

INFRASTRUCTURE POLICY TRENDS

July 2020

A CANARY IN PANDA'S CLOTHING?

A canary is to a coal mine what a panda is to the international supply chain.

On May 12th, 2020, the Calgary Zoo announced that it would be sending two giant pandas back to their home in China, years ahead of schedule, due to unpredictability in the supply of bamboo in the context of pandemic-related supply chain issues.

The pandas' diet consists almost entirely of fresh bamboo, usually flown directly from China to Calgary. But in the last two months, due to COVID-19-related disruptions, *“the Calgary Zoo has seen changes in transportation destroy the bamboo supply lines”* and has concluded that, for the safety of the pandas, they should be returned to China, *“where bamboo is abundant and easy to access”* (Calgary Zoo, 2020).

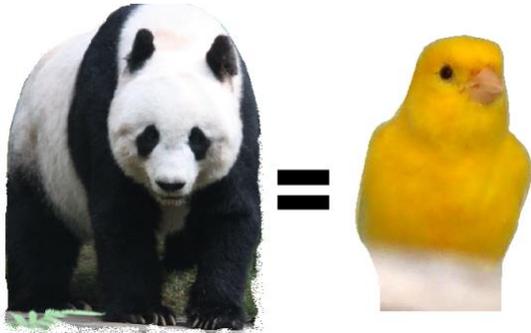


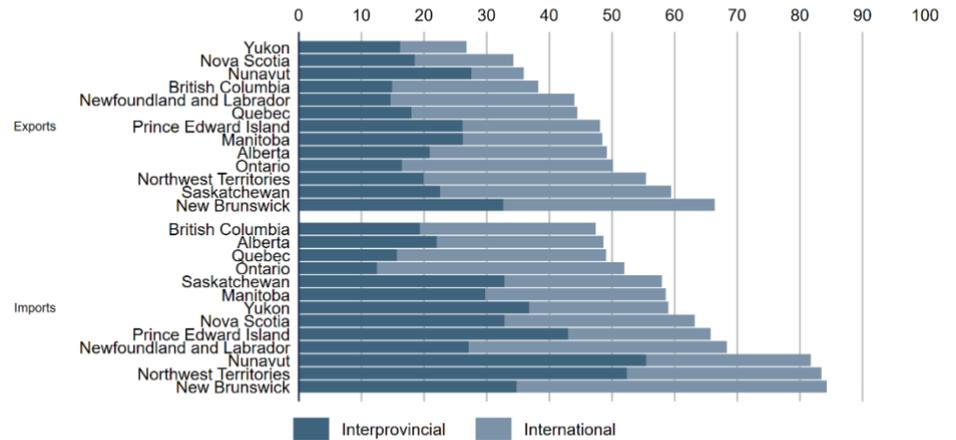
Figure 1: Panda Equals Canary (in this circumstance)

Sources: Base Imagery from Wikimedia Commons, poor quality edits by author

Like the proverbial “canary in a coal mine”, whose demise would alert coal miners to danger from poison gas before they themselves succumbed to it, the jeopardy facing these pandas serves as a warning about the stability of Canadian and global supply chains. The Calgary Zoo’s decision has spared the pandas from the canary’s fate, but Calgary’s panda exhibit still stands as an early casualty of a vulnerable supply chain.

Canada is a trading nation. We trade with other countries and our provinces and territories trade with each other in huge quantities. Trade supply chains are important for the things we buy and consume as well as the things we produce and sell.

Figure 2: Interprovincial and International Trade as a Share of Provincial GDP (%) (2016)



Source: Statistics Canada, Supply Use Tables (2016) <https://www150.statcan.gc.ca/n1/pub/15-602-x/15-602-x2017001-eng.htm> and Author's Calculations

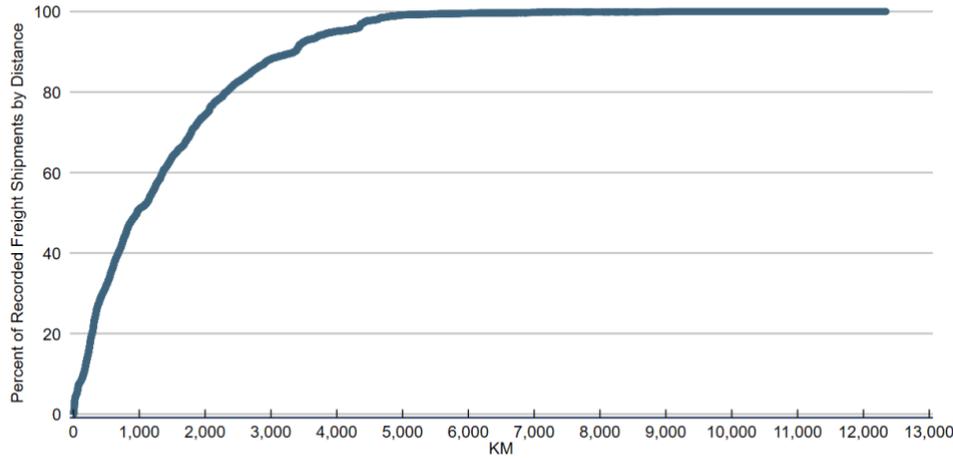
Figure 2 shows how important these trade supply chains are at both the international and the interprovincial levels. The goods each province imports from other countries and provinces range in share of GDP from a low of 47 per cent to above 80 per cent; exported goods represent anywhere from 27 per cent up to 66 per cent.

The aforementioned panda issue is a visible example of this; supply chain issues for goods like personal protective equipment (PPE), much of which are manufactured in and purchased from China, are much more critical especially during a global pandemic.

But, as shown in Figure 2, a significant portion of Canada’s provincial-level trade is domestic rather than international. So, maintaining the flow of goods at the interprovincial level is also essential to ensure the uninterrupted flow of vital medical supplies, food products and other goods and services inside the country.

The average distance for a freight shipment varies significantly from province to province, but in all cases the distances are vast. Half of all recorded freight shipments originating and/or terminating in Canada are in excess of 1000km; a quarter are in excess of 2500km (Figure 3).

Figure 3: Cumulative Distribution of Canadian Freight Shipping Distances (2011-2017)

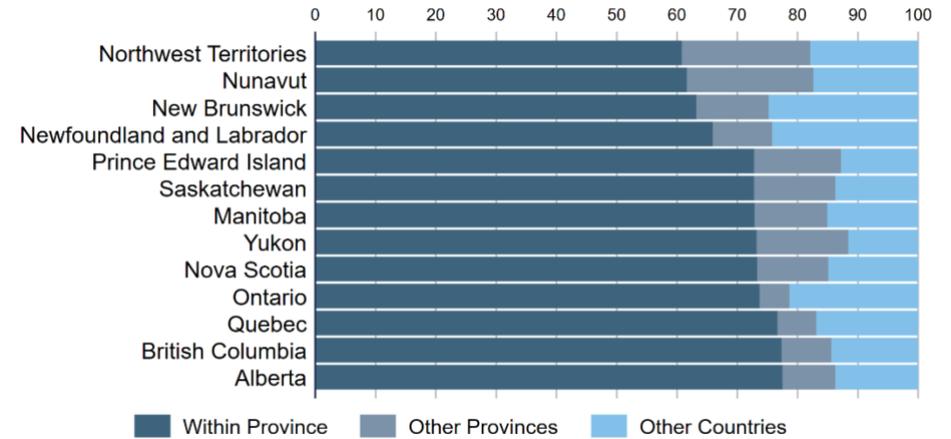


Source: Statistics Canada, Canadian Freight Analysis Framework <https://www150.statcan.gc.ca/n1/pub/50-503-x/50-503-x2018001-eng.htm> and Author's Calculations

And these shipments are not always for finished goods. Often important inputs are shipped from point A to point B, where they are processed into a new product and then shipped to point C, where they are again processed before being shipped to point D, etc. These shipments also cross provincial and international borders. In fact, between 25 and 40 cents of every dollar's worth of provincial or territorial production represents value added in another province or another country (Figure 4).

Despite calls for more domestic value-added production in Canada, these trading relationships are mutually beneficial. Integrated geographic supply chains allow for more specialized and efficient production. A large share of Canada's trade is with the United States. Although the Canada-U.S. border remains closed to all non-essential travel due to COVID-19, the agreement between the two countries exempts the flow of goods as well as temporary foreign workers and essential health care workers who live and work on opposite sides of the border.

Figure 4: Geographic Sources of Value Added by Province (%)



Source: Statistics Canada, Input-output multipliers (2016) <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610011301> and Author's Calculations

The truncated visit of China's giant pandas, while not representing a critical service disruption itself, stands as a warning of the vulnerability in the supply chains we rely on to buy, sell, and produce most of the goods and services in our economy.

The Calgary Zoo can send the pandas home, but we're stuck here. We need to make sure there are stable supply chains grounded in stable infrastructure to ensure the future of our economy.

For more information on how Canadian trade infrastructure supports supply chains and economic and social objectives, please visit The School of Public Policy's Canadian Northern Corridor Research Program Website: <https://www.canadiancorridor.ca/>

References:

Calgary Zoo. 2020. "IF YOU CAN'T BRING BAMBOO TO THE GIANT PANDAS, YOU NEED TO MOVE THE GIANT PANDAS CLOSER TO THE BAMBOO!" May 12. <https://www.calgaryzoo.com/GiantPandas>