

Celebrate resilience: supply chains have passed the test

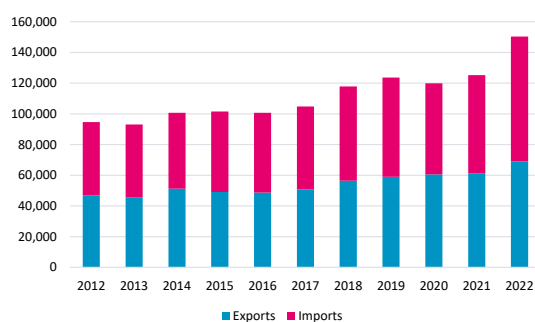
Under extreme pressure, our supply chains have been winners. But what do we need to do to ensure future resilience?

First, the good news...

New Zealand has dodged an economic bullet. New Zealand exports and imports have been tested and found to be resilient in the face of extreme supply chain pressure. Resilience can mean different things in different situations, but it would be difficult to tell from Figure 1 the turmoil we faced in March 2020, with many suggesting that the situation faced was the most challenging logistics environment in living memory.¹

Despite some flat years, why has the value of imports and exports remained strong over the COVID period? Several factors have helped: the value of the New Zealand trade to shipping companies and the fierce competition for market share; New Zealand's flexible bureaucracy that helped enable documentation for supply chains; relationships in the supply chain that improved producers' and logistics companies' ability to move product; and the strong world demand for food.

Figure 1 Value of merchandise imports and exports (August years)



Source: Stats NZ, NZIER

What next? How can New Zealand overcome the continuing impacts of COVID and take advantage of the green shoots of export-led growth? It is clear we are at a crossroads and whatever we do needs to be world competitive in a more uncertain and complex world.

...the bad news has come thick and fast

Not only have we had to deal with a pandemic and its ongoing impacts, but we have a major land war in Europe that has sent input prices skyrocketing (note the rise of import values in the graph above).²

It is worth reviewing what our supply chains faced and are still up against:

- A pandemic. It isn't easy to believe the situation New Zealand faced back in March/April 2020 when the disruption started. We had perishable goods scattered all over the Asia Pacific stranded at ports with no paper documentation since the planes were not flying.³
- Geo-political tensions were ramping up, particularly between China and the United States, over trade and security. Like Japan, a generation ago, China was targeted for supplying United States consumers' needs at competitive prices. New Zealand has been caught in the crossfire as the United States has applied tariffs on New Zealand steel and

² In particular grain, oil, and diesel input prices.

³ Typically, documents for sea cargo (e.g. Bill of Lading) are couriered by plane to the port of entry e.g. see <https://www.marineinsight.com/maritime-law/required-documentation-for-shipping-complete-list/>

¹ <https://www.emerald.com/insight/content/doi/10.1108/SCM-09-2020-0439/full/html>

aluminium for ‘national security’ reasons. Apparently, we are an unfriendly nation.⁴

- China has also complicated the issue with assertive nationalism and expanded influence. Economic advancement is now playing second fiddle to these other objectives. At the same time, China is likely to be an important export/import market for New Zealand goods for the foreseeable future.⁵
- A ‘bump’ in demand as many countries used quantitative easing to combat the impacts of the pandemic together with involuntary savings from the lockdowns, this extra money in consumers’ pockets has increased demand, putting pressure on supply chains.⁶
- Port congestion, highlighted by the failed attempt to fully automate the Auckland port.⁷
- Ongoing COVID waves. The illness plus the isolation have cut working hours in most industries. This has reduced output just as demand has spiked.⁸

Further, the chances of international cooperation on trade, climate change, or reducing geo-political tensions seem remote.

Perception is not reality

A critical steadying factor through all this has been resilience in supply chains. However, the economics of supply chains has not changed.

The economic imperative is people still want to improve their standard of living. Supply chains underpin what people can buy and at what price.

Shipping services that support supply chains are a very competitive business partly bankrolled by government-supported banks. Despite the

continuing supply disruptions, shipping companies compete strongly for market share.

What we see currently is the trading world operating on two levels. There is the rhetoric around the threat that China poses, typically by those who see their trade power diminishing. This culminates in political agreements that provide little in the way of economic benefit.

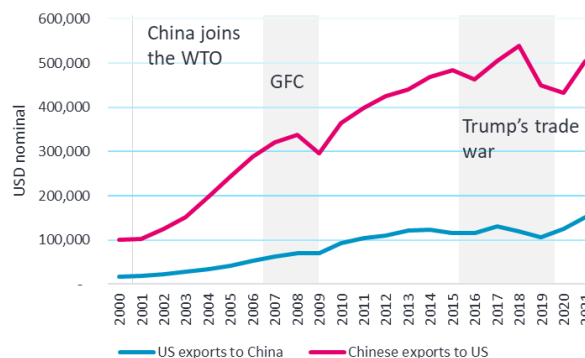
For the United States, domestic policies mean there is no movement on any agreement that could be considered controversial. And trade agreements are controversial despite their job-creating potential.

The two levels are highlighted by the following quote and graph (Figure 2).

A tweet by Donald Trump in 2018,⁹ “*trade wars are good, and easy to win*”, as he began to impose tariffs on about US\$360 billion of imports from China.

Nobody wins trade wars, and it creates a sinking-of-all-boats effect. In the shaded area below, the United States and Chinese exports suffered before rebounding at the end of the Trump era.

Figure 2 Value of merchandise exports



Source: Siripurapu (2022)

Also, the behaviour of companies has not changed. Supply chains have not altered, and United States-Chinese trade continues unabated. United States/China trade has now increased back to 2017/18 levels (Trading Economics 2022).

⁴ See for example <https://www.cato.org/policy-analysis/protectionism-or-national-security-use-abuse-section-232#background>

⁵ See for example: <https://www.e-ir.info/2022/01/13/legitimacy-and-nationalism-chinas-motivations-and-the-dangers-of-assumptions/>

⁶ For an explanation see: <https://moneyfacts.co.uk/guides/money-guides/quantitative-easing-explained-and-how-to-respond-to-changes/>

⁷ See <https://www.reseller.co.nz/article/698875/ports-auckland-how-dream-automation-turned-into-65m-nightmare/>

⁸ See https://www.ev.com/en_nz/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next

⁹ Referred to in: <https://www.bloomberg.com/news/articles/2021-01-11/how-china-won-trump-s-good-and-easy-to-win-trade-war>

Efforts by the Japanese government to re-shore¹⁰ supply chains by spending billions in incentives have had limited effect. Japanese companies, it appears, have farmed the subsidies and then resumed connections with China after a short period of grace (Dapice 2022).

Supply chains have moved, but it is unclear whether these would have shifted anyway as part of a dynamic supply chain process, e.g. supply chains moving from China to Vietnam (*Business Standard* 2022; Trivedi and Ren 2022).

The 'snap back' snapped

We are at least eternal optimists. In 2020 it was assumed that a wave of COVID would break over New Zealand, and then economic activity would return to 'normal' relatively quickly.

The phrase 'snap back' was used frequently. The reality has been somewhat different. Variants of COVID ravaged populations around the world spread by interconnectedness brought on by globalisation. Further lockdowns and partial lockdowns continue.

Some degree of normalcy is starting to occur. Restrictions are being lifted, and airlines are slowly coming back online. The latest COVID-related outbreaks are receding, although not as quickly as we would like, and the world is tentatively allowing tourism to restart.

There are, of course, major hurdles to overcome, particularly around Chinese lockdowns and the protocols around tourist resumptions.

How can we ensure that supply chains work for New Zealand trade?

If we have weathered the storm – COVID willing – how can we ensure that our supply chains work harder for New Zealand?

Small countries need to make every post a winning post in trade. One advantage they have is the potential for an alert and flexible regulatory approach.

Border-facing agencies know they are a vital part of New Zealand's supply chain. Their independence, trustworthiness, and efficiency must be maintained as we bounce back from COVID restrictions.

We know that they must always be vigilant so New Zealand can use its regulatory settings to enable efficient markets while protecting the things important to us. This is one of New Zealand's competitive advantages relative to bigger countries with more lead-footed bureaucracies.

Crucially, as technology makes new trades possible, government regulatory settings and flexibility in a globalised world will determine the success or failure of developing new trading initiatives.

Digital trade initiatives are all the rage

The latest trade agreements have chapters that enable digital trade. The mooted Indo-Pacific Trade Economic Framework for Prosperity (IPEF) has digital trade as its economic centrepiece.

Goods and services that cross borders require a range of information that satisfies both exporting and importing nations' requirements. Digital trade stores that data/information securely in permissioned blockchain systems.¹¹

Digital trade is disruptive of traditional clearance processes, but its benefits are substantial. The impact can be dramatic, cutting border wait times for goods (in one case, from an average of four days to under an hour). Also, if you consider that 30 permissioned parties can look at the documents of a single consignment up to 200 times, having them in a safe, secure system with easy access is a significant step up in efficiency.

So much so that the efficiency gains that can potentially be reaped from participation in digital trade are equivalent to a high-quality free trade agreement (between US\$500 million and US\$ 1,000 million per annum for New Zealand's APEC supply chains over 10 years) (NZIER 2021a).

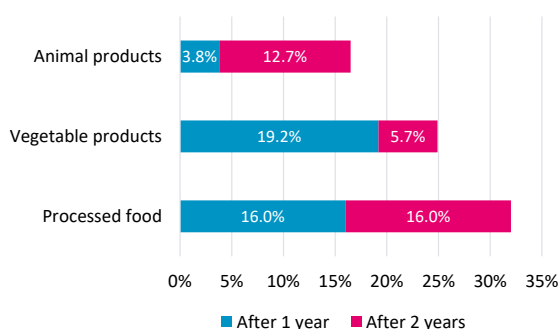
The impact of dynamic gains over time should not be underestimated. Figure 3 shows the impact

¹⁰ Reshoring is the process of bringing manufacturing and part or all of the supply chain back to the home country from a foreign country.

¹¹ Only authorised parties can gain access.

when the European Union introduced e-certificates for perishable goods.

Figure 3 Export values increase after implementing SPS e-certificates in the European Union



Source: van Tongeren and Baragwanath (2021)

There are challenges as there are parties on the export and import side of value chains that benefit from paper trade. Also, the interoperability issues are non-trivial. Issues include:

- Between governments. Allowing digital data to flow across borders and even revealing government documents online will require careful negotiation.
- Between government entities domestically. Ensuring that systems can communicate digitally between government agencies is challenging since it changes how those relationships operate.

There are also challenges in introducing digital trading procedures into law.

A major issue for MSMEs¹² and SMEs¹³ is finding the capital (both resources and capability) to re-organise their back office to take advantage of digital trade. To secure the ‘Trade for All’ agenda, agencies must consider how they can best facilitate firm inclusion in digital trade initiatives.

The Southern Link, a great way to fly ... or ship?

Technology is driving new trade opportunities. One such opportunity is the Southern Link. The Southern Link is a potential trade route that joins

Asia, New Zealand and South America. It extends a global value chain that involves routing multi-modal freight and passengers between North Asia and South America via New Zealand.

Why is New Zealand in a favourable situation to take advantage of a new trade route? There are several reasons:

- Location. New Zealand is in the right place for several key routes – with one flight (10.5/11 hours) from the market and head office (Hong Kong/New Zealand and Santiago/New Zealand).
- Time zones. New Zealand can deal with the market and head office during office hours. This saves costs (e.g. no extra shifts needed) and may even improve response times.
- A more responsive bureaucracy in New Zealand that can deliver practical regulatory solutions. Bulk e-commerce movement across borders is relatively new; therefore, nimble regulatory approaches are needed.
- Costs, particularly labour costs, are lower in New Zealand than in Australia, especially compared to main centres such as Sydney and Melbourne.
- Lack of congestion associated with Auckland and Christchurch airports. Efficient route management and little congestion with approaches and departures. This means that planes can fly at optimum levels, saving significant time and fuel and not getting caught by curfews.

The silk road was the route travelled by silk and other high-value, low-weight products using the ship of the desert; what products would drive the Southern Link?

The answer is not a particular set of products. It’s a way of conducting commerce. The critical trade is e-commerce. The speed at which e-commerce has become a major trade has been dramatic. Around the world, e-commerce platforms are taking advantage of a gap in the market and providing services that customers are flocking to so that they can buy a whole range of consumer products. E-platforms such as Shopee have only been in operation for five years, and now they are the leading operators in ASEAN and regions such as Taiwan and Hong Kong. They have also started

¹² Micro-, small and medium-sized enterprises.

¹³ Small and mid-size enterprises.

operations in Brazil. This significant development underpins the growing links between South America and Asia.

The traditional routes for e-commerce fulfilment to South America from Asia are through the Middle East and Europe, and these routes will continue to dominate e-commerce traffic. What New Zealand offers is an alternative supply route diversifying risk and improving the efficiency and effectiveness of e-commerce platforms.

On the back of e-commerce, there are chances for other trades to flourish: tourism, services, education, and business intermediaries (see NZIER 2021b).

Solving the intractable embracing the challenge of climate change

New Zealand has significant challenges to agriculture from the need to respond to climate change. The biggest challenge is on the farm. But supply chains will also have to become more climate-friendly.

In both cases, there will not be one big breakthrough that moves us toward our climate goals. It is likely to be hundreds of incremental steps that help us obtain the targets. We need to start now!

One issue is waste in the supply chain. As an example of how to mitigate waste, Zespri has brought in PlantTech Research to examine how to deal with the temperature bounce that some kiwifruit experience once it enters the cool store (PlantTech 2022). This fruit tends to ripen more quickly and can spoil or downgrade the fruit quality.

By developing algorithms that detect the bounce and building models that classify predicted causes, they could pinpoint where the impacts are likely to occur, i.e. mainly on SunGold™ and within the first few weeks in the cool store.

PlantTech were able to suggest cool store practices that minimise bounces occurring. The outcome was the first version of a temperature bounce detector to be incorporated into the Zespri IT system.

All parts of the supply chain will have to incrementally improve their performance to meet climate change goals. Innovation, such as the work

undertaken by PlantTech, can assist in mitigating food waste – a small but significant part of that challenge in the supply chain.

We need to pay close attention to all aspects of the supply chain – akin to a full court press – which means enhancing New Zealand’s capacity and capability to apply mitigation processes and techniques and ensuring that best practice is universally adopted. It also underpins the need for an educated, flexible workforce to ensure that New Zealand keeps pace with shifting mitigation requirements.

The doors are open ... when will they come?

Under COVID lockdowns, with the borders closed, the planes were not flying. The international tourist market collapsed; rebuilding the sector needs to be a priority for New Zealand.

Pre-COVID, a good proportion of New Zealand’s high-value perishable exports flew in the holds of passenger aircraft. The resumption of tourism has multiple benefits.

This enforced pause allowed the government to think carefully about the tourist infrastructure required to match tourists’ and New Zealand’s needs. This includes how we price access to that infrastructure.

How the resumption will take place is tricky, there are many moving parts. Tourists need to want to travel and to be able to access visas in a timely manner, and the planes will have to be in place for them to fly.

Further uncertainty is attached to the Chinese market. With continuing lockdowns, it is unclear how the Chinese authorities will proceed. At what pace will they be allowed to travel, and the associated flights come back?

One bright spot has been the 2022 winter in Queenstown. It has had a bumper season full of Australians itching to get at the snow. Long may it continue.

These ebbs and flows mean that New Zealand border-facing agencies and businesses must react quickly to the changing views of governments and tourists.

Resilient supply chains are the key ... keep at it

Supply chains have responded well to the COVID curve ball, and we need to capitalise on their success. Several implications flow from this in an uncertain world:

1. We need to keep on top of the issues/approaches/opportunities because we earn our living from the world – exports of goods and services are the lifeblood of our economy.
2. Whatever opportunities we pursue must be outward facing and be competitive with the rest of the world, i.e. born global.
3. Longer term, this requires a well-trained and productive workforce and infrastructure that is fit for purpose and, where possible, utilised 24 hours a day.
4. Supply chains must reflect that New Zealand are ‘traders with the world’. New Zealand has been careful not to join trading blocks, and this supports and underpins the need for an independent foreign policy.
5. Incrementalism is the way to solve the tough intergenerational issues we face around climate change and water. Institutional settings, both government and the private sector, must support those goals.

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