

The Conference
Board of Canada

Supply Chain Challenges and Implications for the Canadian Economy

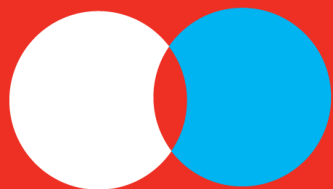
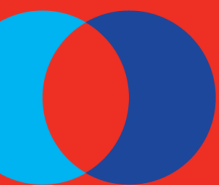
Sohaib Shahid

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Toronto Association for Business Economics
December 9, 2021

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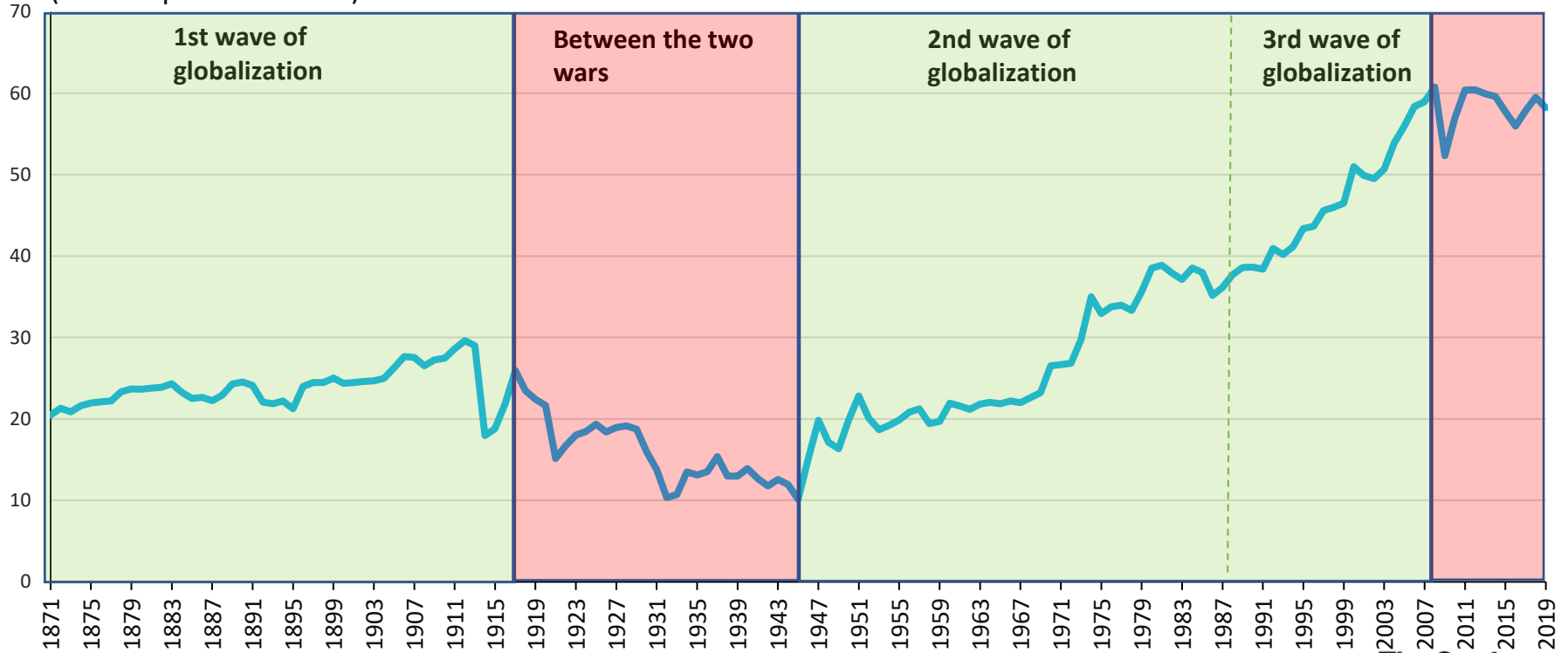


Historical & Geopolitical Context

Globalization Comes In Cycles



(Trade Openness Index)



Sources: The Conference Board of Canada; OWID

Global Production Networks Are Not As Global Anymore



Value of foreign content in manufacturing production, per cent

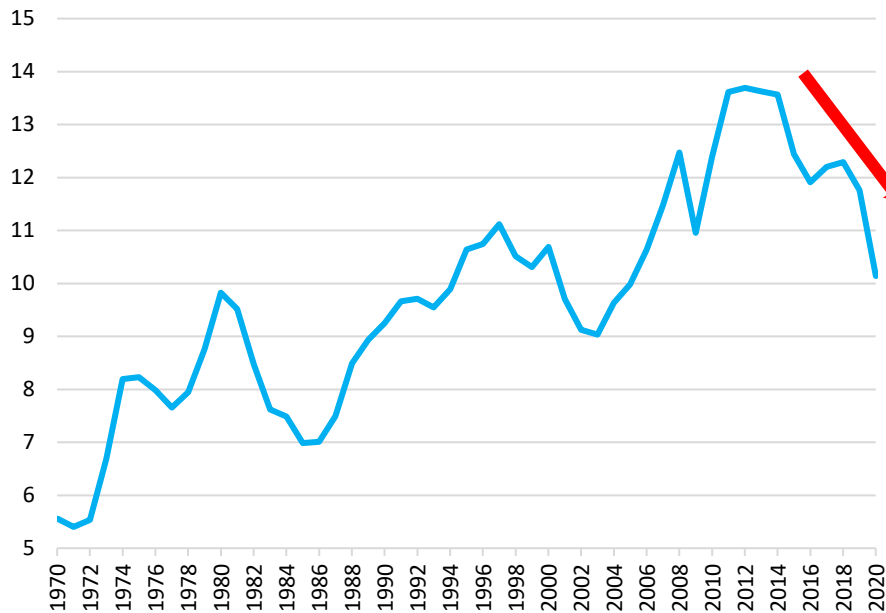
	1995	2011	2020
Global	17.3	26.5	23.5
United States	8.7	16.2	13.6
China	13.3	17.6	14.3
Europe	21.6	35.3	35.8

Sources: The Conference Board of Canada, Conference Board Inc., ADB Multi-Regional Input-Output Tables, World Input-Output Database (2013)

The Two Big Players Are Looking Inwards

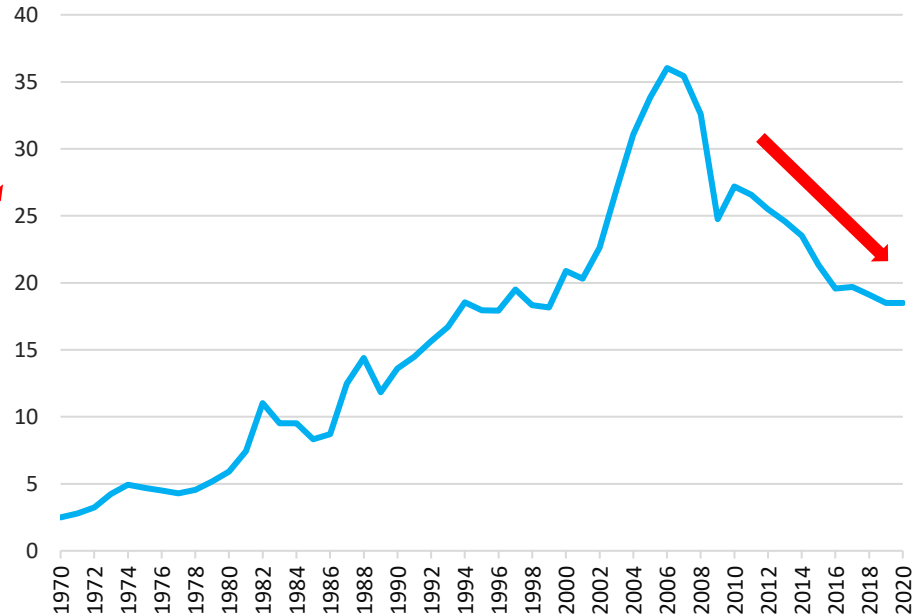


American exports, per cent of GDP



Sources: The Conference Board of Canada, World Bank

Chinese exports, per cent of GDP

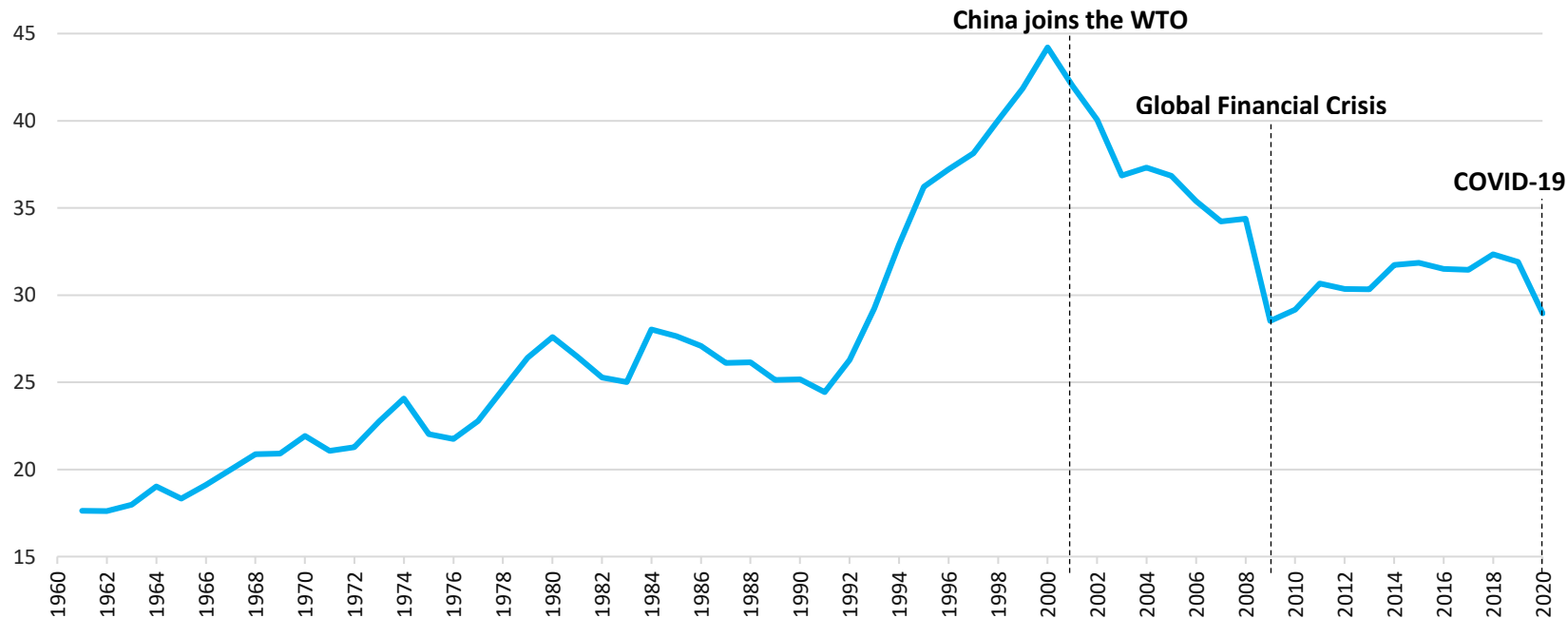


Sources: The Conference Board of Canada, World Bank

What Happens Outside Our Borders Impacts Us Profoundly

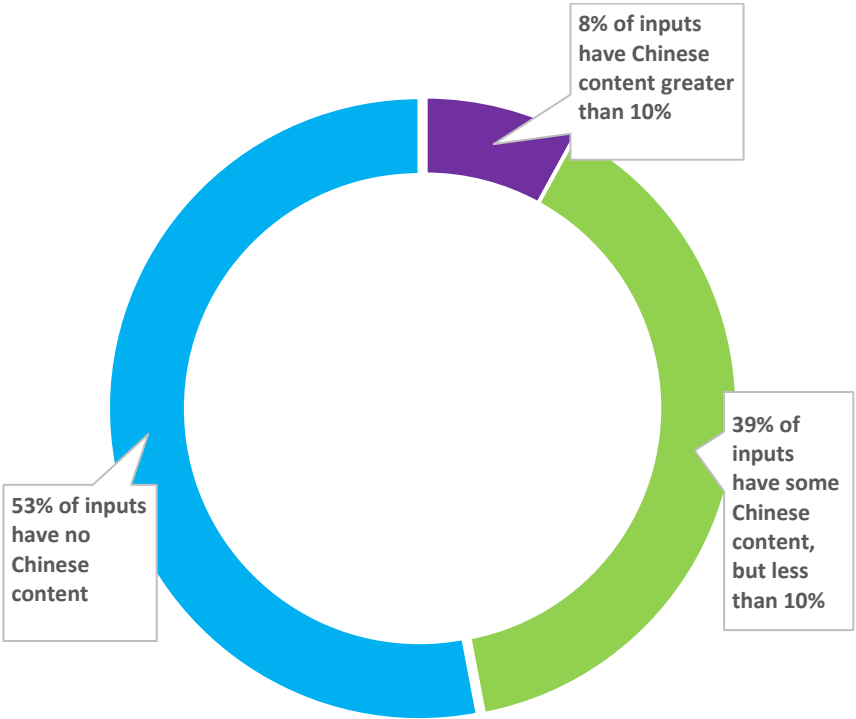


Canadian exports, per cent of GDP



Sources: The Conference Board of Canada, World Bank

Canada's Dependence On China Is High



Input	Average Chinese content of input across sectors, %	Sectors it is a significant input, %*
Small electric appliances	36	97
Lighting fixtures	28	97
Leather and allied products	27	97
Hand tools	23	97
Electrical equipment	16	97
Computers and parts	16	97
Major appliances	15	97
Office supplies	12	96
Miscellaneous manufactured products	11	95
Plastic products	10	93

Sources: The Conference Board of Canada, Global Affairs Canada, StatCan (Supply and Use Tables 2016)

Sources: The Conference Board of Canada, Global Affairs, StatCan
 *Significant is defined as at least 10 per cent Chinese content. The data include a total of 233 sectors.

China, China, China...



Canada, EU form raw materials pact to cut reliance on China

Aim to secure supply chains for critical minerals and metals key to green technology

François-Philippe Champagne in U.S. to talk unblocking supply chain and promote rare-earth minerals

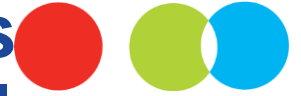
Canada, U.S. can't afford to remain overly dependent on China's economy

Most Canadians think Trudeau should rely less on trade with China: Ipsos poll

Pandemic is an opportunity for Canada to reduce economic dependence on China

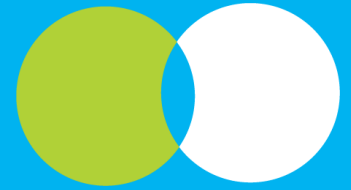
The Conference Board of Canada

U.S. & China Are Stuck In The Thucydides Trap While Canada Is Caught In The Middle



“It was the rise of Athens and the fear that this inspired in Sparta that made war inevitable” — Thucydides (460 - 400 BC)

The Economic Implications of Pandemic Induced Supply Chain Disruptions



COVID-19 Is Not The Only Reason Supply Chains Are Restructuring



Long-term Factors

- Deglobalizing pressures
- U.S.-China tensions
- Protectionism (tariffs etc.)
- Automation

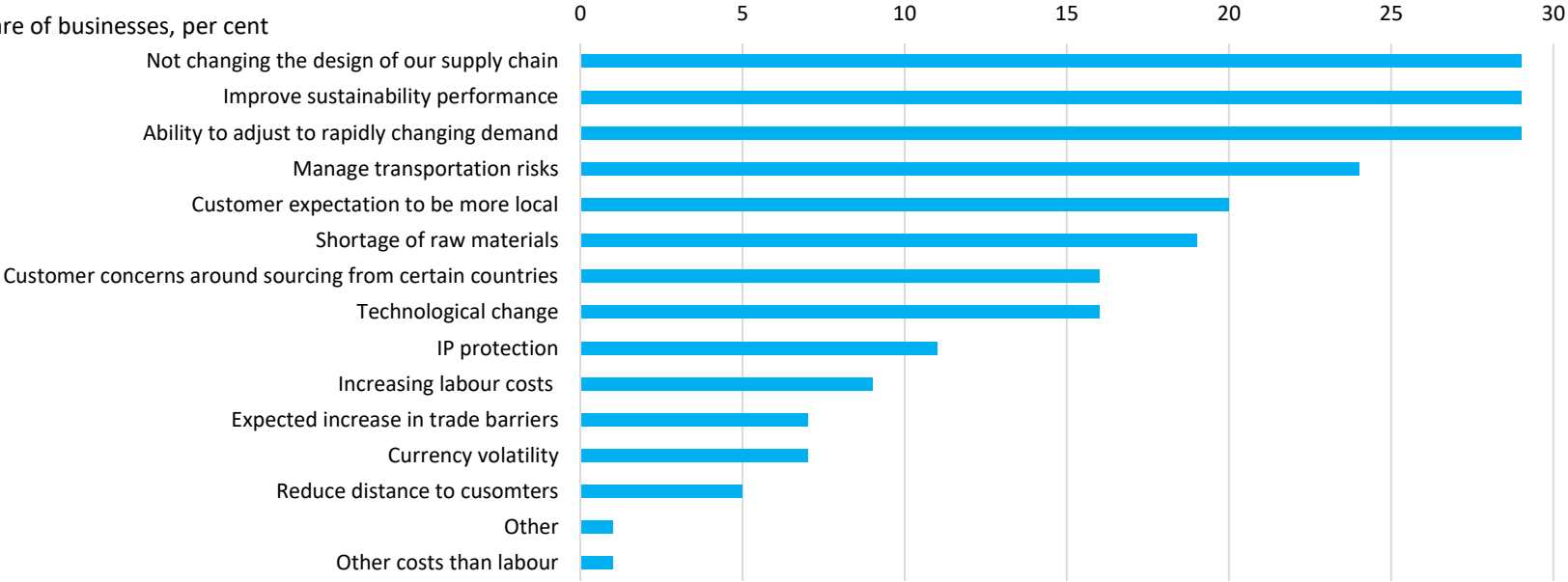
Short-term Factors

- Resurgence in demand
- Labour shortages
- Energy crises
- Natural disasters

Businesses Are Redesigning Their Supply Chains For Different Reasons



Share of businesses, per cent

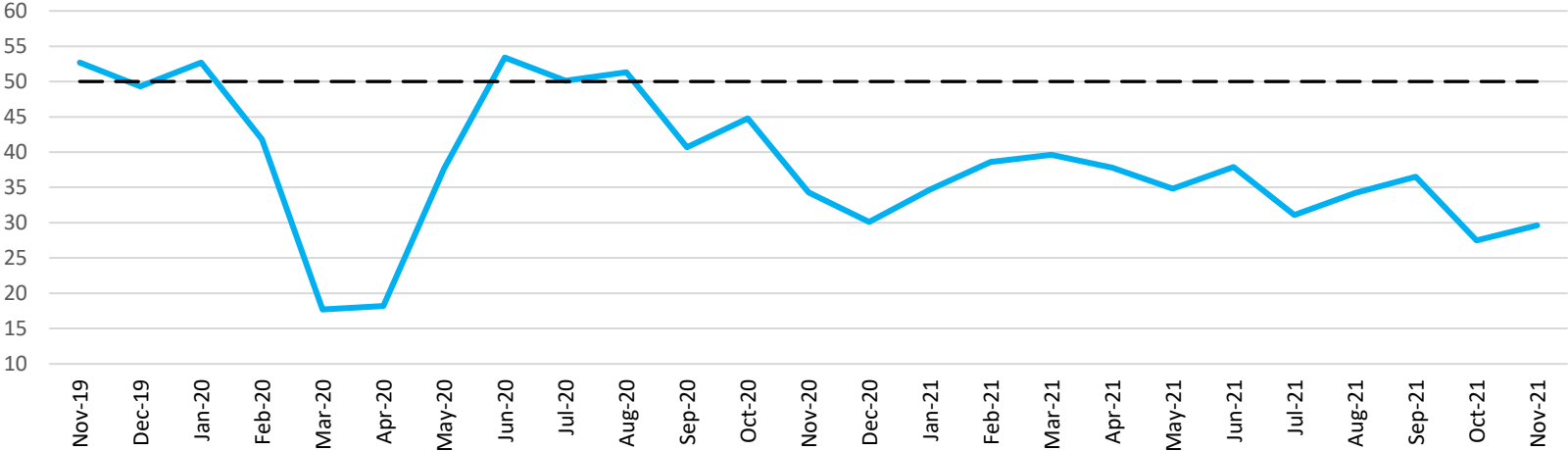


Source: The Conference Board of Canada, The Conference Board Inc.

Supplier Delivery Times Are Taking Longer

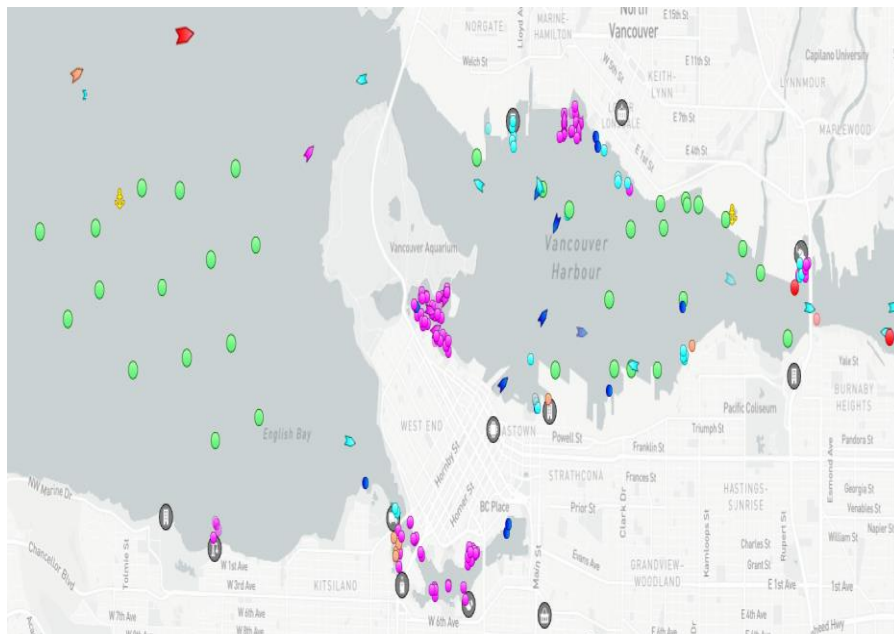


Supplier Deliveries Index

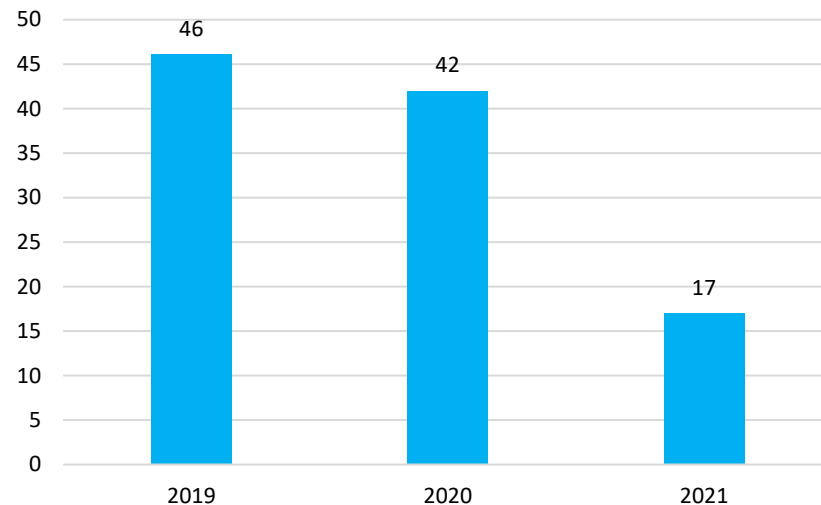


Sources: The Conference Board of Canada; Ivey School of Business.
Note: Below 50 = A majority of businesses reported longer delivery times compared to the previous month

Vancouver's Anchorage Is Congested With Vessels Delaying Their Arrival



On-time vessel arrival, YTD (per cent)



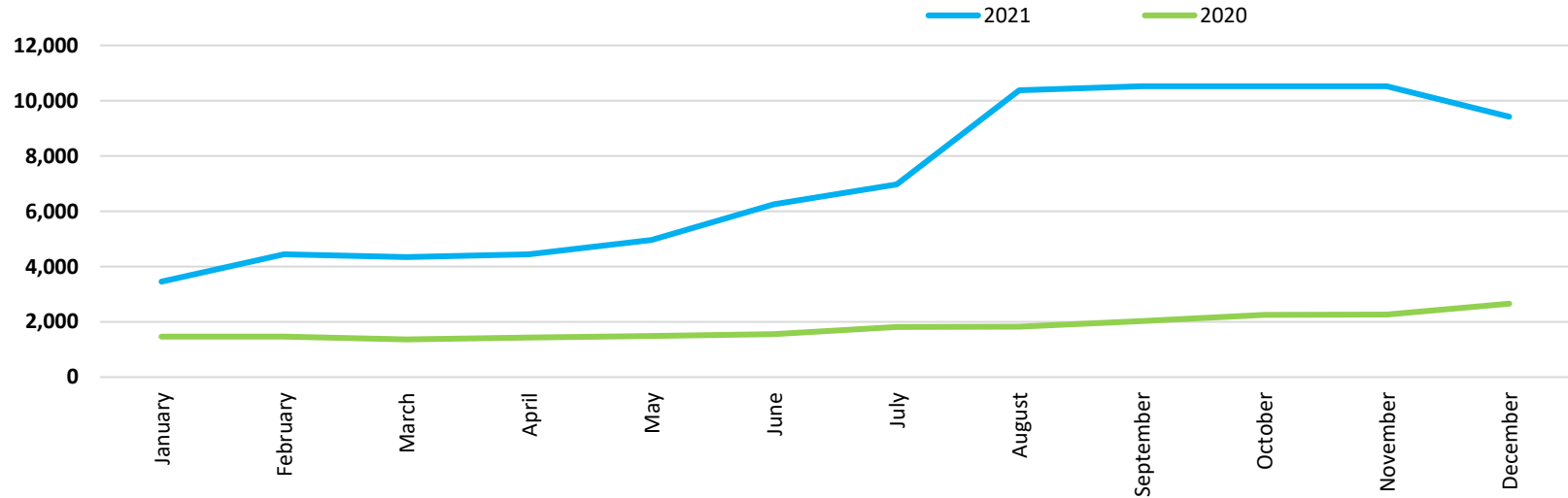
Source: MarineTraffic

Source: MarineTraffic, Conference Board of Canada

Shipping Costs May Have Peaked But A Long Way To Go Back To 'Normal'



(Baltic Global Container Index, US\$/40 Ft Container)

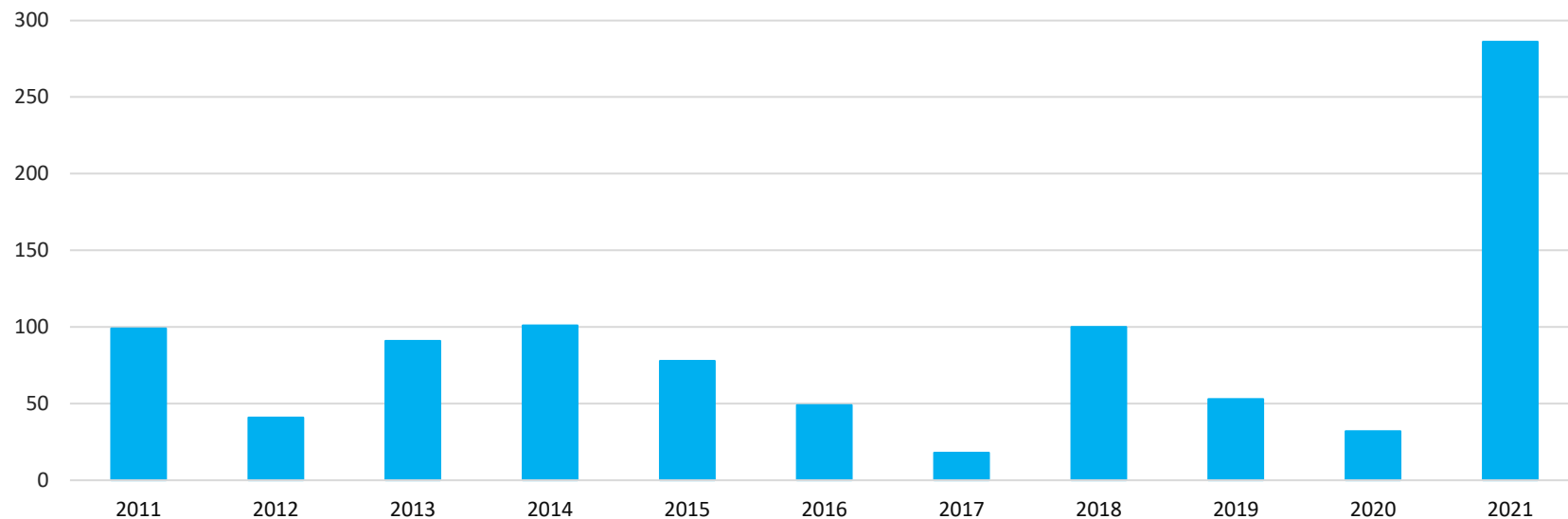


Sources: Conference Board of Canada, Freightos

Container Orders Hit Record Levels



Number of vessels ordered



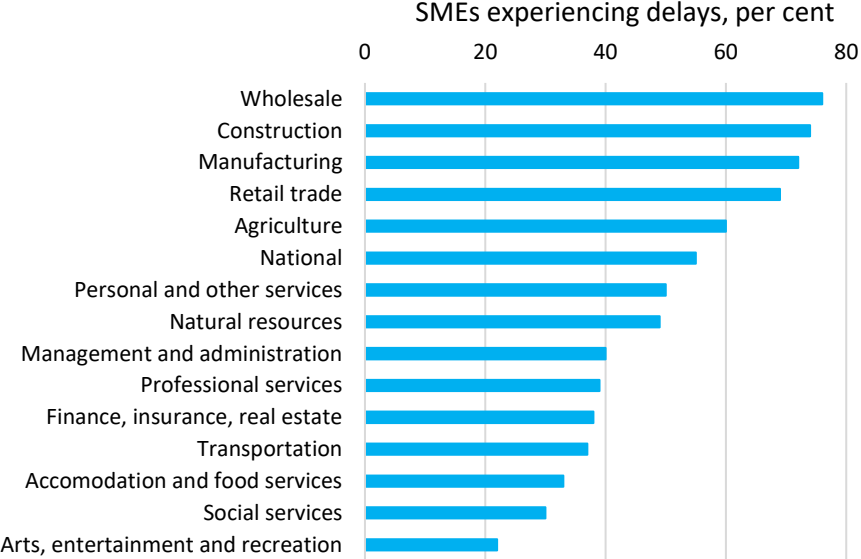
Sources: The Conference Board of Canada, VesselsValue (2021H1)

Flooding In BC Is Making Matters Worse

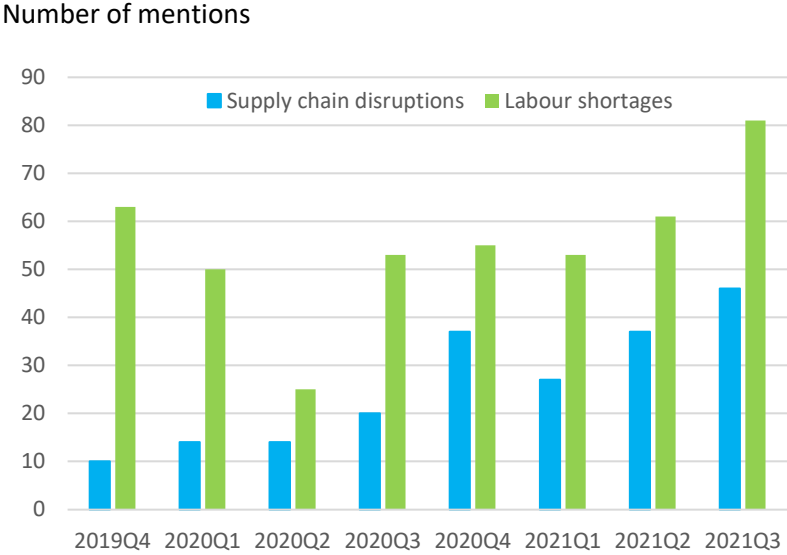


- Torrential rain, washouts and mudslides have closed all major highways that connect British Columbia's Lower Mainland to Alberta
- A significant proportion of Alberta's trade takes place via the port of Vancouver
 - Both imports and exports are delayed
- Expect more delays and higher costs in the near-term

Supply Chain Disruptions Vary By Sector



Sources: The Conference Board of Canada, CFIB

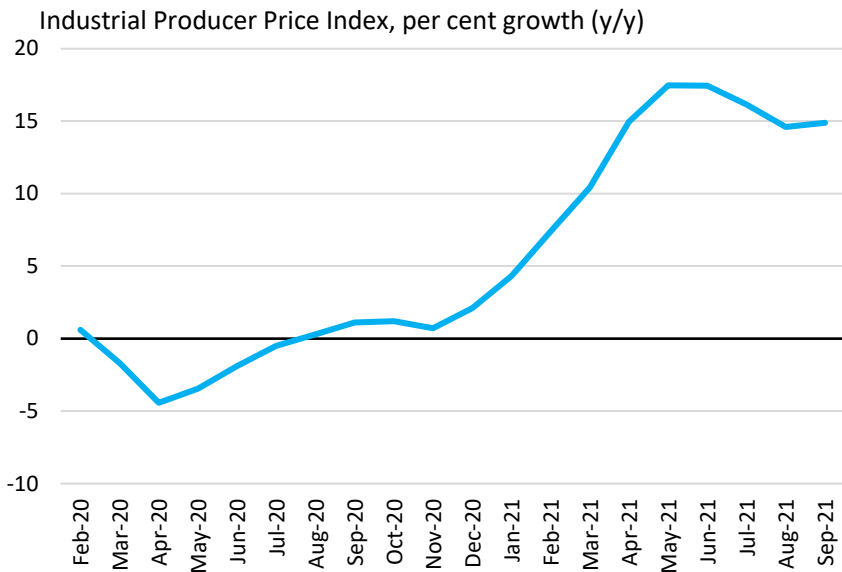


Sources: The Conference Board of Canada, Bank of Canada

Supply Disruptions Are Pushing Inflation Higher...

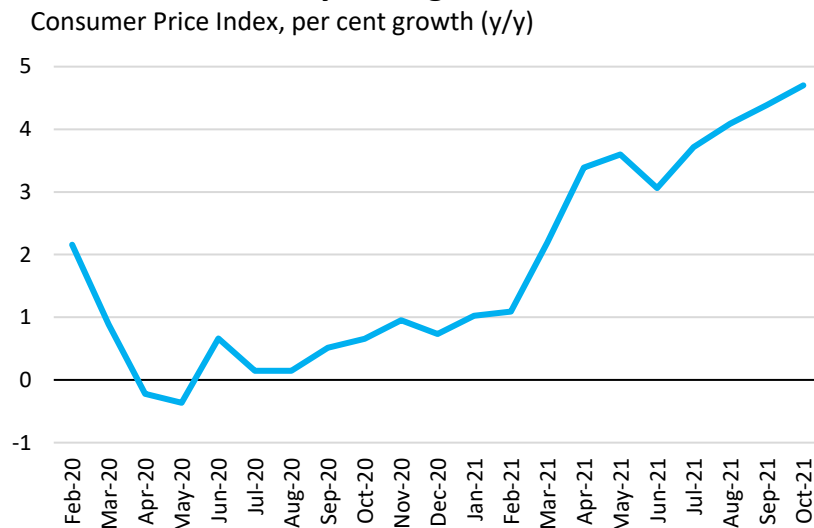


Producers Feeling the Pinch



Sources: The Conference Board of Canada, StatCan

Inflation is at a 18-year High

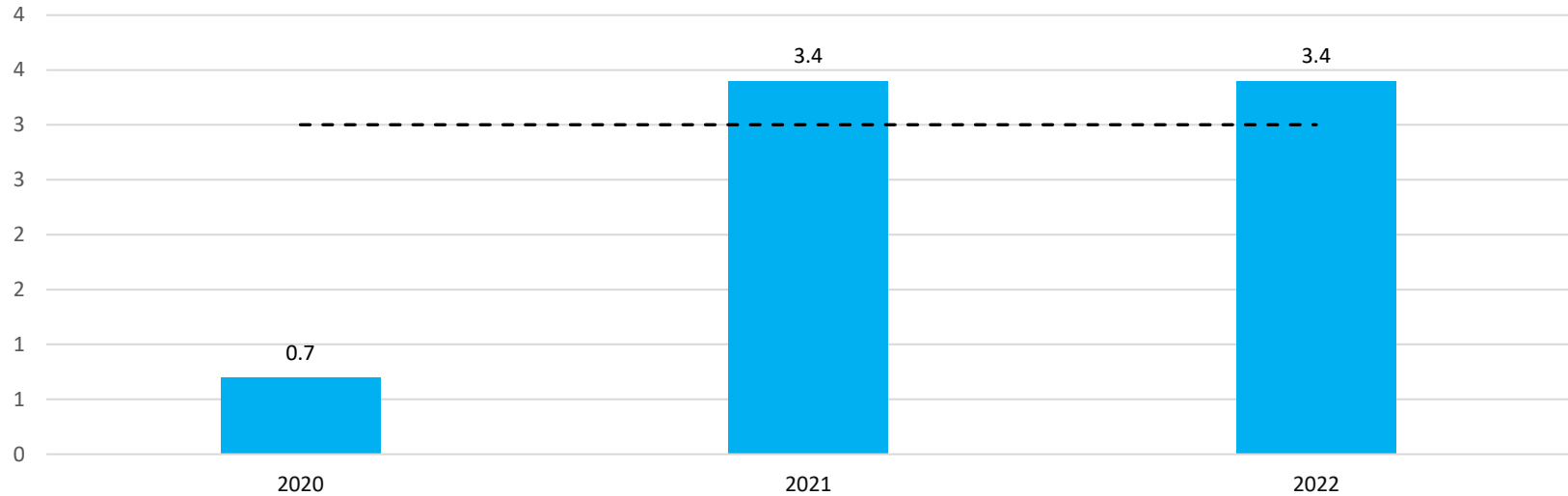


Sources: The Conference Board of Canada, StatCan

...But Remember Inflation Is Not 'Transitory'



(inflation, per cent)

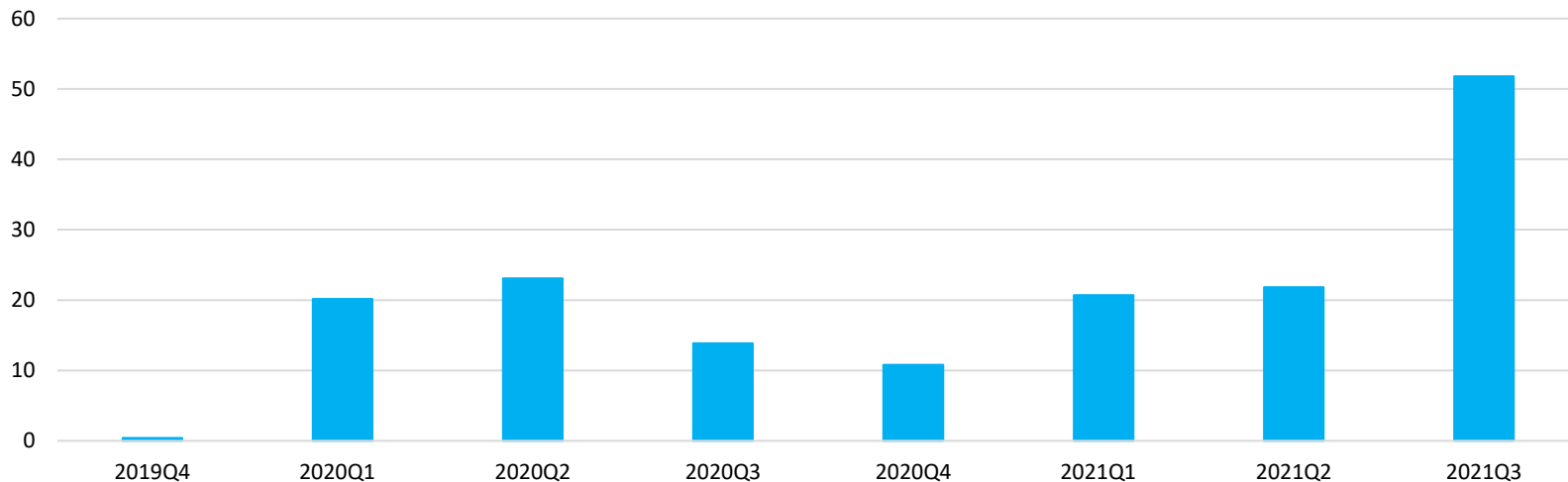


Sources: The Conference Board of Canada, Bank of Canada

Watch Out For Inflation Expectations



Share of businesses expecting inflation to be above 5 per cent or greater, per cent



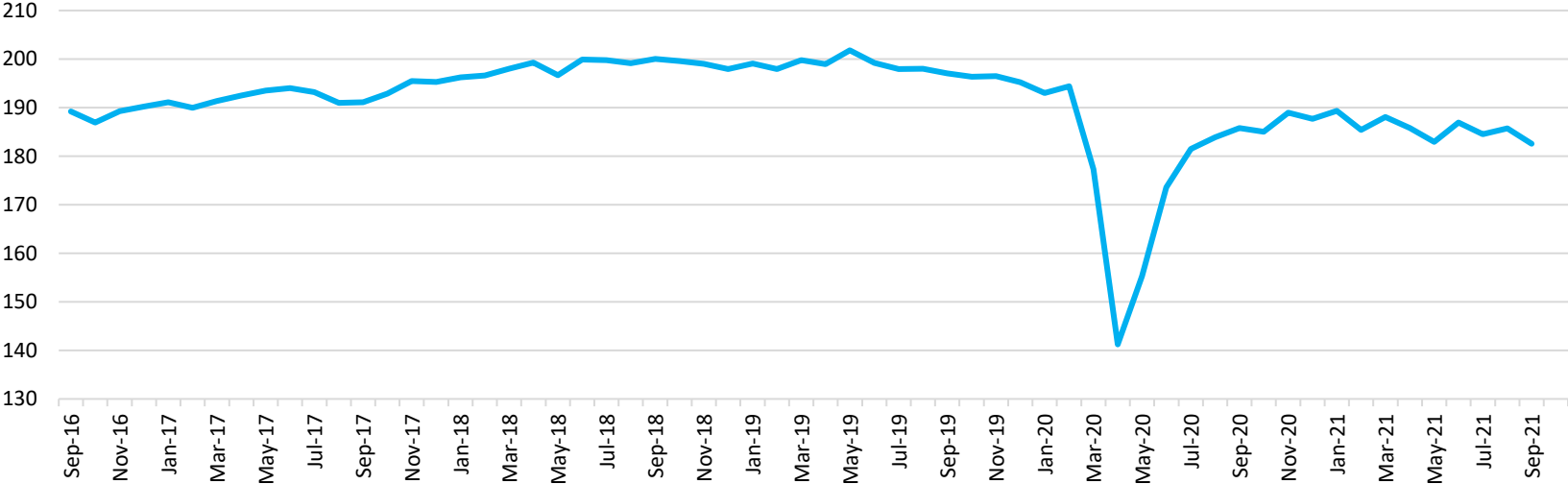
*6-months ahead inflation expectations

Sources: Index of Business Confidence, The Conference Board of Canada

Supply Disruptions Are a Dampener For Economic Growth



GDP in billions of chained (2012) dollars

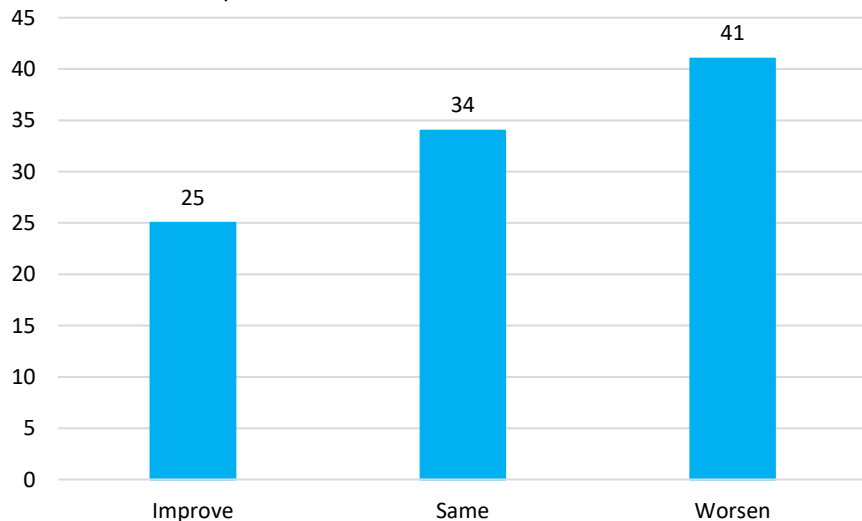


Sources: The Conference Board of Canada, StatCan

A Large Share of Businesses Expect Supply Disruptions To Persist

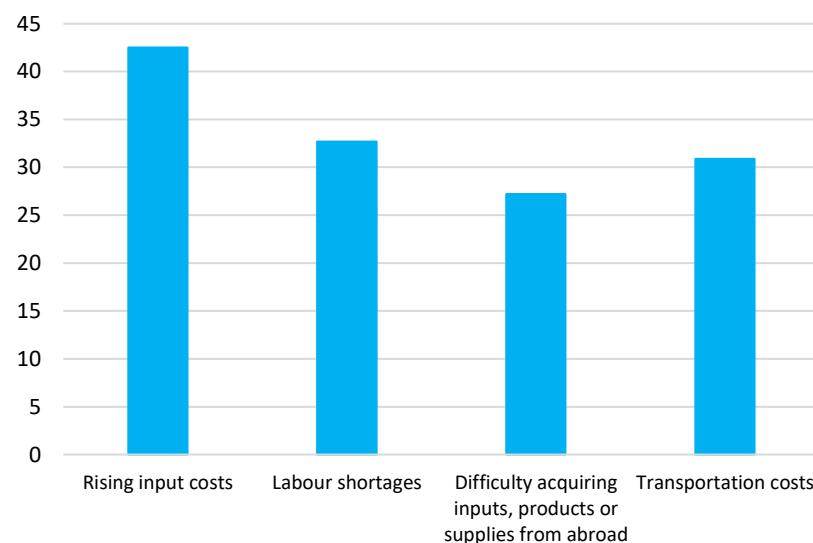


Business expectations about supply disruptions over the next 6 months, per cent share



Source: The Conference Board of Canada

Per cent of Business obstacles over the next 3 months



Sources: The Conference Board of Canada, StatCan



Buckle Up For The Future

Supply Chains Will Never Be The Same

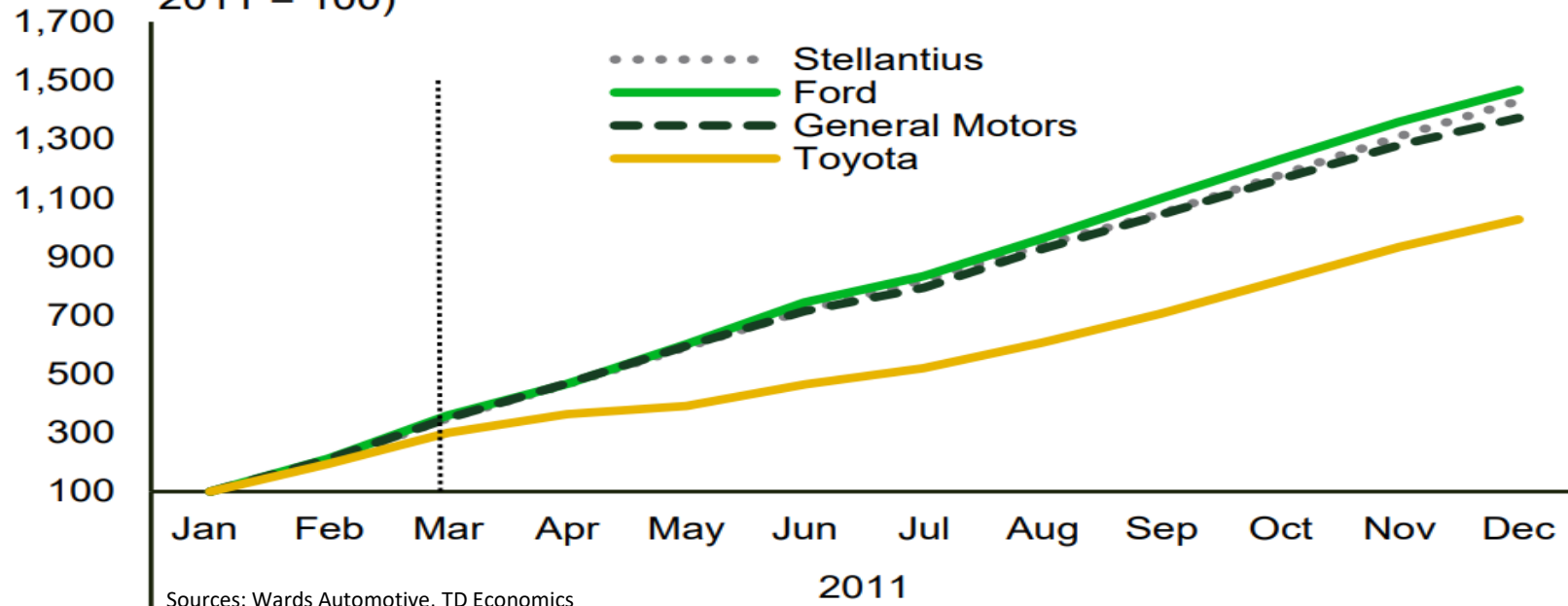


- Supply chains of the future will be:
 - More robust and resilient
 - More regionalized (think ‘re-shoring’ and ‘near-shoring’)
 - “Just-in-time” to “just-in-case”
- Especially true for goods and services that have significant economic or national security consequences
 - Example: Semi-conductors
- The “how-to” for supply chains of the future
 - Invest in technology
 - Conduct stress tests
 - Strengthen relationship with suppliers
 - Build more redundancies

2011 Earthquake And Tsunami in Japan Hit Toyota's Production...



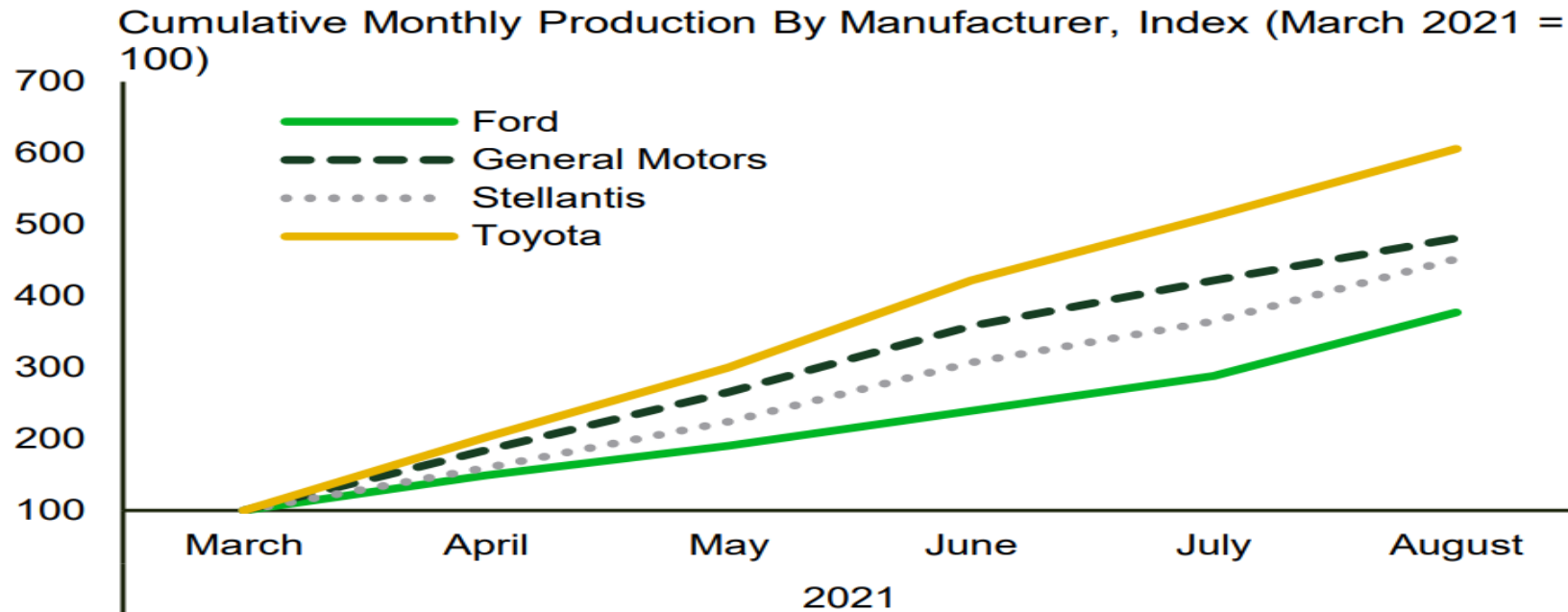
Cumulative Monthly Production By Manufacturer, Index (January 2011 = 100)



Sources: Wards Automotive, TD Economics

Note: Chart extracted from [Automotive Supply Chains: Severely Disrupted but Not Broken \(td.com\)](http://www.td.com)

Toyota Is Doing Better In The Face Of Semiconductor Shortages



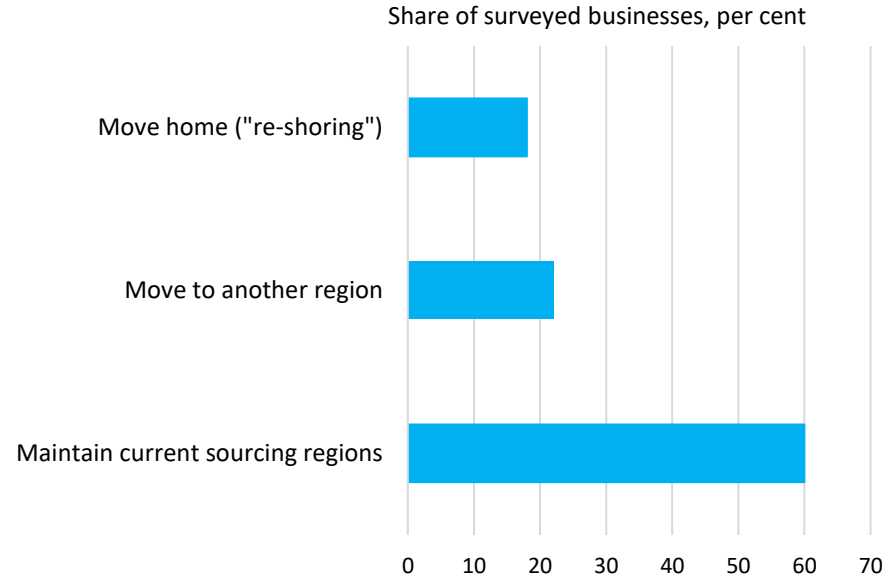
Sources: Wards Automotive, TD Economics

Note: Chart extracted from [Automotive Supply Chains: Severely Disrupted but Not Broken \(td.com\)](https://www.td.com/automotive-supply-chains-severely-disrupted-but-not-broken)

Reshoring Won't Be A Silver Bullet



- Reshoring may make it more difficult for the economy to adjust to future shocks
- Higher production costs could mean thinner profit margins and/or higher prices for consumers
- Business are likely to experience skills gaps

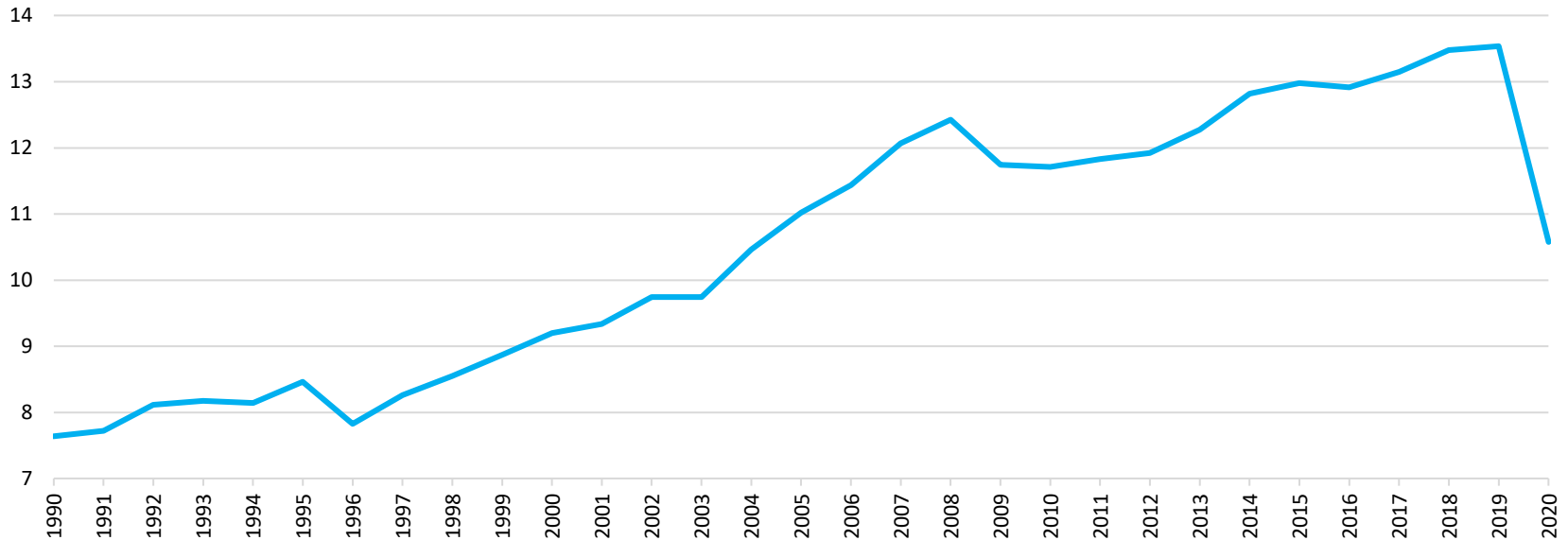


Sources: The Conference Board of Canada, The Conference Board Inc.

Despite The Setback, Services And Digital Trade Will Be The Future of Globalization



Global trade in services, per cent of GDP



Sources: The Conference Board of Canada, World Bank

Key Takeaways



- Supply chain restructuring was underway before the pandemic hit
 - China will remain the global hub for production in the future so reducing dependence on China will be a major challenge going forward

- Supply chain disruptions are, by nature, 'stagflationary'
 - Weaken growth, raise inflation, increase unemployment

- Supply chains of the future will be shorter, more regionalized, incorporate greater redundancies and focused increasingly on services
 - More competition for high skilled workers rather than low-skilled workers which will further exacerbate wage inequality
 - Some measures to make supply chains resilient could be inflationary

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