source: Statistics Canada, [Canadian International Merchandise Trade Database](#). Retrieved on May 7, 2020. Calculations of the OCE.

## 2.1 IMPACTS BY SECTOR

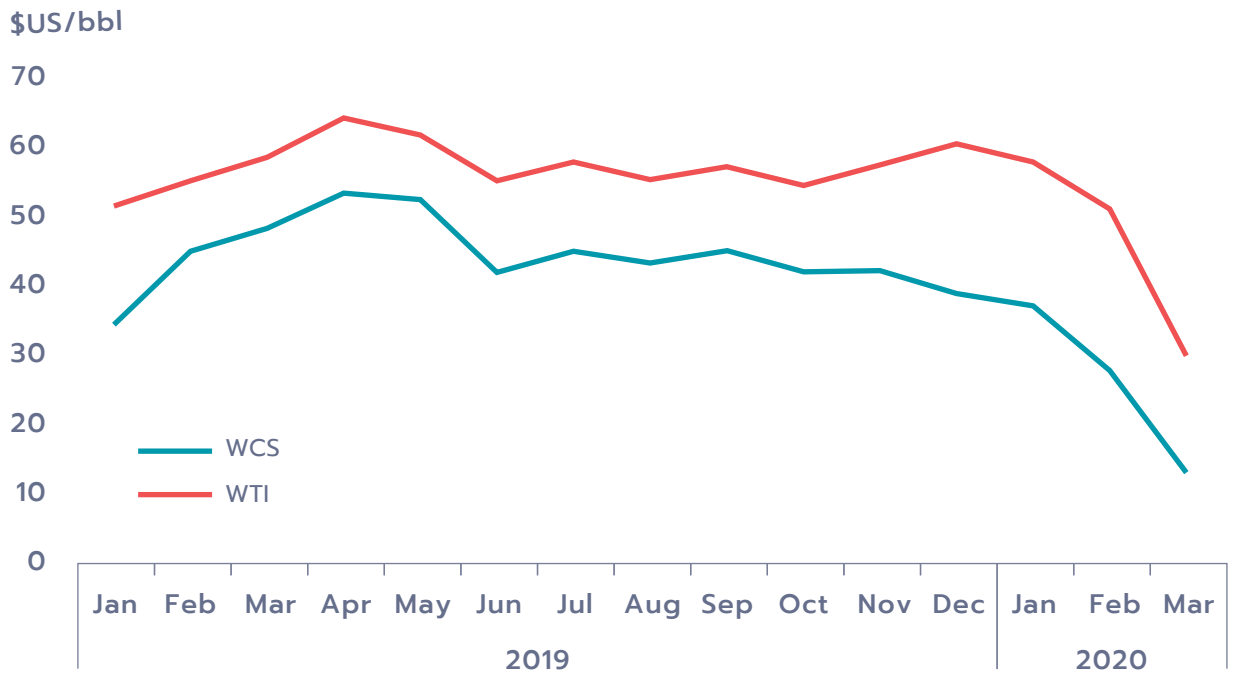
### Plummeting commodity prices dragged down exports of energy products

Energy, Canada’s largest export sector, saw exports increase in the first 2 months of 2020 only to crash in March, mainly from lower exports of crude oil and petroleum gases. On a YoY basis, Canadian energy exports advanced 3.3% in the first quarter of 2020 despite a 21% decline in March.

Plunging crude oil prices were behind the 9.5% decline in crude oil exports in March 2020 (Figure 2.1). The benchmark price for North American crude oil is West Texas Intermediate (WTI), while Western Canadian Select (WCS) is the benchmark for heavy crude oil obtained from western Canadian producers. The pair normally moves in sync as WTI sets the baseline prices, and WCS then trades at a discount due to its higher cost

of refinement and transportation capacity issues. Even though WCS recovered from a historical low price in late 2018, its prices trended down since May 2019. In fact, from Q1 2019 to Q1 2020, the average WCS price fell by 40%, propelled by a 73% YoY decline in March 2020. Moreover, the crash in crude oil market prices might not be fully reflected in export values for 2 reasons: first, oil price fluctuations are normally observed with delays in export statistics, and second, an increase in export volumes partially mitigated the overall decrease. Oil producers often use financial instruments to hedge against temporary shocks to oil prices, sheltering them from short-term volatility but not from long-term weakness in oil prices. This delayed effect combined with the fact that oil prices continued to fall in April could result in even more severe declines in crude oil export values in the coming months.

**FIGURE 2.1**  
Price per barrel - WTI and WCS oil



Data source: WCS price from Alberta Energy, Government of Alberta; WTI price from U.S. Energy Information Administration. Retrieved on May 7, 2020.

## 2.1 IMPACTS BY SECTOR

Many underlying factors contributed to the crash in crude oil prices, but the plummeting demand for oil as countries around the world shut down their economies to limit the spread of the virus during the early days of COVID-19 is certainly among them. Prior to COVID-19 becoming a global crisis, oil production exceeded demand. The COVID-19 containment measures depressed oil demand—known as a “demand shock”—which in the absence of a proportional cut to global oil production resulted in an even greater oversupply of oil. In late April 2020, the difficulty and the high cost of storing an oversupply of crude oil pushed prices down even further.

Other energy exports experienced significant drops in March 2020 compared to March 2019. Exports of petroleum gases registered a contraction of more than 62% YoY in March 2020, primarily on lower export prices and volumes of natural gas and propane, while refined oil dropped 34%, coal by 35%, and electrical energy by 16%.

On the import side, the energy sector registered a smaller but nevertheless significant contraction. On a YoY basis, Canadian energy imports fell 13% in March 2020, primarily due to a 20% decline in crude oil imports and an 85% reduction in electrical energy imports.

### **Durable goods and those that rely on international supply chains were hit especially hard**

The automotive, machinery, and electronics production sectors were among the most impacted because of the integrated nature of their respective supply chains. Manufacturers ceasing production combined with general shutdowns interrupted the supply of intermediate inputs and lowered demand for their products. Since most of the products these sectors manufacture do not have “expiration dates” and since demand for them relies on the discretionary spending patterns of consumers these sectors will likely not fully recover until containment measures are lifted in Canada and abroad, and consumer confidence and personal disposable income are restored.

In March 2020, exports of automotive products were down 23%, due mainly to lower exports to the United States. Some automotive products had their exports hit harder, particularly passenger vehicles, automotive parts and trucks. Canadian imports of automotive products also decreased in March, down 18% YoY, largely due to a reduction in imports of automotive parts (down 28%).

Similarly, exports of machinery and electronics fell by 11% and 26%, respectively, in March 2020. Lower machinery exports were primarily attributable to gas turbines, internal combustion engines and parts, while electronic exports were down mostly due to lower exports of electronic integrated circuits and telephones. Canadian imports in both sectors were also down in March. Machinery imports fell 10% mainly because of declines in imports of internal combustion engines and automatic data processing machines, and electronics imports were down 13%, primarily due to lower telephone imports.

### Securing PPE products for Canada: data analysis by the OCE supports on-the-ground efforts by the TCS

As this chapter shows, the emergence of COVID-19 has disrupted global supply chains and the way businesses in Canada and around the world operate. Early on, Global Affairs Canada mobilized its people to help Canada find solutions to address the new challenges posed by COVID-19—including an unprecedented demand for personal protective equipment (PPE) and medical devices such as ventilators. Within the department, 2 groups with unique expertise came together to help Canada find the best sources of PPE. Data analysis by trade economists from the Office of the Chief Economist (OCE) came to the service of deal brokering by trade commissioners from the Canadian Trade Commissioner Service (TCS).

Although the pandemic changed trade conditions considerably, where products are manufactured tends to remain stable over time. Based on this assumption, the TCS did a sweeping scan of prospective companies while the OCE analyzed trade data in 2 ways to identify likely international sources of PPE and medical devices. The OCE first looked at the countries from which Canada had imported such products in the past and then it identified the countries that were the largest exporters of these products in the recent past.

This approach produced the following results:

- Malaysia, China, and Thailand were the biggest suppliers of rubber gloves to the world including Canada.
- China was the dominant supplier of face and eye protection.
- The United States is Canada’s main supplier of more complex forms of protection and medical devices such as gas masks and breathing appliances.
- Australia and the United States, followed by China and Mexico, are Canada’s major suppliers of ventilators.

The OCE shared this information with the TCS to help on-the-ground trade commissioners conduct strategic searches for this essential equipment and broker the best deals on behalf of Canada.

The TCS mobilized trade commissioners in over 160 cities to source and identify likely sellers of PPE to Canada from existing and new business contacts, stepping away from its regular mandate. Armed with information provided by the OCE, the TCS network was able to strategize its search rather than searching for PPE in places where none existed.



As such, trade commissioners in Malaysia and Thailand concentrated on companies specializing in rubber gloves while trade commissioners in Australia and the United States established contacts with ventilator producers. In some cases, the TCS had existing relationships with companies in the PPE business. In many other cases, trade commissioners relied on their shrewd business know-how to approach companies for the first time and broker deals on behalf of health authorities across Canada. Together, trade economists and trade commissioners were able to identify sources of this life-saving equipment to help meet Canada’s needs.

## 2.1 IMPACTS BY SECTOR

### Other sectors like agriculture products and medical goods have held steady

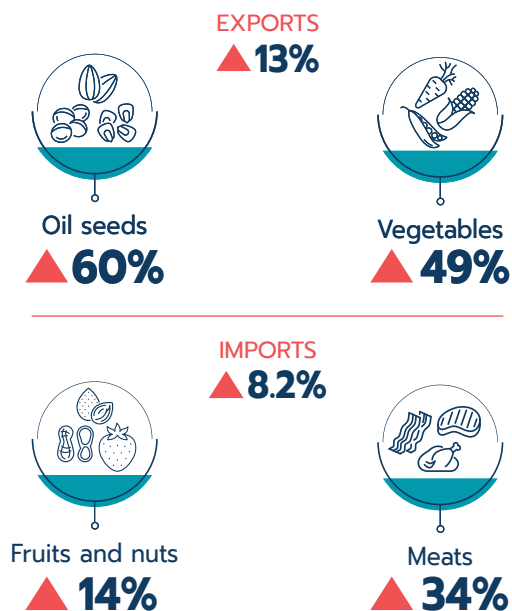
In contrast to most products, Canada's agriculture exports improved in March 2020 compared to the year prior, and this growth moderated the overall decline in Canadian goods exports in March. Led by higher exports of oil seeds and vegetables, Canadian agriculture exports rose 13% in March YoY. Exports of oil seeds were up 60% as canola seeds (71%) and soybeans (58%) both posted dramatic increases, and exports of vegetables rose 49%—supported by pulses (62%) and potatoes (77%). Other agriculture products such as preparations of cereals and fats and oils also recorded significant growth. Like exports, imports of agriculture products increased in March as well, up by 8.2%, supported by increases in imports of fruits and nuts (14%) and meat (34%). Canadian agriculture exports were up 8.5%, and imports rose 4.1% during Q1 2020 compared to Q1 2019.

Pharmaceutical products also rose (up 35%), exhibiting a pattern opposite of the overall decline in exports for the month of March 2020. This upward trend will likely continue as long as the crisis lasts or Canada develops additional capabilities for pharmaceutical products. Precious stones and metals also saw increased exports (12%) as gold prices strengthened, which is often the case in times of increased uncertainty. The increases in exports of aircraft and parts (23%), aluminum (14%), and iron and steel (16%) in March 2020 are more difficult to explain and may not be sustained.

### SERVICES TRADE

Canada's services trade has fared better than goods trade.<sup>9</sup> In the first quarter of 2020, services exports declined marginally, down 0.3% YoY, as declines in exports of travel and transportation services were almost entirely mitigated by higher commercial services exports (mainly financial services). This 0.3% decline was small when compared to the 2.9% decline in goods exports over the same period. The same was true for Canada's services imports, which fell 2.8% in Q1 YoY compared to the 5.5% decline in goods imports.

### THE AGRICULTURAL SECTOR DID WELL IN MARCH 2020



<sup>9</sup> This section uses non-seasonally adjusted balance of payments basis data for goods and services trade as opposed to the rest of the chapter that uses customs basis data. Customs basis data does not provide information for services trade.



## 2.2 Impacts by trading partners

As discussed at the beginning of the chapter, the pandemic did not initially manifest itself in all countries at the same time nor has it affected all countries the same way. The virus hit China and other countries early, and so they were able to start recovering or move into the recovery phase sooner. In contrast, the United States and European countries only started reporting a surge in COVID-19 cases in March 2020. Countries have also taken different approaches to limit the spread of the virus, which may have led to the differing impacts on international trade flows, including Canada's trade flows. Table 2.2 shows Canada's top 10 export destinations and import source countries in Q1 2020.

**TABLE 2.2**  
Top 10 Canadian goods export destinations and import sources in Q1 2020

	Q1 2020		MARCH 2020	
	(\$B)	(YOY Δ%)	(\$B)	(YOY Δ%)
<b>EXPORTS</b>				
United States	106	0.7	37	-6.3
China	5.0	-14	1.8	-15
United Kingdom	4.5	-10	1.1	-35
Japan	3.0	0.8	1.1	-3.2
Germany	1.8	29	0.8	33
Mexico	1.7	-10	0.6	-13
Netherlands	1.1	1.9	0.3	-24
South Korea	1.1	-26	0.3	-25
France	1.0	29	0.3	11
Italy	0.9	31	0.4	113
<b>TOTAL</b>	<b>139</b>	<b>-1.2</b>	<b>48</b>	<b>-7.9</b>
<b>IMPORTS</b>				
United States	74	-2.6	26	-6.2
China	15	-20	4.5	-24
Mexico	8.2	-8.9	2.8	-20
Germany	4.4	-2.4	1.6	-6.1
Japan	4.1	-0.9	1.5	-5.1
Italy	2.3	7.8	0.8	4.9
United Kingdom	2.1	-13	0.8	-9.7
South Korea	2.0	-13	0.7	-9.4
Vietnam	1.8	16	0.7	12
France	1.7	-20	0.6	-8.6
<b>TOTAL</b>	<b>139</b>	<b>-5.7</b>	<b>49</b>	<b>-8.4</b>

Data source: Statistics Canada, [Canadian International Merchandise Trade Database](#). Retrieved on May 7, 2020. Calculations of the OCE.

## 2.2 IMPACTS BY TRADING PARTNERS

### UNITED STATES

The United States is Canada's most important trading partner by a wide margin, due in part to the heavily integrated supply chains between the 2 countries. Moreover, both countries introduced their COVID-19 response measures only a few days apart. In the first quarter of 2020, the effect of COVID-19 and related containment measures on Canada's goods trade with the United States was not yet severe; growth in exports in both January and February of 2020 offset a sharp contraction of 6.3% in March that was roughly in line with a fall in Canadian exports to the world. For the quarter as a whole, Canadian goods exports to the U.S. market actually increased by a modest 0.7% to \$106 billion, while goods imports from the United States declined slightly, down 2.6%. However, the impact of the pandemic on Canada's trade with the United States varies tremendously by U.S. states.

#### **The product composition of trade explains a significant portion of differentiated impacts by state**

Michigan, Canada's top export destination in the United States, fell to second place in March 2020. Since automotive products is Canada's largest export sector to Michigan and historically accounts for roughly three fifths of total exports to the state, overall Canadian exports to Michigan were hit especially hard from automobile manufacturers suspending in-person operations in March. As a result, Canadian exports to Michigan recorded the largest decline in value out of all the states, falling 25% in March YoY. Total imports from Michigan also suffered in March, down 18% YoY.

In contrast, although Illinois ranks high among the states most affected by COVID-19, Canadian exports to the state increased 0.5% YoY in March 2020. This growth was almost entirely due to an increase in exports of precious stones and metals (gold) offsetting declines in other large export sectors such as energy. Consequently, Illinois replaced Michigan to become Canada's top export destination in the United States in March. However, Canadian goods imports from Illinois did not hold up as well, down 23% in March YoY.

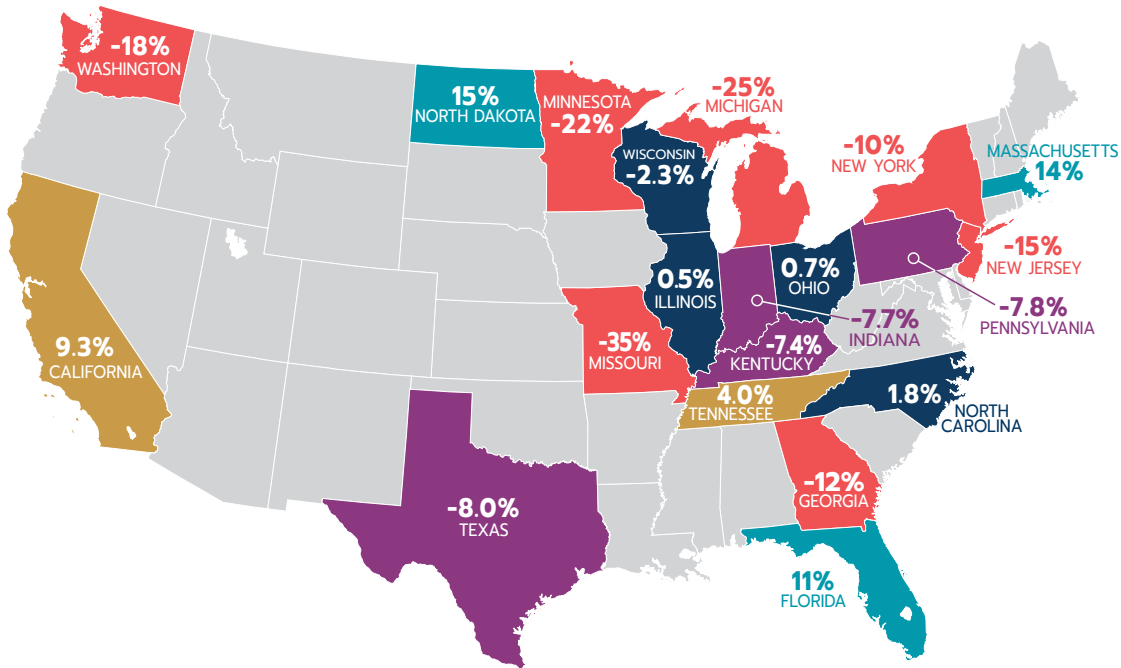
The state of New York has been overwhelmed by COVID-19 and is the most impacted state in the United States. This is somewhat reflected in the trade data as Canadian exports to the state decreased 10% YoY in March 2020, largely due to the fall in energy exports more than offsetting the growth in exports of precious stones and metals. Canadian imports from New York were down in March as well, falling 21% YoY.

Canadian exports to other major U.S. trading partners such as California, Texas, and Washington were also impacted differently by COVID-19. Exports to California were up 9.3% in March 2020, mainly supported by its top export sector—automotive—which accounts for roughly 60% of total Canadian exports to the state. Conversely, Canada's exports to Texas decreased 8.0%, as the growth in exports of aircraft and parts was unable to mitigate the large decline in exports of energy products. Finally, the state of Washington falls in the middle of all U.S. states in terms of the impact of COVID-19, but Canadian exports to the state decreased 18%, mostly on lower exports of energy products—nearly the triple the drop for exports to the United States overall.

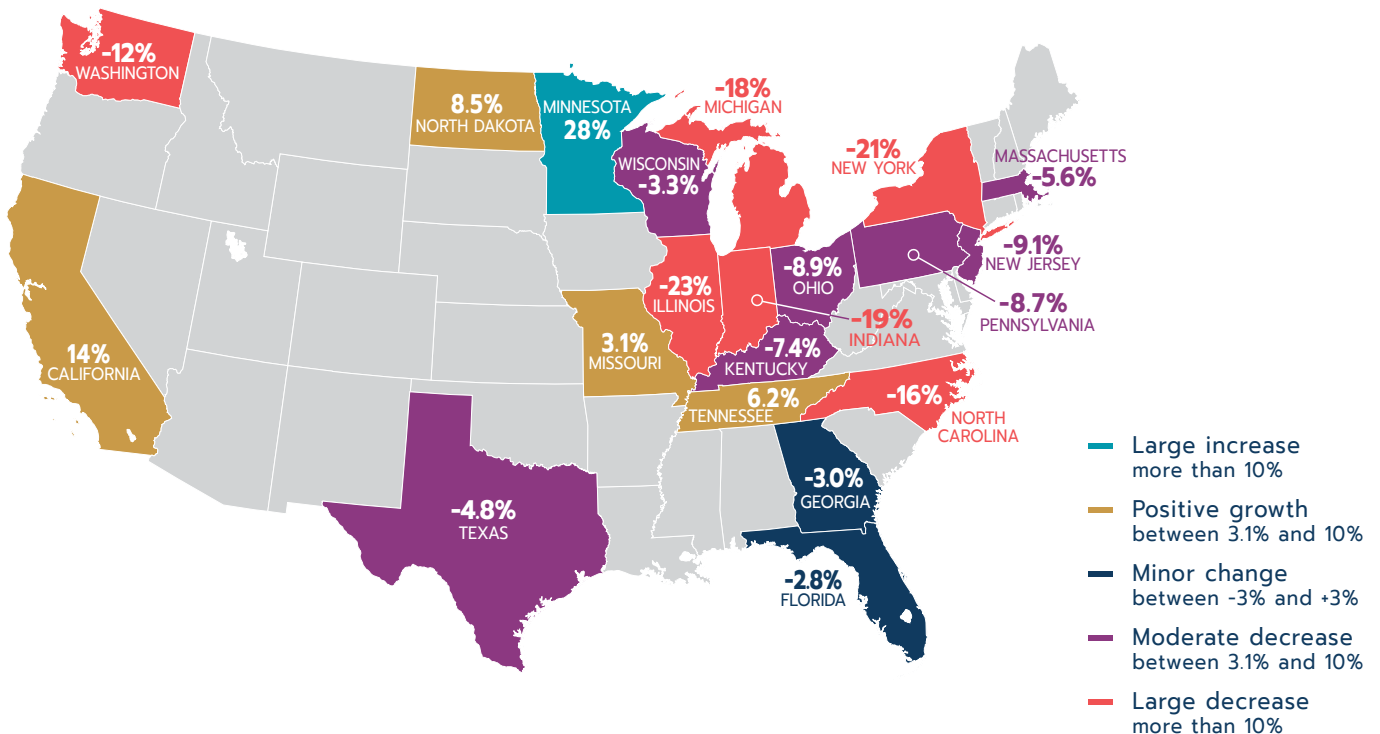


**2.2** IMPACTS BY TRADING PARTNERS

YoY change in Canadian **EXPORTS** to top 20 U.S. states, March 2020



YoY change in Canadian **IMPORTS** from top 20 U.S. states, March 2020



## 2.2 IMPACTS BY TRADING PARTNERS

### OTHER COUNTRIES

**Some countries were hit early by the pandemic, but the impacts on Canadian exports were not consistent**

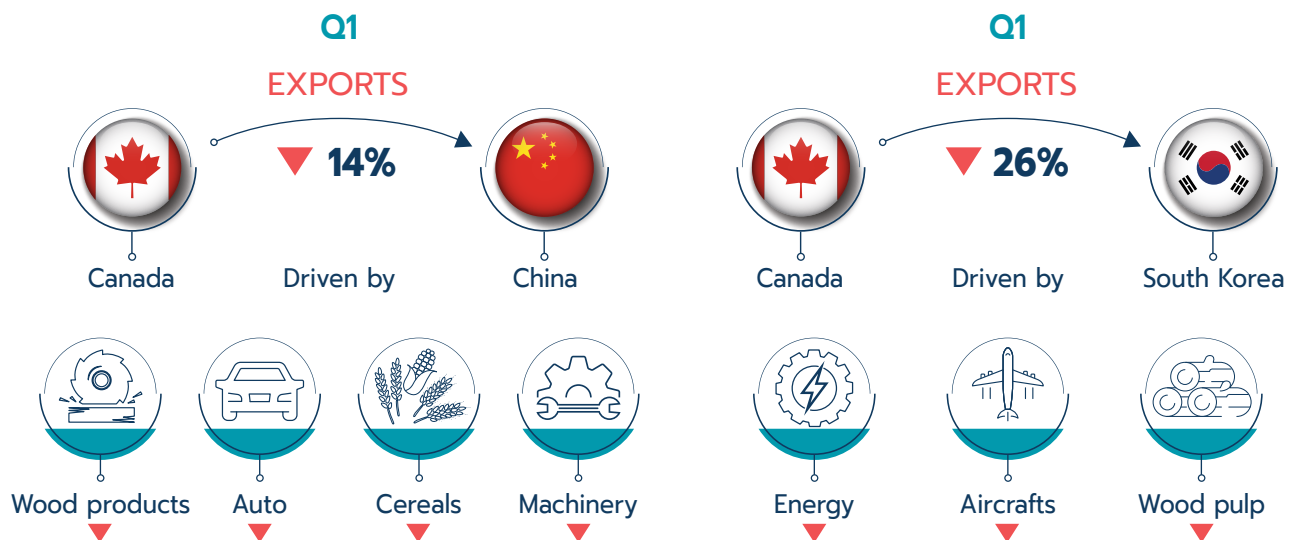
China, the first country to implement containment measures in response to the outbreak, recorded declines in Canadian goods exports and imports that were among the largest of any of Canada's trading partners. In the first 2 months of 2020, Canadian exports to China fell by 13% YoY, likely from depressed domestic demand in China. But as Canada followed with its own shutdown measures in March, the additional shock propelled an even larger fall in Canadian exports (15%). For the full quarter, overall Canadian goods exports to China were down 14%, mainly due to lower exports of wood pulp, wood, automotive products, cereals, and machinery. The shocks from containment measures in China and at home created a similar net downward pressure as Canadian imports from China fell 20% YoY in the first quarter of 2020 (down 24% in March).

Risks remain on the horizon of course, not the least of which is the possibility of a second wave of infections. China's domestic demand will depend on maintaining employment levels and wage growth, but in the current environment of declining profits and deflationary pressures, both may continue to fall. If such risks materialize, Canada should expect to export less to China in the short and even medium term than before the COVID-19 crisis.

Similarly, South Korea was among the few countries to report confirmed COVID-19 cases as early as late January. Canadian goods exports to South Korea contracted by 26% in Q1 2020 YoY, primarily because of lower exports of energy products, wood pulp, and aircraft and parts. Canadian imports from South Korea also contracted 13% over this period.

In contrast, although Japan was also among the first countries to report confirmed COVID-19 cases, Canadian goods exports to Japan have held steady. On a YoY basis, exports to Japan edged up 0.8% in the first quarter of 2020 despite a 3.2% contraction in March.

### COVID-19 IMPACTED SOME EXPORTS EARLY



### What China’s economic recovery from COVID-19 may mean for Canada

As the first country to fall victim to COVID-19 and the first to exit from the grip of the virus, China presents an interesting case study in economic recovery. As our third-largest trading partner behind the United States and the European Union, China is particularly important to Canada: the resilience of China’s economic recovery may lessen the impact of a broader slump in global trade and may help Canada’s exports to China resume sooner rather than later.

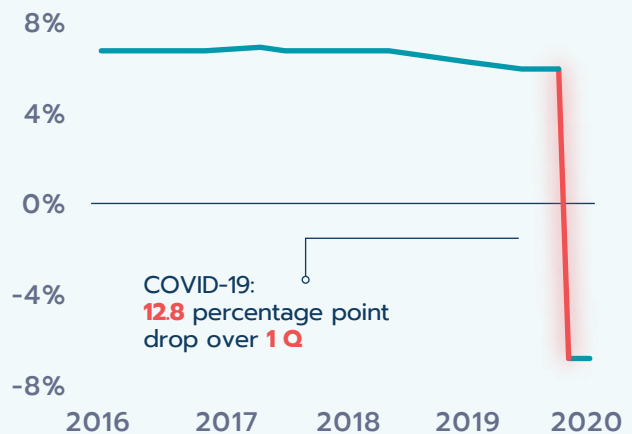
On January 20, 2020, the Chinese government started to impose measures to control the epidemic that restricted the movement of people and goods and shut down all non-essential business activity.

These measures exacted a rapid and heavy toll on China’s economy. In the span of a single quarter, the epidemic had become a pandemic, and China’s year-over-year GDP growth passed from being positive (6.0%) in Q4 2019 to negative (-6.8%) in Q1 2020. China experienced an almost 13 percentage points drop in growth over one quarter—all the more striking when compared to the 9 percentage-point decline during 7 consecutive quarters of the 2008-2009 global financial crisis. The 6.8% GDP contraction YoY in Q1 2020 was China’s first since economic reforms took hold in the early 1990’s.

Various industries resumed operations in China at different times in February and March 2020, with some heavily delayed by labour shortages (for example, in construction and manufacturing) while local governments prohibited others from opening (for example, in the recreation, education and tourism sectors). Meanwhile, measurements of rising coal consumption, traffic congestion and real estate sales looked promising—although still far from the activity levels in 2019—suggesting that China’s economy was recovering. At the very least, with a number of other major data indicators all trending upwards, there were encouraging signs that China’s economy was on the mend and that an economic “floor” had been reached and was now receding.

For Canada, that is good news because it suggests that this key trading partner will be looking to resume imports and exports. So, as Canadian industries resume their activities, many will likely look again to China as an important market while others will once again be able to procure most if not all of the inputs they have traditionally sourced from China.

### CHINA’S REAL GDP GROWTH (QUARTERLY, ANNUALIZED, YEAR-OVER-YEAR)



Data Source: National Bureau of Statistics (China)  
Calculations of the Embassy of Canada to China.

## 2.2 IMPACTS BY TRADING PARTNERS

### Some European countries defied the trend and recorded significant increases in exports from Canada

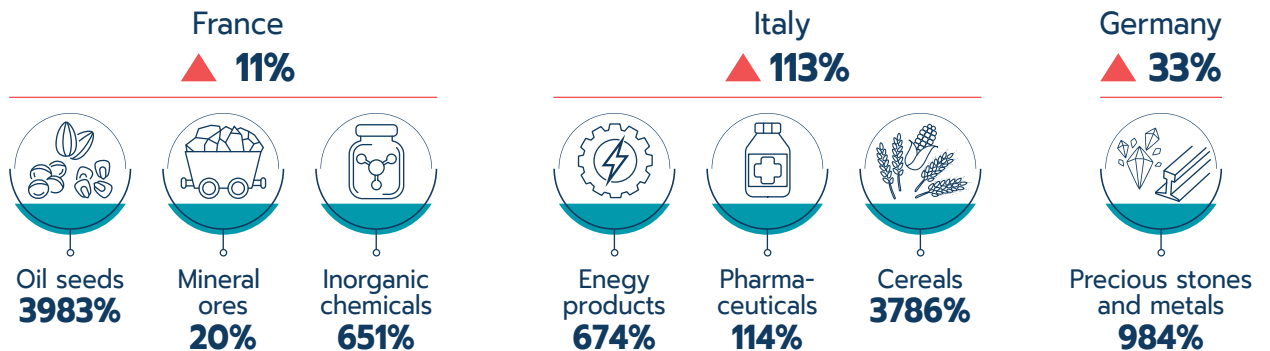
Exports of Canadian goods to European countries such as Germany, France and Italy recorded significant growth in Q1 2020 and in March 2020 (Table 2.2). The increases in March are surprising given that the containment measures were introduced by the national governments in the first half of the month and continued for the rest of March. Exports to Germany rose 29% in Q1 2020 (33% in March), supported by precious stones and metals (gold and precious metal scrap). Canadian exports to France and Italy also posted significant growth, up by 29% and 31% in Q1 2020 (11% and 113% in March), respectively. Growth in exports of oil seeds, mineral ores, and inorganic chemicals to France led the way, while exports to Italy rose mainly due to energy products, pharmaceuticals, and cereals.

Conversely, the United Kingdom, Canada's top trading partner in Europe, recorded a large fall in goods coming from Canada in Q1 2020, down 10% YoY. The fall was concentrated in March when both countries implemented nationwide containment measures in the second half of the month. In March 2020, Canadian goods exports to the United Kingdom fell by 35% YoY, primarily due to lower exports of precious stones and metals (gold) and inorganic chemicals.

## 2.3 Impacts by mode of transportation

In addition to what is traded and with whom, how goods are transported between countries is yet another trade dimension that has been impacted by COVID-19. There are many reasons why the crisis might impact goods travelling by some modes more than others. Despite being the most expensive form of transportation, transport by air is the fastest and is therefore favoured for some goods because they have limited shelf lives or they are costly to keep in inventory or they are very valuable or they are shipped to far destinations like Asia. Many of these goods are also transported in the cargo holds of passenger aircraft, the majority of which have been grounded during the crisis. Goods travelling by ship can spend weeks in transit. Therefore, those goods that were sent on their way before the crisis started may not have arrived at their destination until after restrictions had been put in place. To further complicate matters, shortages of cargo containers have been reported.

### SOME EXPORTS INCREASED IN MARCH 2020



## 2.3 IMPACTS BY MODE OF TRANSPORTATION

In the first 3 months of 2020 compared to the same quarter in 2019, transportation by road for imports and exports closely followed the downward trends in total exports and imports—down 1.2% for exports and 5.7% for imports (Table 2.3). The other 4 modes of transportation had quite different results.

**TABLE 2.3**  
Trade by transport mode, Q1 2020

	Q1 2020		MARCH 2020	
	(\$B)	(YOY Δ%)	(\$B)	(YOY Δ%)
<b>EXPORTS</b>				
Air	17	3.8	5.6	-1.0
Maritime	24	-6.3	8.3	-12
Other	21	5.6	6.7	-20
Rail	21	-3.8	7.4	-6.4
Road	56	-1.7	20	-3.3
<b>TOTAL</b>	<b>139</b>	<b>-1.2</b>	<b>48</b>	<b>-7.9</b>
<b>IMPORTS</b>				
Air	20	-7.8	7.1	-6.4
Maritime	30	-8.3	10	-9.3
Other	4.0	-0.3	1.2	-17
Rail	12	0.8	4.6	-5.5
Road	74	-5.3	26	-8.7
<b>TOTAL</b>	<b>139</b>	<b>-5.7</b>	<b>49</b>	<b>-8.4</b>

Data source: Global Trade Atlas. Retrieved on May 7, 2020. Calculations of the OCE.

One could have expected that with the onset of COVID-19 **trade by air** would experience large declines that grew worse as the first quarter of 2020 progressed. However, exports by air declined only 1.0% in March 2020, a much smaller decline than the total decline of exports (7.9%) for that month, while imports declined by 6.4% in March, a smaller decline than the decline for air transportation for the quarter (7.8%). As might be expected, exports by air to China saw a sharp fall of more than 19% in Q1, to which the COVID-19 crisis most likely contributed albeit to an as-yet unknown degree. This was offset by increased exports of small aircraft flown to the United States (thus shipped by air) and of gold to Germany, both of which contributed to a growth of 3.8% YoY for the first quarter.

**Road** (by truck)<sup>10</sup> is Canada's most important mode for all exports and for imports (Figure 2.2). Overall, it saw decreases of 1.7% for exports and of 5.3% for imports in the first quarter of 2020, although the declines in March were larger (3.3% and 8.7%, respectively). Exports and imports of automotive products were the most important driver of the declines in March as auto plants on both sides of the border shut down.

<sup>10</sup>The mode of transport of imports captures the last mode goods take before they clear customs. As such, goods transported by truck or train from a cargo ship to the customs services to be cleared for entry into the country are recorded as having been transported by road rather than by sea. The same is true for some air shipments. This recording procedure by the border services leads to an underrepresentation of maritime and air transportation for imports.

## 2.3 IMPACTS BY MODE OF TRANSPORTATION

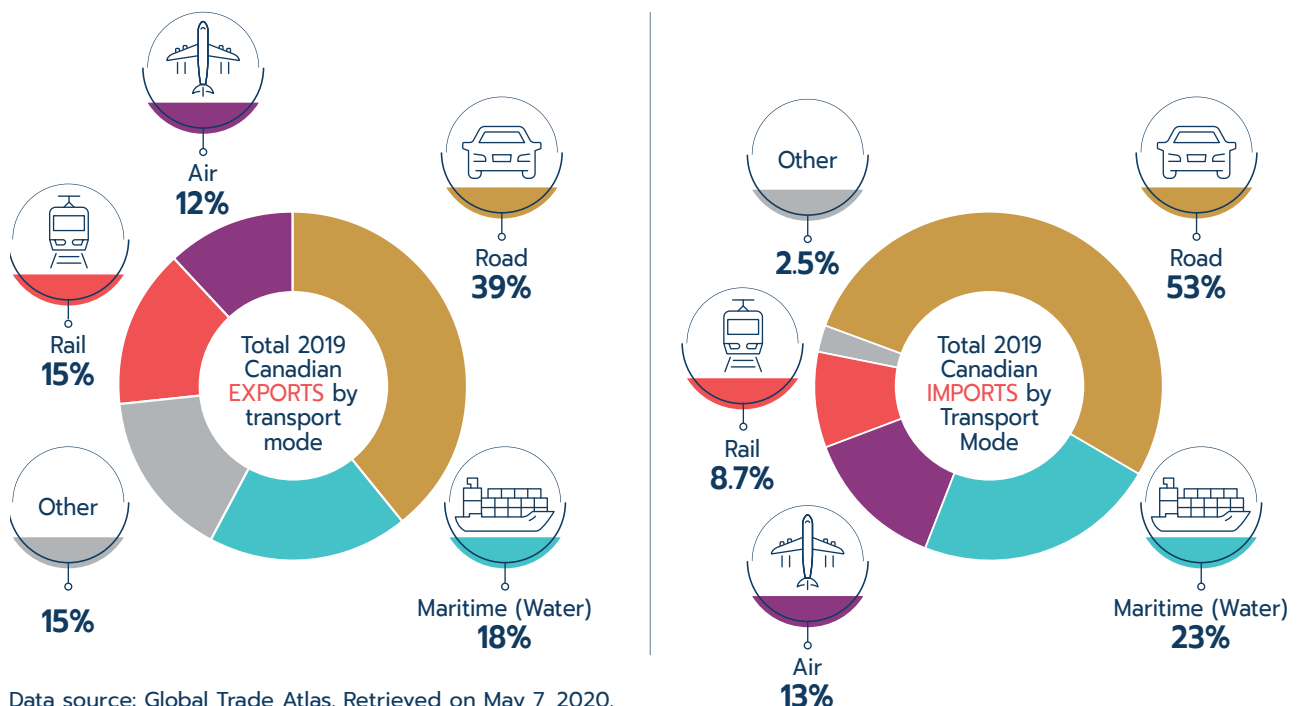
Due to the long travel times between shipping a product and its arrival, the **maritime** (by water) mode could be expected to have been the least affected of the 5 transport categories by the onset of the COVID-19 pandemic. However, maritime exports saw the biggest decline, down 6.3% in the first 3 months of 2020, including a 12% YoY fall in March 2020. The largest declines in Q1 were driven by the trade in goods destined to China and South Korea, which were among the first countries to report the COVID-19 outbreak. The decline for maritime imports was the largest among imports by transport mode for the first 3 months of 2020, down 8.3% YoY. In March, the decline had reached 9.3% YoY.

Exports by **rail** fell 3.8% in the first quarter of 2020, the second-largest decline in exports after maritime exports. But COVID-19 was not the only cause of the decline. Exports by rail

transport for the first quarter of 2020 were already disrupted by strike action and protests across the country that peaked in February and March. These events combined with the repercussions of COVID-19 led to a decrease of 6.4% in March for exports by rail. In contrast, imports by rail increased slightly (0.8%) over the first quarter despite a 5.5% drop in March.

Exports shipped under the category **"other"** dropped in March 2020 by 19.9% YoY although they were up for the quarter overall. Nearly 90% of exports transported by other means are crude and natural gas via pipelines. The dramatic decline in oil exports in March reflects the beginning of the crash in oil prices. By contrast, imports in this category are not significant given their value of \$4 billion in Q1 and modest 0.3% YoY decrease in the first quarter of 2020.

**FIGURE 2.2**  
How do Canadian imports and exports travel between countries?



Data source: Global Trade Atlas. Retrieved on May 7, 2020. Calculations of the OCE.



## 2.4 HOW DOES CANADA COMPARE TO OTHER COUNTRIES?

### 2.4 How does Canada compare to other countries?

The COVID-19 virus has affected almost every corner of the planet. Governments have responded with a variety of measures, most of which have slowed economic and trade activities. For a trading nation like Canada, a global crisis such as COVID-19 has important repercussions on many of its economic sectors. At the time of writing (May 2020), only some of the top exporting and importing economies in the world had reported trade statistics for March 2020. The following section compares the impacts of the crisis on Canada’s trade with the impacts on 5 of these economies: China, Japan, Singapore, South Korea and the United States.

#### TRADE IMPACTS FOR SELECTED COUNTRIES

##### Canadian goods exports performed relatively well overall in the first quarter of 2020

Compared to these 5 countries, Canadian goods exports performed relatively well in the first quarter of 2020, declining by only 1.2% YoY (Table 2.4). China’s goods exports, by comparison, were hit hard in Q1, falling by 10%, as it was the first country to be impacted by COVID-19, with Wuhan going into lockdown on January 23, 2020. As part of its physical distancing measures, China shut down many of its factories during the first quarter, thus reducing its manufacturing exports. On the other hand, even though it was also hit early by the virus, South Korea reported goods exports had actually increased in Q1 2020 YoY. That said, South Korea’s exports performance

in Q1 2019 was relatively weak compared to Q1 2018. The impact of COVID-19 on goods exports for Canada, the United States and Japan was more evident in March 2020 than earlier in the first quarter, with larger year-over-year declines in March than in Q1 overall.

On the imports side, only Canada, the United States and Japan experienced year-over-year declines in imports in Q1. It is difficult to attribute these declines to COVID-19 since declines also occurred in January and February for Canada and the United States before COVID-19 had taken hold in either country. The underlying cause of these declines could be attributed, at least partially, to the general slowdown of the worldwide economy that had started in 2019. Yet it is undeniable that the rate of decline accelerated in March 2020 as COVID-19 containment measures were imposed mid-month in both Canada and the United States. China, Singapore, and South Korea did not experience quarterly declines (year-over-year) in imports. It is worth remembering that many countries have remained committed to maintaining the movement of goods, even as they restricted the movement of people. Likewise, many countries put in place physical distancing measures around mid-March, which means that the impact of COVID-19 might not have shown up yet in the goods trade data.



TABLE 2.4

Total goods exports and imports,  
by reporting economies

	Q1 2020		MARCH 2020	
	(\$B)	(YOY Δ%)	(\$B)	(YOY Δ%)
<b>EXPORTS</b>				
Canada	139	-1.2	48	-7.9
China	3,335	-10	1,300	-2.5
Japan	18,111	-5.5	6,358	-12
Singapore	127	-1.3	44	-0.6
South Korea	156,223	4.7	56,882	6.9
United States	396	-3.1	135	-9.2
<b>IMPORTS</b>				
Canada	139	-5.7	49	-8.4
China	3,244	1.1	1,160	4.1
Japan	18,314	-7.2	6,353	-5.0
Singapore	121	2.7	40	0.3
South Korea	145,695	4.6	51,286	7.9
United States	569	-4.9	194	-6.5

\* In national currency  
Data source: Global Trade Atlas. Retrieved on May 7, 2020.  
Calculations of the OCE.

## TRADE WITH CHINA

### Using trade with China as a benchmark, intra-Asian trade held up better than trans-Pacific trade

While most of the world only started to fight the spread of COVID-19 in mid-March 2020, China had been in the trenches since January. Therefore, trade statistics coming from China can perhaps shed unique insight on the impact of COVID-19 on trade for the first 3 months of 2020 (Table 2.5). Canada, Japan, Singapore, South Korea, and the United States all experienced declines in trade with China in the first quarter of 2020 compared to a year earlier. Canada's trade with China saw a sharp fall in Q1 2020, but the fall in China's trade with the United States was even more pronounced.

By contrast, trade between China and its partners in Asia in Q1 2020 seems to have held up better than trade between China and other trading partners. Only time, and the trade results for the next 3 quarters of 2020, will confirm this pattern or reveal other factors in play. In addition, there appears to be a notable difference among countries in terms of the time between the first clear impacts of COVID-19 and changes in their respective trade performance. For example, Japanese and South Korean imports from China experienced the largest year-over-year declines in February, while Canadian and U.S. imports from China experienced the largest declines in March. Exports to China from Canada, Singapore, and United States suffered large year-over-year declines in February, and yet while Singapore's exports to China increased year-over-year in March, exports to China from Canada and United States continued their respective year-over-year declines.

## 2.4 HOW DOES CANADA COMPARE TO OTHER COUNTRIES?

**TABLE 2.5**  
Total goods exports and imports with China, by reporting economies

	Q1 2020		MARCH 2020	
	(\$B)	(YOY Δ%)	(\$B)	(YOY Δ%)
<b>EXPORTS</b>				
Canada	5.0	-14	1.8	-15
Japan	3,223	-5.3	1,191	-8.7
Singapore	14	-12	5.3	0.8
South Korea	34,914	-2.4	13,076	1.0
United States	22	-15	8.0	-24
<b>IMPORTS</b>				
Canada	15	-20	4.5	-24
Japan	3,842	-17	1,432	-4.5
Singapore	15	-2.6	6.0	7.1
South Korea	28,542	-1.3	10,902	9.4
United States	76	-28	20	-36

\* In national currency  
Data source: Global Trade Atlas. Retrieved on May 7, 2020.  
Calculations of the OCE.

### SME exporters and COVID-19

The number of Canadian firms exporting goods fell in the first quarter of 2020, with much of that fall occurring in March, as many economies around the World, including Canada, implemented containment measures to reduce the spread of COVID-19. The early impacts of COVID-19 have been greater among SMEs (firms with less than 500 employees) than among larger firms.

The number of SMEs that were exporting in March 2020 was 11% lower than in March 2019. For large firms, the decline was a more modest 8.3%. Similarly, the value of exports from SMEs dropped by 10% compared to 7.6% for large firms (Blanchet and Sekkel 2020).

The larger decline in the number of SMEs exporting compared to large firms is even more notable considering that exports to the United States fell less overall than exports to other destinations and the United States is a particularly important destination for SME exporters. By destination, the number of exporters selling goods to China, France and Italy saw the sharpest declines—down 20% to each—while the decline in the number of firms exporting to the U.S. market was less severe (down 9.1%).

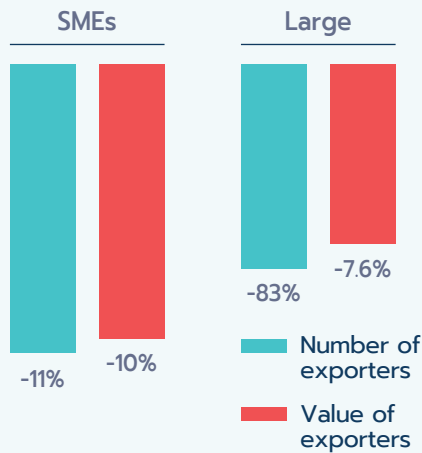
**2.4 HOW DOES CANADA COMPARE TO OTHER COUNTRIES?**

The number of exporters in the goods-producing sectors such as manufacturing, mining and agriculture witnessed the smallest relative declines. By contrast, the number of exporters of goods in the retail and wholesale sectors declined the most in percentage terms, among important export sectors.

The smaller declines in exports (by value) compared to number of exporters suggests that it was mostly firms with lower exports by value that were the first to stop exporting. In e-commerce, for example, the number of SMEs exporting fell even while the value of exports increased, which indicates that the average value of exports per exporter increased.

**DECLINE IN NUMBERS OF EXPORTERS AND VALUE OF EXPORTS BY FIRM SIZE**

**March 2020 vs March 2019**



**Take-home message 1**

For the first quarter of 2020, the overall impacts of COVID-19 on Canadian trade were few, with 2 exceptions: exports to China and South Korea dropped 14% and 26%, respectively.

**Canadian Goods Exports**

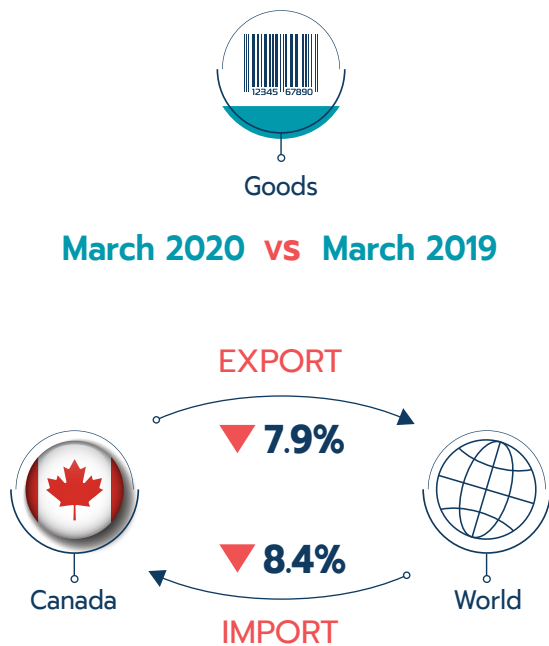
**Q1 2020 vs Q1 2019**



**2.4** HOW DOES CANADA COMPARE TO OTHER COUNTRIES?

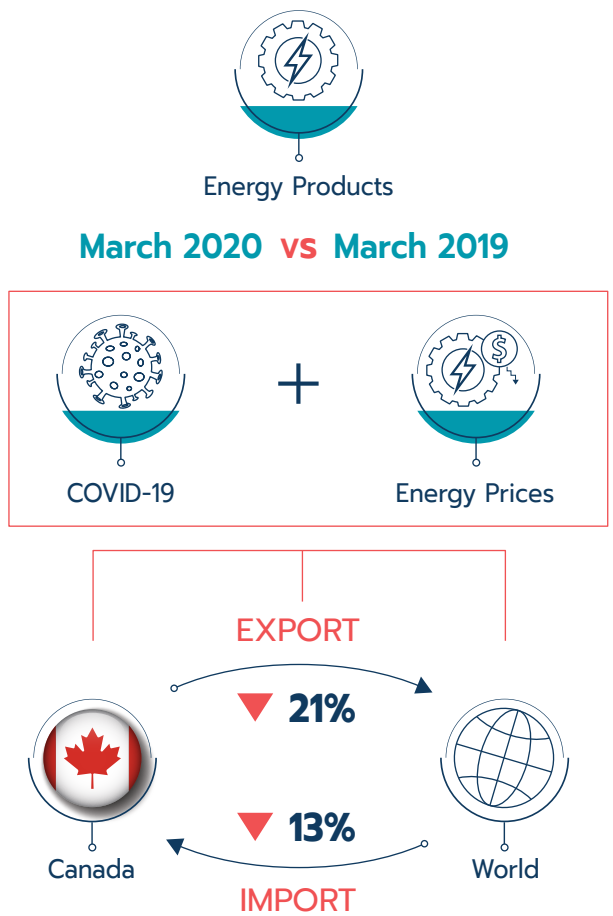
**Take-home message 2**

While declines in March 2020 cannot be fully attributed to COVID-19, goods exports dropped by 7.9% and goods imports by 8.4%.



**Take-home message 3**

Energy exports and imports were hit hard by COVID-19 while energy prices plummeted: exports declined by 21% and imports by 13% in March 2020.



**2.4** HOW DOES CANADA COMPARE TO OTHER COUNTRIES?

**Take-home message 4**

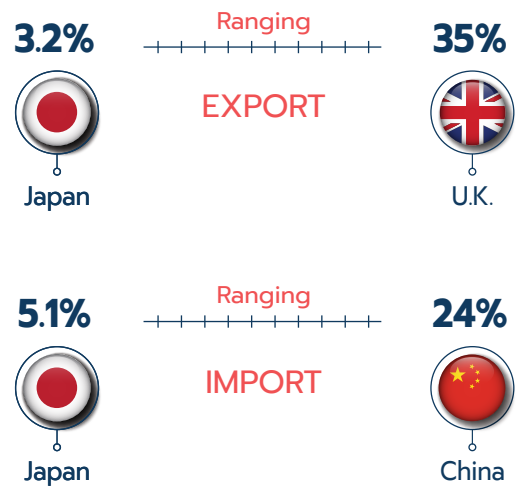
Trade impacts were observed for most of Canada’s top 10 trading partners in March 2020 with drops in exports ranging from 3.2% in Japan to 35% in the United Kingdom while drops in imports ranged from 5.1% for Japan to 24% for China.



COVID-19 Impact

**Drops in trade with Top 10 trading partners**

March 2020 vs March 2019



**Take-home message 5**

Evaluating the early impact of COVID-19 on trade flows is clearly a complex undertaking. When containment measures take place at different times in different countries, the challenge remains to coordinate global supply and demand—an ongoing lesson for the world’s economies as they ease restrictions and get back to business in the shadow of COVID-19.



# VULNERABILITY OF CANADIAN INDUSTRIES TO DISRUPTIONS IN GLOBAL SUPPLY CHAINS

Chapter 2 showed that the impacts of the COVID-19 pandemic on Canadian trade were unevenly distributed during the first 3 months of 2020: by March 2020, exports and imports of some goods and with some trading partners had been heavily impacted while others seemed almost untouched. This chapter looks at why some industries are more vulnerable to international trade shocks than other industries.

There are undeniable benefits to firms engaging in global value chains. Through them, they can procure resources, inputs and labour at a lower cost. They can access knowledge and talent. And they can find unique products and services not readily available at home. These advantages contribute to firms staying competitive and spur innovation. However, this greater internationalization also exposes Canadian firms to shocks arising outside of Canada like COVID-19.

Using the early months of the COVID-19 crisis as an example, we explain the various points at which trade can be disturbed or “choked” by the sudden onset of an international catastrophe and then examine which Canadian industries are the most vulnerable to supply chain disruptions and hence are the most negatively affected by international shocks such as pandemics.

## 3.1 Types of international supply chains

There is no doubt that the early months of the COVID-19 pandemic strained international supply chains. The tightening and closing of borders, restrictions on the movement of people, constraints on transportation capacity, and the closure of businesses disrupted many supply chains that involve Canadian firms and put others at risk. At the same time, international demand for many goods and services produced in Canada fell as businesses closed, incomes were disrupted, and people around the world stayed at home.

Supply chain disruptions will impact Canadian industries and individual firms within each industry differently. The impact of the disruption depends on many factors, including the extent to which a firm’s supply chains depend on foreign countries as sources of inputs and as markets to sell products, as well as by the number and geographical distribution of countries involved in their supply chains.

### 3.1 TYPES OF INTERNATIONAL SUPPLY CHAINS

Figure 3.1 illustrates 3 broad types of international supply chains in which Canadian firms may be involved that would lead them to be more susceptible to global shocks such as the COVID-19 pandemic:

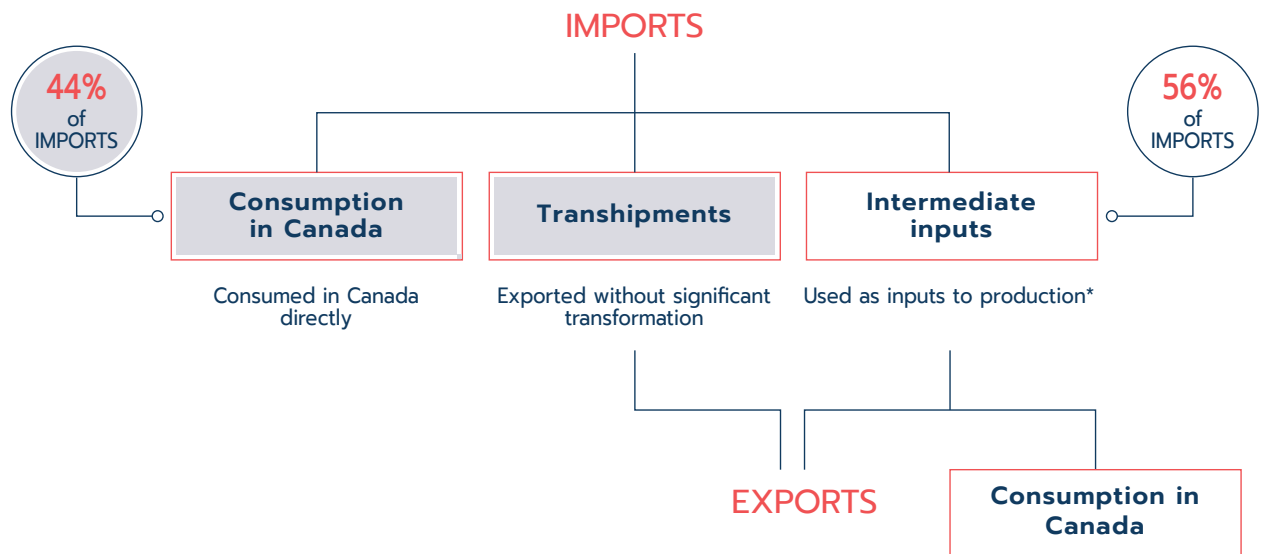
- The simplest supply chain involves firms that import goods or services for domestic consumption in Canada. Approximately 44% of Canadian imports are for direct domestic consumption.
- Transshipments or re-exports,<sup>11</sup> by contrast, involve goods and services that Canadian firms import and then export without significant transformation. Transshipments make up about 8% of total Canadian merchandise exports.

- The most complex supply chain involves firms that import goods and/or services to be used as intermediate inputs in the production of finished goods or services. These finished goods and services are consumed in Canada and/or exported to other markets. Approximately 56% of Canadian imports are used as intermediate inputs by Canadian enterprises.<sup>12</sup> Except for fertilizer and some machinery, agricultural and resource-based sectors are examples of industries that use minimal imported intermediate inputs.

<sup>12</sup> In Figure 3.1, the share of intermediate inputs (55.8%) also includes capital goods, that is, machinery and equipment used to produce goods and services, and payments for intellectual property.

<sup>11</sup> Total exports consist of domestic exports and re-exports.

**FIGURE 3.1**  
International supply chains



\* Includes capital goods and IP



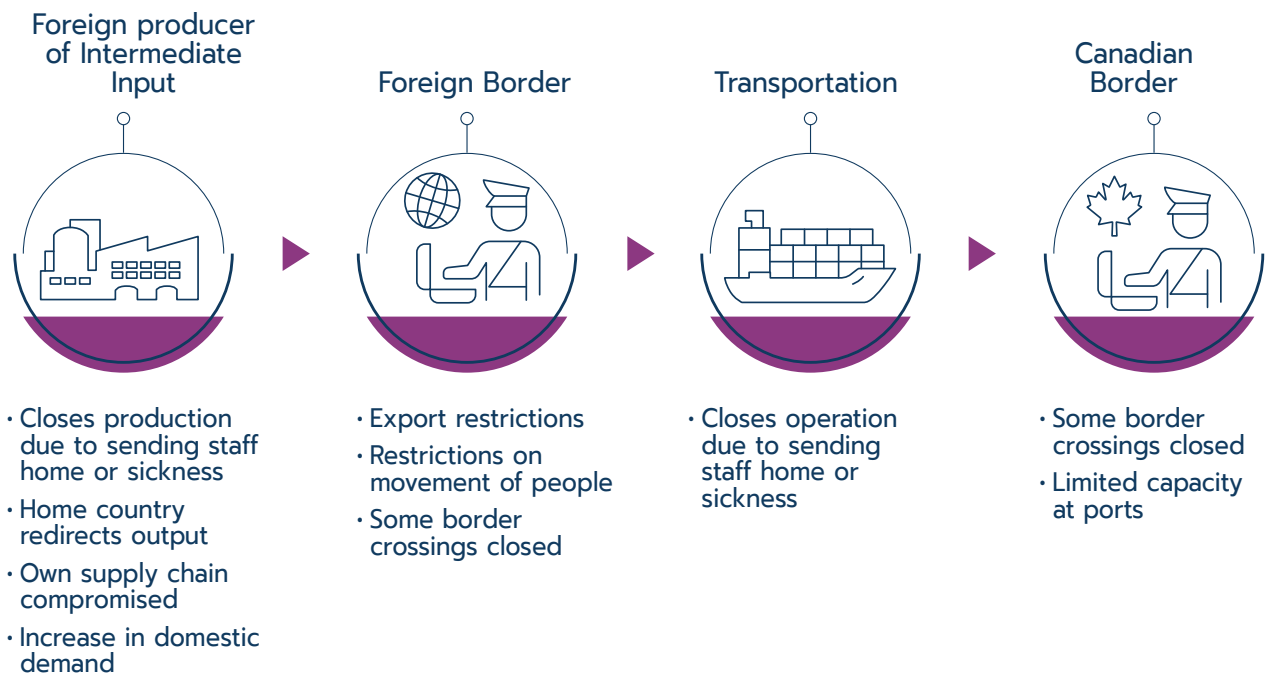
### 3.1 TYPES OF INTERNATIONAL SUPPLY CHAINS

#### WHAT HAPPENS WHEN SUPPLY CHAINS ARE DISRUPTED: CHOKe POINTS

Several choke points exist in even the simplest supply chain (Figure 3.2). First, foreign factories producing the good that Canada imports may temporarily shut down, as has happened during the COVID-19 pandemic.<sup>13</sup> Second, the home country of the foreign supplier could redirect a firm's output or increase its domestic demand for a product, which could limit exports. This was the case for medical

protective equipment during the early days of the COVID-19 crisis. Third, the temporary closing of factories can produce a domino effect as firms that have halted production for particular products will reduce orders from their own suppliers. Think of supply chains as streams: any closures or shocks to suppliers upstream will impact the manufacturers making products and the consumers using them downstream. Fourth, border closures and restrictions including in Canada will slow or halt the international transport of people and goods.

**FIGURE 3.2**  
Potential choke points in an international supply chain



<sup>13</sup> While the COVID-19 pandemic has caused factory closures across the globe, supply chain shocks can also occur in a single country or region. In 2019, for example, Typhoon Hagibis in Japan forced many Japanese firms, including Subaru, to halt production for as long as 10 days.

### 3.1 TYPES OF INTERNATIONAL SUPPLY CHAINS

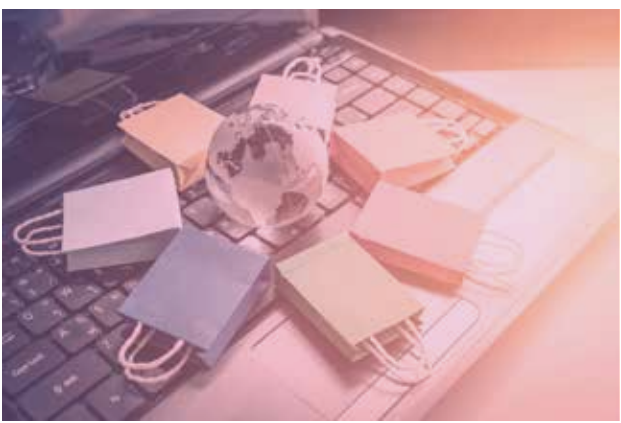
As the COVID-19 crisis has shown, international border and travel restrictions as well as the rules and regulations of the countries that enforce them limit or prohibit products from being transported into or out of any country involved in the international supply chain as well as the services enabled by the cross-border movement of people.

Canada is a trading nation, with over 165,000 firms that import goods and over 45,000 firms that export goods. Goods and services imports are equivalent to 33% of Canada's GDP while goods and services exports are equivalent to 32%. It makes sense that choke points affecting Canada's main supply chains affect both Canadian exporters and importers. Canadian companies are therefore vulnerable to disruptions to both their upstream supply of imports and to their downstream export markets. Supply chain disruptions affect Canadian companies of any size, including many of Canada's small and medium-sized enterprises (SMEs) that are part of international supply chains and thus risk exposure to international shocks such as COVID-19. SME exporters and importers comprise a significant proportion of Canada's SME community. In 2017, 12% of SMEs overall exported goods or services, but within Canada's manufacturing sector this share rises to over one third. In addition, 12% of SMEs imported goods or services that were used as intermediate inputs to production, while 14% imported goods to sell "as is" within Canada. Broadly speaking, SME importers are more exposed to international disruptions than SME exporters; in 2018, some 162,280 SMEs imported goods into Canada—almost 4 times the number of SMEs that exported goods.

No sector of the Canadian economy is immune to the effects of disruptions to global supply chains, though some industries may suffer more than others according to their reliance on international markets. Some will be more exposed to shocks in upstream supply, others to disruptions in downstream demand, and still others to both. That said, those industries within the Canadian economy that rely more on domestic consumption and less on international markets will be somewhat insulated from international shocks. However, they have not proven to be immune from the domestic constraints on the "business-as-usual" model arising from COVID-19 as governments at all levels across Canada enact measures to keep Canadians, including shoppers, at home. The remainder of this chapter examines the relative vulnerability of various Canadian industries to international supply chain disruptions to determine those most likely to weather international shocks.

### 3.2 Measuring vulnerability of Canadian industries to supply chain disruptions

Having established that global catastrophes affect global supply chains the question remains: how to measure the extent to which a given Canadian industry is vulnerable to such shocks. Using data for 218 Canadian industries, the Office of the Chief Economist (OCE) first ranked each industry in question by constructing the **international supply vulnerability index**, an index that identifies the sensitivity of each industry to upstream supply shocks. To do this we measured the extent to which each industry relies on intermediate inputs sourced from abroad for goods, services, or both. We then constructed a second index, the **international demand vulnerability index**, to rank each industry according to the downstream demand for its output. To do this we measured the extent to which each industry depends on international demand for its products and services.



The international supply vulnerability index measures the following 4 key components:

- Reliance on intermediate inputs
- Reliance on imports of intermediate inputs
- Geographic concentration of imports
- Number of imported products that can be supplied by a limited number of countries based on work by [Jiang \(2020\)](#)

For each industry, these components are tabulated and then averaged to generate an overall supply vulnerability score for that industry.<sup>14</sup>

The international demand vulnerability index measures the following 3 components:

- Reliance on exports
- Geographic concentration of exports
- Reliance on indirect exports (i.e. contributing value-added to the products that another Canadian industry exports)

For each industry, these are tabulated and then averaged to generate an overall demand vulnerability score for that industry.

<sup>14</sup> Each index ranges from a score of 0 to 100, with 0 being relatively immune to international demand (for demand index) and supply (for supply index) and 100 being very vulnerable. All data comes from Statistics Canada supply use tables, complemented by special import supply use tables, a measure of value-added exports from the Trade in Value-Added accounts, and standard import and export data. The supply use tables come from Table: [36-10-0478-01](#). See [Supply and Use Tables](#) for the complete tables. The special import supply use tables were provided by the National Account Division at Statistics Canada. Finally, trade in value-added comes from Table: [12-10-0100-01](#).

### Do lawyers export? An example of indirect exports

While some sectors of the Canadian economy may not rely on exports directly, they may nevertheless provide value added to the exports from other sectors of the Canadian economy. This value added can be in the form of goods or services used to produce the exported products of another sector (for example, car parts used in exported automobiles) or it could be a finished product that is exported by another sector (for example, a consumer product produced by 1 sector and sold to a wholesaler that exports it as is). In this way these sectors can be said to have indirect exports. Using data from Statistics Canada trade in value-added tables, we can measure the share of these indirect exports in the output of each sector. This result is used for the third component of the International Demand Vulnerability Index.

The legal services sector is focused mainly on the domestic market: direct exports account for only 5% of output. However, this sector also provides value-added services to the exports of other sectors, and it is these indirect exports that account for another 9% of the sector's output. For example, a legal firm may provide value added to an exporting firm by helping it register and protect its intellectual property in the market to which it is exporting. For the purpose of this analysis, these valued-added services are considered indirect exports.

The individual scores for the demand index and the supply index for each industry are then averaged to yield a single overall score, the combined score, for that industry that indicates its vulnerability to disruptions affecting both supply and demand.<sup>15</sup>

The 25 most vulnerable industries and the 25 least vulnerable industries are discussed in turn.

### CANADIAN INDUSTRIES MOST VULNERABLE TO INTERRUPTIONS IN INTERNATIONAL SUPPLY CHAINS

This section looks at those Canadian industries that are vulnerable to disruptions in both international supply and international demand.

Table 3.1 lists the 25 industries most vulnerable to both international demand and supply disruptions ranked from most to least vulnerable on the combined supply and demand index. A characteristic these industries share is that they source much of their inputs from abroad, while they sell much of their output to markets outside of Canada.

<sup>15</sup> For further details on data sources, component calculations, and the derivation of each index, see Boileau (2020).

Together these 25 industries most vulnerable to disruptions in international supply chains account for 9.5% of the output of the 218 industries,<sup>16</sup> and as Table 3.1 shows all

but 2 (oil sands and oil and gas extraction) are in manufacturing or manufacturing-related industries. Indeed, Canadian manufacturing has faced increasing challenges throughout the years and has responded significantly changed. With its share of GDP falling from

<sup>16</sup> Output is the value-added of the industry itself, similar to GDP, plus the value of all the intermediate inputs used that come from other industries.

**TABLE 3.1**  
Canadian industries most vulnerable to interruptions in international supply chains

RANK	SECTOR	INTERNATIONAL VULNERABILITY SCORE		
		DEMAND	SUPPLY	COMBINED
1	Automobile and light-duty motor vehicle manufacturing	60.9	77.4	69.1
2	Heavy-duty truck manufacturing	59.1	72.9	66.0
3	Motor vehicle steering and suspension components (except spring) manufacturing	55.2	72.8	64.0
4	Motor vehicle gasoline engine and engine parts manufacturing	59.4	66.9	63.1
5	Motor vehicle metal stamping	58.8	65.5	62.1
6	Plastic product manufacturing	45.3	77.5	61.4
7	Rubber product manufacturing	49.6	71.7	60.7
8	Oil sands extraction	62.5	55.5	59.0
9	Semiconductor and other electronic component manufacturing	47.4	70.3	58.9
10	Motor vehicle brake system manufacturing	52.2	64.9	58.5
11	Motor vehicle transmission and power train parts manufacturing	50.5	65.2	57.9
12	Converted paper product manufacturing	44.4	71.2	57.8
13	Other motor vehicle parts manufacturing	47.7	67.5	57.6
14	Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	53.4	61.1	57.2
15	Sugar and confectionery product manufacturing	49.8	62.8	56.3
16	Other chemical product manufacturing	38.5	73.5	56.0
17	Other electrical equipment and component manufacturing	38.9	71.4	55.1
18	Veneer, plywood and engineered wood product manufacturing	49.5	60.6	55.0
19	Oil and gas extraction (except oil sands)	53.8	56.2	55.0
20	Motor vehicle electrical and electronic equipment manufacturing	42.1	67.5	54.8
21	Other general-purpose machinery manufacturing	45.7	63.7	54.7
22	Motor vehicle body and trailer manufacturing	41.5	67.2	54.3
23	Alumina and aluminum production and processing	50.7	57.9	54.3
24	Electric lighting equipment manufacturing	49.0	59.6	54.3
25	Other electronic product manufacturing	41.7	66.2	54.0

Note: The international demand and supply vulnerability scores are from Boileau (2020). The combined score is the average of these vulnerability scores.

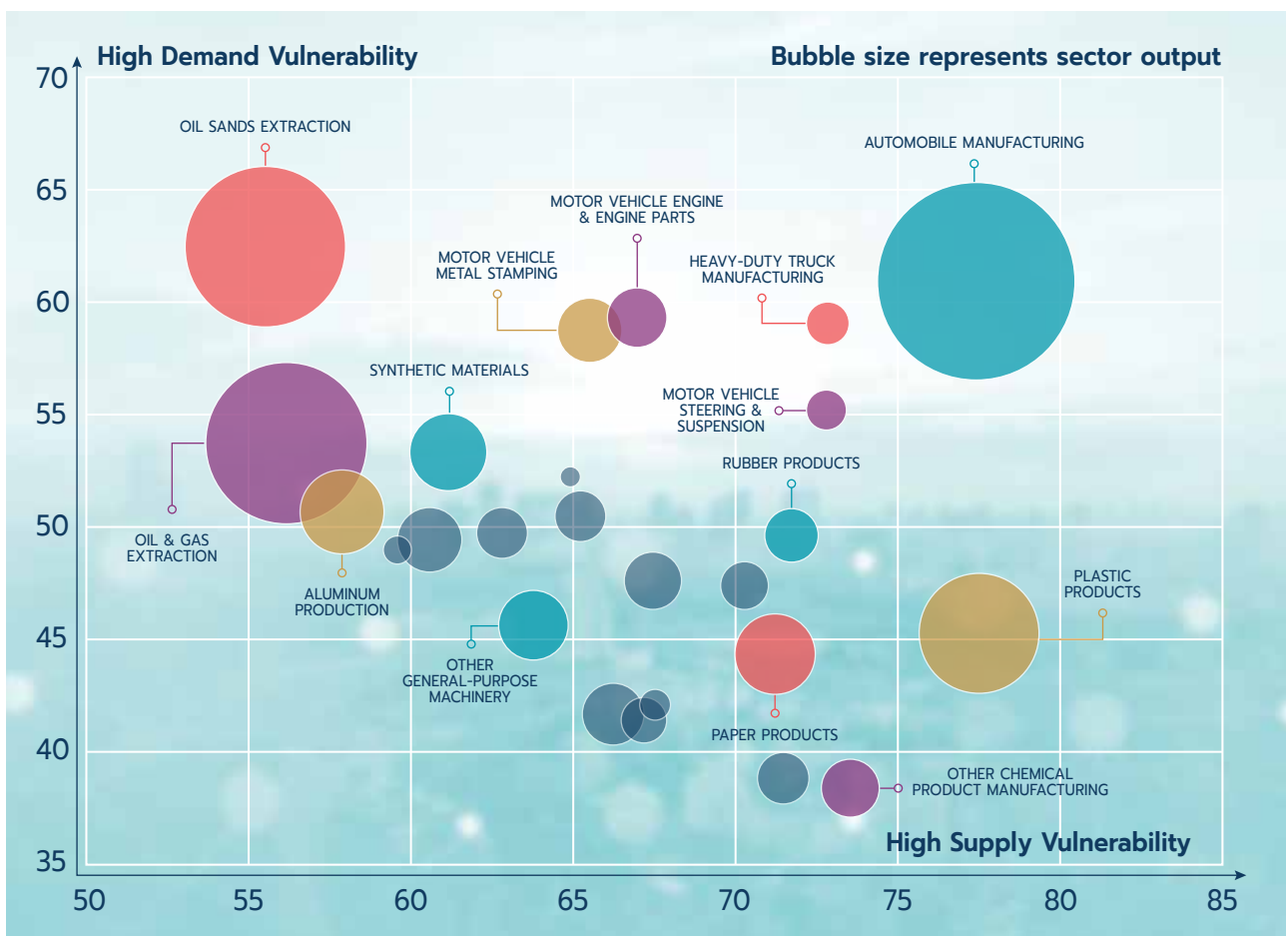
**3.2 MEASURING VULNERABILITY OF CANADIAN INDUSTRIES TO SUPPLY CHAIN DISRUPTIONS**

16% in 2000 to 10% in 2019, the manufacturing industry is clearly a shrinking part of the Canadian economy and the most vulnerable overall to shocks in international supply chains.

Figure 3.3 represents the separate demand and supply index scores presented in Table 3.1 for the 25 most vulnerable industries. The higher the industry “bubble” is on the

chart, the more vulnerable the industry to international demand disruptions. Similarly, the further to the right the industry bubble is on the chart, the more vulnerable it is to international supply shocks. The size of each bubble represents that industry’s importance in the Canadian economy (measured by value of output).

**FIGURE 3.3**  
Industry vulnerability to international supply and demand disruptions



Automobile and light-duty vehicle manufacturing is Canada's largest industry by output as well as the industry that scored highest on the combined international supply and demand vulnerability index. Its high score illustrates the extent to which automobile manufacturing depends on international supply chains. Automobile manufacturing ranks second-highest for supply vulnerability, which is hardly surprising given this industry relies heavily on intermediate inputs to produce a finished vehicle, its final output. Intermediate inputs are required for 86% of the industry's output, which means 14% are valued added by the producer, and 67% of these inputs are imported. Of these imports, 75% are sourced from the United States.

This geographic concentration for supply contributes to the industry's high supply vulnerability score of 77.4, the second-highest in the group after plastic product manufacturing. In addition, this industry potentially imports 589 products from the limited number of suppliers, another component contributing to its high supply vulnerability score. Clearly this industry is highly vulnerable to international shocks that cause disruptions in supply since it relies on a few suppliers in a few regions. On the demand side, automobile and light-duty vehicle manufacturing also ranks second (after oil sands extraction) on the demand vulnerability index with a score of 61. Exports are equivalent to 86% of the industry's output, and its exports are highly concentrated geographically, with 96% of the industry's exports destined to the United States. While indirect exports are responsible for less than 0.1% of the industry's output its high scores in the export reliance and export concentration components push it higher on the demand vulnerability index.

Oil sands extraction is ranked as the industry most vulnerable to international demand given that 75% of its output is exported, with 100% of exports destined to the United States. Indirect exports are equivalent to another 4% of its output. This vulnerability has never been more evident than now in the current climate of downward pricing pressure facing this sector. By contrast, the oil sands industry ranks lowest (55.5) among the 25 industries when it comes to international supply vulnerability. Intermediate inputs are equivalent to 51% of oil sands output, with 20% of these intermediates sourced from outside of Canada, and of these 67% are sourced from the United States. Oil sands also uses a lot of imported intermediates on the limited supply list (such as chemical products, lubricants, and construction machinery) pushing its supply vulnerability index score to 55.5, higher than the weighted average of 49.7 for all 218 industries.

### CANADIAN INDUSTRIES LEAST VULNERABLE TO INTERRUPTIONS IN INTERNATIONAL SUPPLY CHAINS

This section looks closer at those industries that score low on both the international supply vulnerability index and the international demand vulnerability index.

The 25 Canadian industries at the bottom end of the combined demand and supply index are more domestically focused with little or no exposure to international markets for either demand or supply (Table 3.2). They require little in the way of international inputs and are therefore the least vulnerable to interruptions in international supply chains.

**TABLE 3.2**  
**Canadian industries least vulnerable to interruptions in international supply chains**

RANK	SECTOR	INTERNATIONAL VULNERABILITY SCORE		
		DEMAND	SUPPLY	COMBINED
194	Furniture and home furnishings stores	15.0	39.2	27.1
195	Other non-profit institutions serving households	8.6	45.5	27.0
196	Educational services	14.2	39.7	26.9
197	Clothing and clothing accessories stores	16.2	37.6	26.9
198	Accounting, tax preparation, bookkeeping and payroll services	18.0	35.7	26.9
199	Grant-making, civic, and professional and similar organizations	8.1	45.4	26.7
200	Community colleges and C.E.G.E.P.s	6.1	47.1	26.6
201	Sporting goods, hobby, book and music stores	17.5	35.6	26.6
202	Health and personal care stores	16.7	36.2	26.4
203	Social assistance	4.2	48.6	26.4
204	Local credit unions	14.0	38.6	26.3
205	Banking and other depository credit intermediation	19.2	32.3	25.7
206	Electronics and appliance stores	16.5	34.9	25.7
207	Miscellaneous store retailers (except cannabis)	14.4	37.0	25.7
208	Elementary and secondary schools	4.2	46.7	25.4
209	Food and beverage stores	12.7	37.9	25.3
210	General merchandise stores	13.8	35.8	24.8
211	Gasoline stations	14.3	34.7	24.5
212	Investigation and security services	12.8	36.0	24.4
213	Insurance carriers	10.3	37.7	24.0
214	Offices of real estate agents and brokers and activities related to real estate	8.9	38.9	23.9
215	Other aboriginal government services	9.7	38.1	23.9
216	Religious organizations	4.5	41.9	23.2
217	Agencies, brokerages and other insurance related activities	11.0	33.1	22.1
218	Lessors of real estate	6.7	35.6	21.1

Note: The international demand and supply vulnerability scores are from Boileau (2020). The combined score is the average of these vulnerability scores.



Together these 25 industries that are least vulnerable to international supply chain disruptions account for 18% of output for the 218 industries analyzed—almost double the combined output of the 25 most vulnerable industries. The least vulnerable group are dominated by retail as well as professional, education, and other service industries.

The banking and other depository credit intermediation industry, among the larger industries ranking lowest on the combined vulnerability index, is a good example of an industry that is relatively immune to supply chain disruptions.<sup>17</sup> On the demand side, banking ranks near the bottom of the demand vulnerability index, 161 out of 218 industries. Banking exports were only 8% of industry output, and these exports were relatively diverse with 56% destined to the United States (the average for all Canadian industries is 71%), while indirect exports accounted for only 8% of industry output. The banking industry's demand vulnerability index score was 19—which made it the most vulnerable to fluctuations in international demand among these 25 industries. On the other hand, the banking industry's supply index ranked 32.3, which made it the least vulnerable to fluctuations in international supply among these 25 industries. Although intermediate inputs to the banking industry accounted for 25% of its output, only 9% of these inputs were imported. Although 68% of these imports were from the United States, the industry imports relatively few products on the limited supply list.

Although some industries appear to be insulated from supply and demand disruptions based on their scores on each index, this does not necessarily mean that pandemics such as COVID-19 or other international disruptions might not affect these industries in other ways. For example, while air transportation (not shown on the list) ranks near the bottom of the combined supply and demand vulnerability index (183 out of 218), which suggests that the industry may not depend on imports or exports, it clearly depends on the ability of all travelers to cross borders. Universities (not shown on the list) is another example (ranking 189 on the combined index) where restrictions on, or changes in behaviour of, international students could have a significant impact on services output. One can potentially pick any industry in this least vulnerable listing and find many ways it could be impacted by international shocks such as COVID-19.

<sup>17</sup> While this approach shows that banking appears to be almost immune to supply chain disruptions related to supply and demand, this does not mean that the sector is immune to other types of international shocks such as restrictions on international capital flows or volatility in international stock and bond markets.

### CANADIAN SERVICES INDUSTRIES MOST VULNERABLE TO INTERNATIONAL SUPPLY DISRUPTIONS

In this section we look at services industries that either score high on the international demand vulnerability index (but not on supply) or score high on the international supply vulnerability index (but not on demand).

Within the Canadian economy, we determined that the viability of 38 sectors representing a wide variety of industries depends more on international demand for their services and less on international suppliers. In other words, they score high on the demand vulnerability index and low on the supply index. This group includes pipeline and rail transportation services, some extractive industries (such as potash) and R&D, advertising, professional consulting services and administrative services. (See Boileau 2020.)

At the other end of the scale, 29 industries providing mostly services are among the industries with high international supply vulnerability and low international demand vulnerability. These include some manufacturing services and the large government service sectors at all levels as well as institutions offering health care services and defence services.

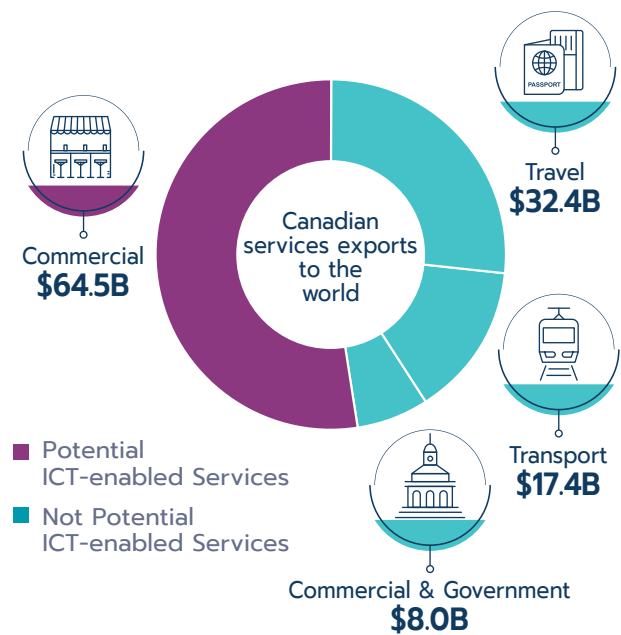
Federal, provincial and municipal government services were assigned to this category because all 3 score particularly high on the fourth component of the supply index (that is, the number of imported products that can be supplied by a limited number of sources). In fact, all 3 government sectors use a wide variety of imported products, including agri-food, chemicals, and the metals and minerals that are sourced from a limited number of suppliers. Provincial government services, for example, scored highest of all industries on this component, importing a potential 1,572 products out of 2,107 on the list.

### REDUCING SUPPLY AND DEMAND VULNERABILITY: THE ICT EFFECT

While traditional service exports often require the movement of people—either Canadians going abroad to deliver services or visitors to Canada purchasing services—an increasing number of Canadian services are proving themselves to be, or are presumed to be, deliverable digitally via information and communication technologies (ICT) (Figure 3.4). The use of technology may insulate many of these more vulnerable industries from disruptions in supply and demand that might otherwise affect them. Familiar digital platforms that enable people to conduct transactions remotely include email, Skype, Facetime, ZOOM, and sharable cloud folders. The COVID-19 crisis has been transformative in countless ways, not the least of which as a disruptor to the “business as usual” model.



**FIGURE 3.4**  
Exports of potential ICT-enabled services, 2017



Data: Statistics Canada tables 36-10-0005-01 and 36-10-0004-01 and 12-10-0141-01

**3.3** Where do we go from here?

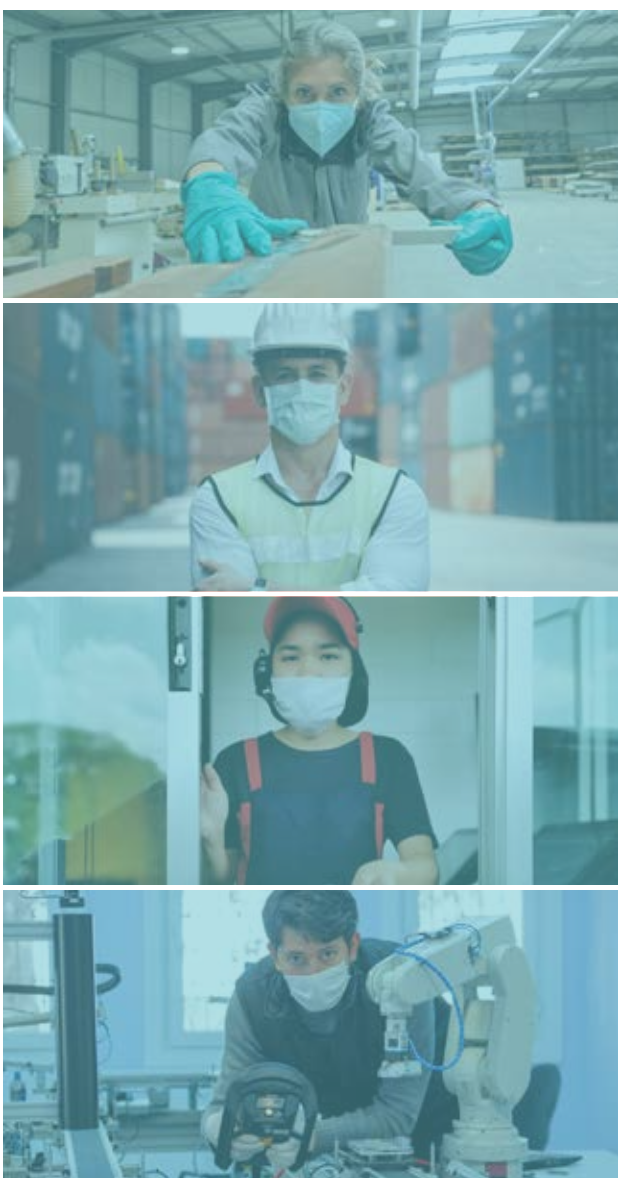
Research suggests that a firm’s involvement in global supply chains improves its productivity and its competitiveness. In times of global shocks such as COVID-19, some may argue that the costs outweigh the benefits of participating in global value chains. Openness to international markets puts some businesses at risk. Yet, international supply chains are likely here to stay, and Canadian firms will find ways to adapt to the inevitable future shocks. Sourcing from abroad will continue to allow these firms to lower costs and acquire high-quality inputs, access expert knowledge and find unique products and services that Canada cannot yet provide. Exporting allows Canadian firms to meet demand in fast-growing economies and forces domestic firms to “up their game” to compete in a global marketplace. But as COVID-19 highlights, globalization is often a double-edged sword. There are undeniable risks. But international competition often breeds innovation, which can translate into better Made in Canada products and services.



3.3 WHERE DO WE GO FROM HERE

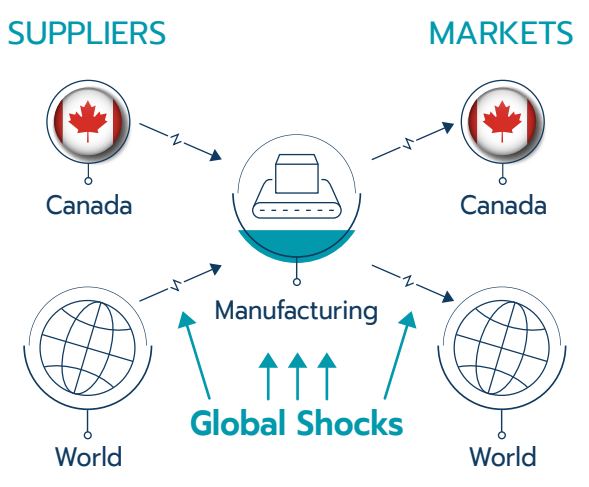
Take-home message 1

As the economies of Canada and its trading partners recuperate from COVID-19, individual industries will face their own challenges as they re-establish their international connections.



Take-home message 2

Manufacturing sectors are particularly vulnerable to global shocks as they rely on both foreign suppliers for inputs and foreign markets for sales.



**3.3** WHERE DO WE GO FROM HERE

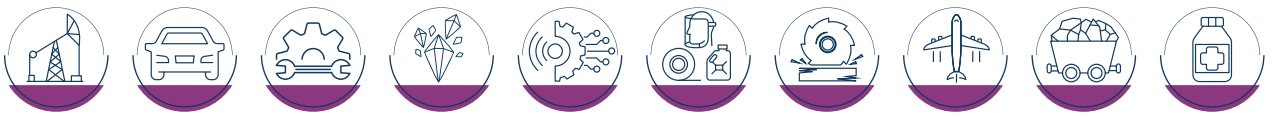
**Take-home message 3**

Retail and other service industries, on the other hand, may be less vulnerable to disruption because they rely more on domestic markets and suppliers.



**Take-home message 4**

The risks associated with international supply chains must be weighed against the many benefits: more competitive and productive enterprises that pay higher wages to workers and offer lower prices to consumers.



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