

Economic Development Winnipeg

WEEKLY ECONOMIC DIGEST



GLOBAL SUPPLY CHAIN CHALLENGES

COVID-19 IMPACTS WILL CONTINUE INTO THE FUTURE

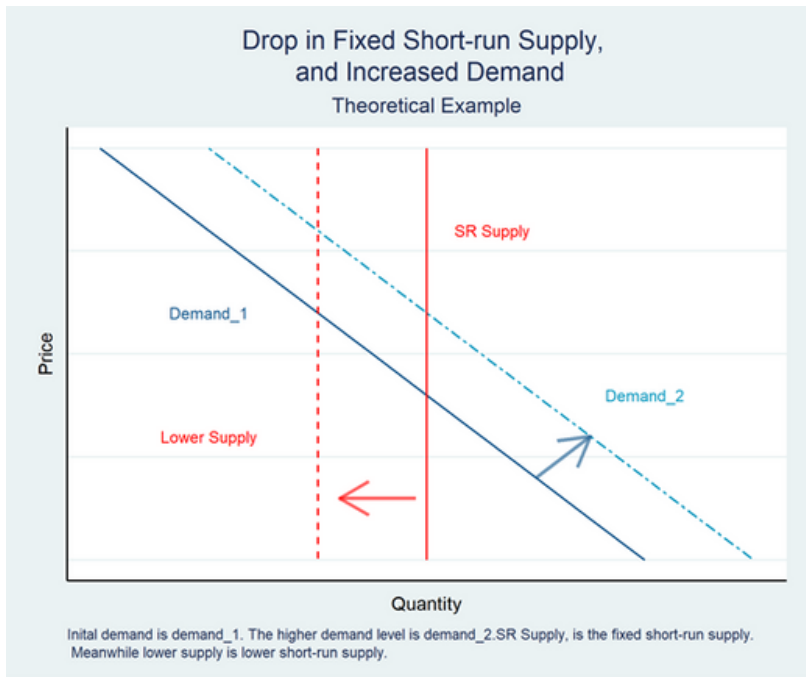
Chris Ferris, Senior Economist

Bottom Line

COVID-19 continues to offer up various challenges across global supply chains. While Canada and several other countries are advanced in our vaccination programs, these challenges will continue to pop-up until we have vaccine-induced herd-immunity in Canada and much of the world. Vaccine certificates/passports and the various non-pharmaceutical interventions should help us resume a lot of activities while vaccination programs continue at home and abroad.

We are experiencing significant demand for intermodal movement, which is creating congestion at various stages of the supply chain. Canadian intermodal movement is up 61% since February 2020. COVID-19 is playing a role in causing chaos, cascading delays throughout the system. Longer-dwell times for containers have worsened the issue, forcing companies to significantly expand their container fleet.

A shortage of computer chips is one supply issue that will take some time to resolve. An unanticipated surge in demand for consumer goods containing computer chips was partially responsible for this, along with stop-bang lockdown issues in various industries.



Bottom Line (cont'd)

While the reduction in crops in Western Canada has nothing to do with COVID-19, it will take some time before new supplies will be available, so price increases, substitution and delayed demand will have to ration available supplies until at least next crop year (Aug/Jul) in August 2022. This will reduce grain movement demand by trucks and rail, which will free up some motive power during this crop year.

Short-run vs Long-Run Adjustments

In the short run, there is no time to add a new production plant, nor to vary production/supply chain technology. In this case, short-run supplies are essentially fixed. In such a case an increase in demand (demand_2) will mean buyers would have to pay a higher price. Those buyers willing to pay more will get more of the supply. In some cases (such a smaller crop), a further challenge can be a drop year-over-year in available supplies.

Given some time to adjust, manufacturing suppliers of non-agricultural goods can often boost their plant's capacity utilization and offer more supply to the market per week or month. This can be done by increasing the hours of current workers (including overtime) and/or by hiring more workers (this could include adding another shift). At the same time buyers can substitute alternative products or delay their purchases per week or month.

With more time, a company can expand a current plant, or add a whole new one, while hiring more workers to sustain an output increase. They can optimize their value chain by implementing better inventory management (including reshoring). This will help them deal with the stop-bang of lockdowns that are likely to continue disrupting production shipping and upstream delivery around the world over the next few years while vaccination efforts continue.

Once COVID-19 and its variants fade from relevance, expanding global populations and trade flows will mean the need to expand global logistics systems will not fade. Congestion will come and go with shipping disruptions and localized demand surges. This will continually encourage value chains to adopt better information exchange technology, to adopt multiple ranges of container ship sizes to take advantage of various port sizes. It will also encourage the adoption of innovative technology and the pursuit of labour enhancing productivity growth throughout the value chain. All of this will require enhanced training of staff.

A Closer Look at the COVID-19 Impact on Supply Chains

There are a variety of supply chain issues that have been affecting global and local manufacturing activities as we have gone through the COVID-19 pandemic thus far. Some have been driven by increases in demand, some by shortages of supply. Some are being driven by congestion/slowdowns in the logistics chains due to surges in shipping demand. COVID-19 continues to play a direct or indirect role in these disruptions, as noted by Mark Cardwell's August 13, 2021, article "[Container Crunch](#)," Insider Logistics.

As a result, issues have arisen in various stages of a variety of [value chains](#). In the production of primary and intermediary inputs, manufacturing, at wholesale, retail, or at any of the logistic points in between. Some issues can be dealt quickly, while others will require more time, investment, hiring/training or other actions.

Information flows up and down value chains normally function reasonably well to guide the positioning of logistical assets in the right place at the right time, but the COVID-19 stop-bang issues and the logistical tangle in the Suez Canal have caused significant chaos in logistical systems worldwide. For instance, see Sam Chambers "[Container congestion registered in every corner of the planet](#)," and Kevin Varley "[Cargo Congestion Worsens With More Ships Waiting to Enter US Ports](#)." These articles have laid bare serious backlogs for containerized shipping have developed as a result.

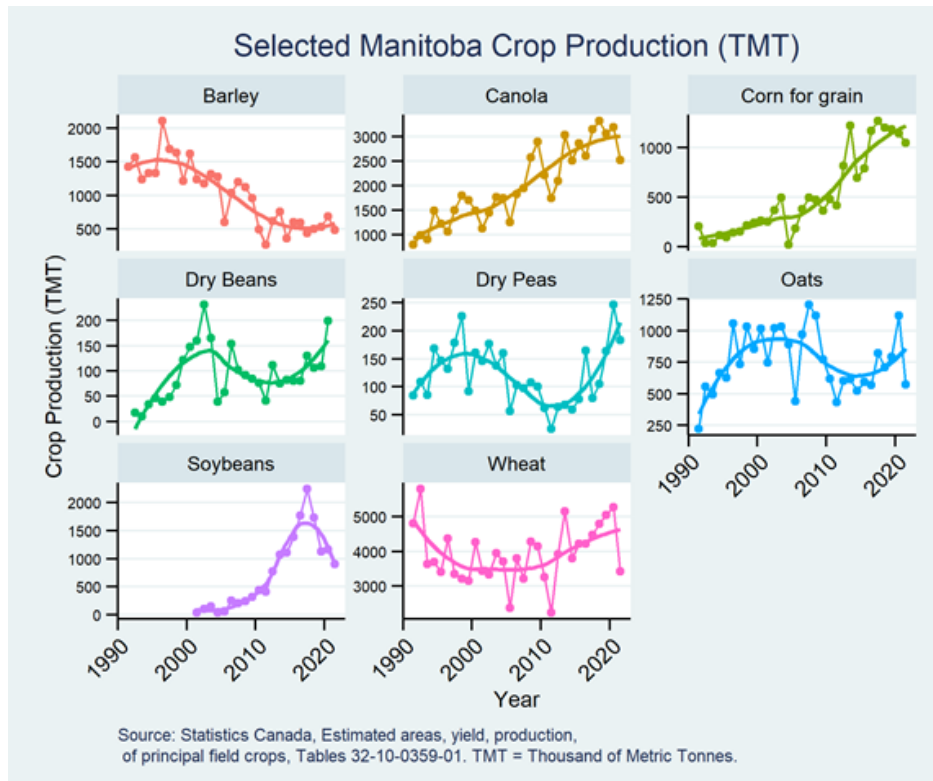
Adding more containers to the global supply has been going on for months, since cycle times are as much as 20 per cent longer than normal. The necessity of clearing ships waiting in port lineups is seeing the use of overtime, extending hours and various other short-term measures. Shipping lines are also using more smaller container ships to direct more container flow to smaller, less congested ports during this time of significant port congestion.

Monthly Railcar loading tonnages (MT) carried intermodally are up 61 per cent in June 2021 versus February 2020. Non-intermodal tonnage is only up 6 per cent, while traffic from the USA is only up 4 per cent.

Table 23-10-0216-01	Total traffic carried (MT)	Total non- intermodal traffic loaded (MT)	Total intermodal traffic loaded (MT)	Total traffic received from United States connections (MT)
Feb-20	26,967,129	21,775,071	1,966,858	3,225,200
Jun-21	29,541,284	23,022,510	3,156,933	3,361,841
Percentage change	110%	106%	161%	104%

Looking Forward:

There are ongoing expansions of various ports. There are also long-term plans for building new ports, such as the USMCA Corridor that will connect a new container port in Mazatlán Mexico to Winnipeg, Canada by rail ([see WED Vol 2, Issue 16](#)).

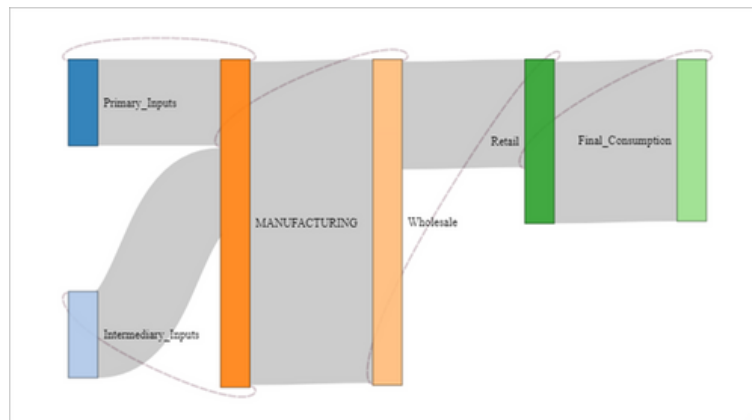


Example of Drought Effects on Crops and Livestock Markets

The drought in Western Canada, including Manitoba has led to lower crop supplies being available. Given that only one field crop can be harvested per year, this will act as a binding constraint until after the next harvest. This situation has led to higher futures and cash prices for these crops. Where buyers can find substitute goods, they will substitute. Those same price signals will help ration supplies and will help farmers to decide what crops to plant next spring. For farmers without much of a crop, this will affect their cash flow, particularly if they do not have sufficient crop insurance or other risk management tools. **These lower supplies will affect crop processing and those buying those inputs for 2021/22 through to at least August 2022.**

The above chart shows early production estimates for 2021. The combination of reduced yields and higher abandonment is estimated to reduce Manitoba wheat, canola and oats production, among other crops.

The price of feed (e.g., crops, hay) for cattle, hogs, poultry, and other livestock has led to some herd reductions that will take time to reverse, particularly for cattle. **This will affect livestock processors this year and into the future.** Thus, we will see higher prices through wholesale and retail levels. In some cases, demand destruction in 2021/22 may extend into the future, reducing per capita demand beyond a single year. These will also be affected through at least August 2022.



Intermediate Inputs: Shortage of Computer Chips

As we have been hearing, there is a shortage of several types of computer chips (intermediary inputs) that are needed for manufacturing automobiles, computers, and various consumer goods.

This has been worsened by COVID-19 and the expansion of demand for consumer goods with embedded computer chips. In the short term, competition for supplies is expected to see some buyers secure the chips they need, while others will go waiting. **The longer-term solution of more plants to build new chips is already in play**, but it takes time to secure land, get permits, build the plant, equip it, and hire people to staff it.

There are also some intermediary manufacturing inputs, and final goods destined for wholesale/retail/final consumption that are competing for transportation capacity. In the longer term these issues will be resolved.

Looking forward:

Containing COVID-19 will go a long way to ending this source of supply chain chaos. Getting people vaccinated against COVID-19 and signaling this using vaccine certs/passports is useful and supportive of the economy. This combined with non-pharmaceutical interventions will go a long way to getting us all back to normal, and ensuring they only have transitory price effects.

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