



SOURCING FROM THE WORLD'S FACTORY:

OUR IMPORT RELATIONSHIP WITH CHINA

Author:



SENSE PARTNERS

DATA LOGIC ACTION

Commissioned by:



Ko Te Kaunihera o Aotearoa me Haina

New Zealand China Council

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**CHRISTCHURCH
AIRPORT**

FOREWORD BY THE CHAIR

China's status as New Zealand's largest export market is well known and often discussed.

Less often in focus is the fact that China is also easily our largest source of imports – although its proportional dominance is lower (16.5% of our total imports, versus 27% for our exports).

It is the combination of trade in both directions that renders China consistently our largest bilateral trade partner – total two-way trade in the year to March 2024 totalled NZ\$35.1 billion, double that with our next largest partner Australia at NZ\$17.5 billion and third largest the United States at NZ\$16.1 billion.

The impact of Chinese imports on New Zealand, both businesses and households, shouldn't be overlooked. A survey of a typical kiwi home will uncover a multitude of high-quality appliances, mobile devices, toys, plastics, clothing and fabrics, perhaps building materials, and increasingly electric vehicles, all originating from China. Some will be well-known New Zealand products manufactured offshore, others will be increasingly well-known Chinese brands like Xiaomi (phones, household appliances) and BYD (cars, batteries).

The situation is similar for commercial supplies and industrial materials. Our report particularly identifies China's global role as a supplier in areas such as solar and wind renewable energy technology and equipment, with scope to benefit New Zealand as we look for cost-effective ways to advance our decarbonisation goals.

China's role in our supply chains came into stark focus during 2020-2022. Chinese manufacturing continued during much of this period as the country worked to keep COVID at bay. But

shipping delays and 'blank sailings', as well as lockdowns at the New Zealand end, quickly saw shortages of items and materials which we all needed. This was not of course restricted to imports from China. But given its dominance as a source country, interrupted Chinese supply chains had a noticeable impact.

There is potential for our imports from China to be disrupted in other ways as well. Regional tensions in the South China Sea affecting shipping lanes, an increasing China-United States trade conflict leading to calls for derisking or decoupling, future 'black swan' shocks as yet unknown to us – any could see our supply chains from China suddenly affected again in future.

In this light it is timely and important to understand New Zealand's current level of exposure to China as a source of imports. Are there product categories where we are particularly reliant? Could diversification to a wider range of trade partners be an effective strategy for our future imports? Alternatively, are there areas where we could benefit from more Chinese imports than we do at present?

I trust readers will find this report a useful source of information, and a catalyst for further discussion on another important element of the New Zealand-China relationship. I thank John Ballingall, Andrew Schoultz and team at Sense Partners for their diligent work to produce it. And of course our report co-sponsors – Council members Christchurch International Airport and ANZ Bank, the New Zealand International Business Forum, Auckland International Airport and the North Asia Centre of Asia Pacific Excellence, without whose support the report could not have been completed.

John McKinnon, Chair

June 2024



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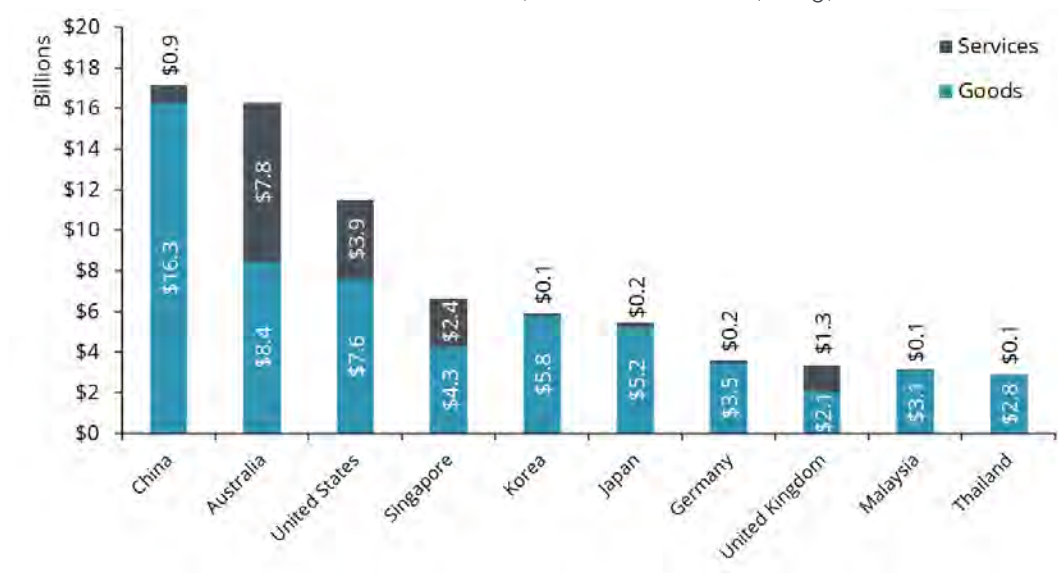


Key points

China is the world's factory, to our benefit

- Over the last decade, New Zealand's imports of goods and services from China have grown an average of 4.7% per annum in real terms. China is our largest source of imports at \$17.2bn in 2023 (16% of New Zealand's total global imports).
- This is just ahead of Australia, at \$16.2bn, though our trade with China is far more goods focused. 94% of our imports by value were in goods. With Australia it is nearly 50:50, reflecting Kiwis' spending on visits to Australia and the integration of the trans-Tasman business services sector.

FIGURE 1: GOODS AND SERVICES IMPORTS, TOP 10 PARTNERS, 2023, NZD



Source: StatsNZ

- Imports from China benefit Kiwi households and firms. China has a comparative advantage in manufacturing, particularly consumer and household goods. Accordingly, its share of global manufacturing value add has risen to 28.9%, with the US in a distant second at 16.1%.

China is deeply embedded in green value chains

- Another source of benefit is China's role in green value chains. These are globe-spanning production chains that produce the complex technology we need to decarbonise.
- China accounted for 68% of global solar photovoltaic (PV) exports in 2023 – some US\$48.8bn. Exports of rare-earth minerals, critical to green technologies like wind turbines and batteries, topped US\$235m in 2023, 92% of the global market.



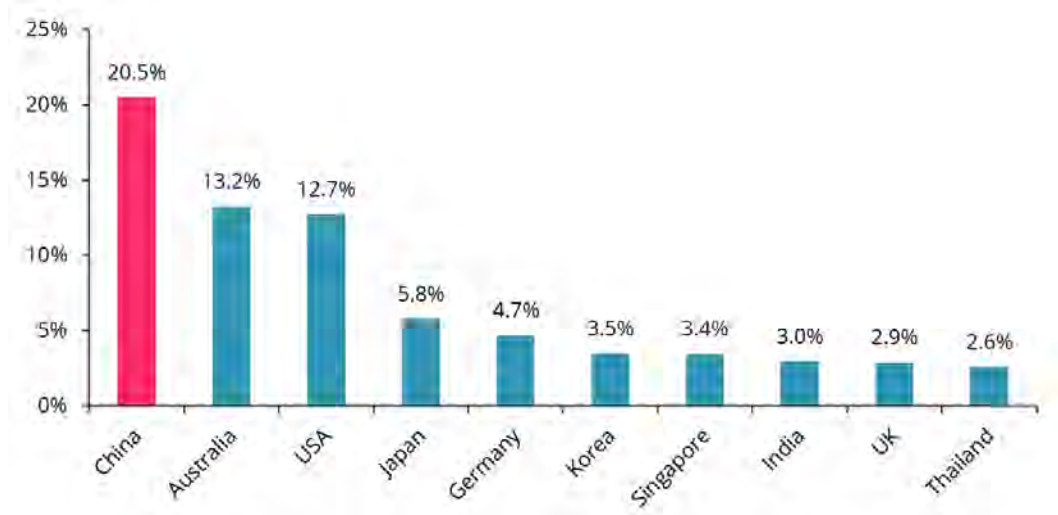
Risk is product-specific, but at a high level we aren't overly exposed

- Given China accounts for 16.5% of our good and services imports, it is relevant to consider what might happen if New Zealand wasn't able to access imports from China. There are many reasons why global supply chains could be interrupted in future.
- Risk is contextual to each product and firm, but we don't appear to be unusually exposed to China.
- Of our direct imports from China, 82% by value are in products where China supplies less than 50% of our imports and supplies less than 50% of global exports. In these products, we have alternatives to Chinese suppliers in the event of a shock that makes importing from China more difficult.
- Only 3% of imports by value are in products where China is both a dominant supplier to us and to the world. These tend to be basic consumer goods, like toys (\$260m), lamps and light fittings (\$221m), and various plastic household items (\$82m).

Diversification an expensive insurance policy that may not work

- Our import relationship with China is not limited to those goods we purchase directly from them. As the world's factory, China produces inputs into goods finalised in other countries, which we then import. To capture this, we must look at the whole supply chain.
- When we look through the entire supply chain, China's contribution to our economic output amounts to 20.5% of the portion sourced from overseas. This is the largest of any of our trade partners, but we must keep in mind only 19% of our output is sourced from overseas.

FIGURE 2: SHARE OF OVERSEAS CONTRIBUTION TO NZ OUTPUT, TOP 10, 2020



Source: OECD



- There are other markets we could buy from. But diversifying away from China for non-market reasons is likely to be costly and challenging. And many alternative markets will themselves be integrated with China.

China has potential to remain a manufacturing powerhouse

- China's growth model does face challenges. Some may indeed limit future growth. But it is not clear that either abundant labour or capital investment have reached a limit. Raising the retirement age or improving domestic labour mobility could boost the workforce. The ratio of capital to labour remains just 31% of the level of that in the US - here is also plenty of scope for capital investment to boost growth.
- The Chinese government's promotion of automated manufacturing, part of its "new quality productive forces" policy, may help to channel investment into productivity enhancing areas.

Turbulent global trade will be expensive for everyone – no one wins

- Geopolitical tensions have already turned into new trade barriers and a more activist industrial policy. The trade environment New Zealand has to navigate is now much more turbulent. This is to everyone's detriment.



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1. Purpose

We have been commissioned to assess trade and diversification

Sense Partners was commissioned by the New Zealand China Council to explore New Zealand's goods and services imports from China.

We have been asked to assess the scale and profile of New Zealand's imports from China, concentration risks (or not), China's strong and weak points as a supplier, and potential future supply chain challenges and how we should respond. Is New Zealand too reliant on China? Is diversification necessary or feasible?

Our report includes several box stories. These have been written by the New Zealand China Council to highlight key themes in our trade relationship with China.



2. Tracking our import trade with China

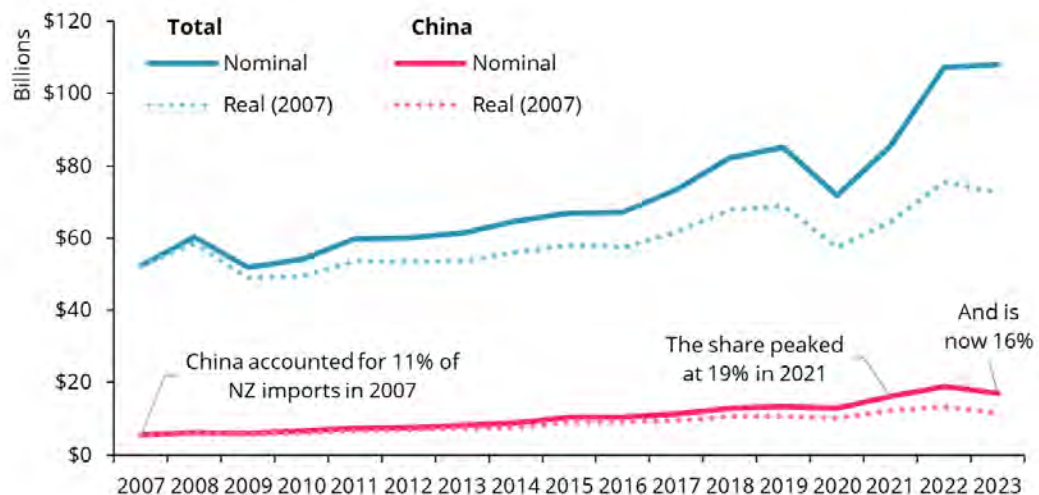
2.1. Trends in imports over the last decade

Even after accounting for inflation, import growth from China has been strong

Total imports into New Zealand have reached a nominal value of \$107.9bn in 2023, an average annual growth of 4.6% since 2007. Imports from China are now more than \$17.2bn, 16% of total imports. Adjusting for inflation since 2007, the real value is \$11.5bn. This is up from \$5.5bn in 2007, just prior to the signing of the New Zealand-China Free Trade Agreement in 2008.

The COVID-19 pandemic threw an almighty spanner in the global economic works. The fallout from this has included factory closures, port closures, disruption to maritime shipping and a general snarling up of supply chains.¹ Massive simultaneous government stimulus in almost all countries added more than a little pressure on the demand side.²

FIGURE 3: NEW ZEALAND'S GOODS AND SERVICES IMPORTS SINCE 2007



Source: StatsNZ

The product of these two factors was a surge in inflation, which does account for a decent portion of changes in nominal values.

While total imports in nominal terms have grown 106% since 2007, in real (inflation-adjusted) terms it is only up 38%. Imports from China have increased 109% in real terms – far outpacing general growth in imports.

¹ Treasury (2021) "WEU Special Topic – The economic impacts of global supply chain disruption," *Treasury Staff Insight*.

² de Soyres, F. Santacreu, A. & Young, H. (2022) "Fiscal policy and excess inflation during Covid-19: a cross-country view," *FEDS Notes*. Washington: Board of Governors of the Federal Reserve System.

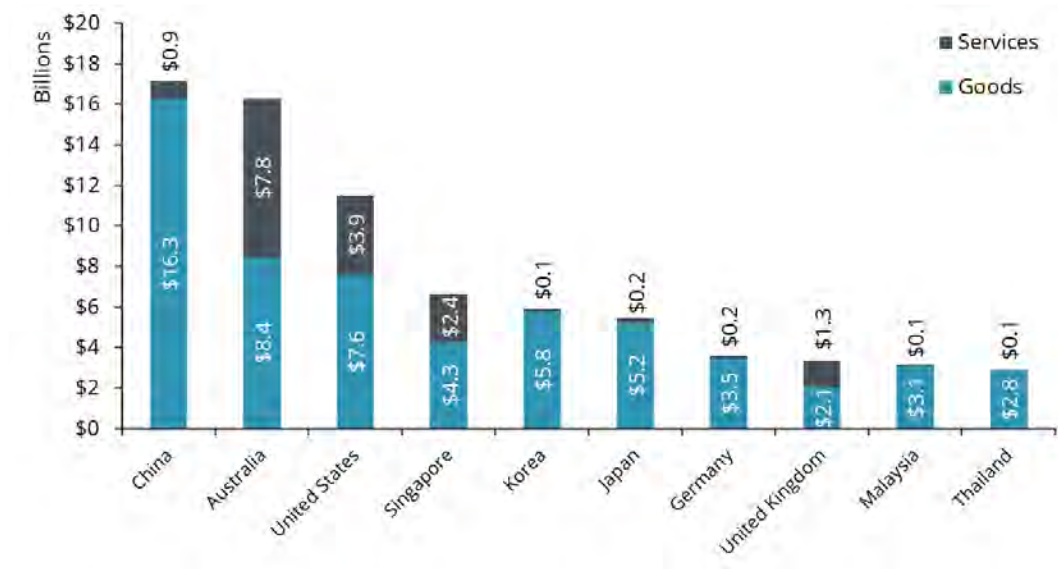


As factory of the world, Chinese exports are primarily goods

In combined goods and services terms, China is our largest import partner, and our third fastest growing among top-10 suppliers. Our fastest growing top-10 import partner is South Korea, with imports doubling since 2014. This average annual rate of 8% is ahead of Singapore, at 6.6% - a 78% increase since 2014 to \$6.7bn.

In real terms, combined imports from China have risen 55% since 2014, an average of 4.7% per year. By comparison, imports from Australia grew 26% over the 2014-2023 period, an average of 2.6% per year in real terms.

FIGURE 4: GOODS AND SERVICES IMPORTS, TOP 10 PARTNERS, 2023



Source: StatsNZ

Our import trade with China is dominated by goods, particularly consumer goods. China is, after all, the factory of the world.

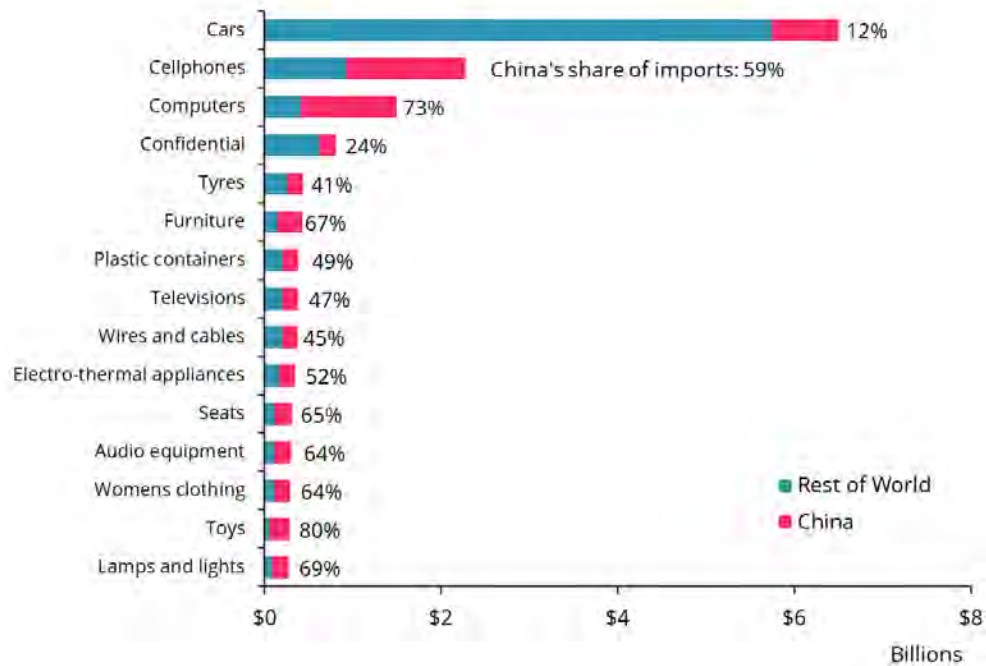
Services imports from China have grown a substantial 8.4% on average each year. China is tied with the US as our second fastest growing top-10 services import partner. (See notes on services p. 9 below.)

China is an important supplier of consumer goods

Except for petroleum products New Zealand's other major global imports are largely consumer goods, like cell phones, computers, toys, and domestic appliances. Here, China is a prominent supplier, with shares as high as 80%. Our top 15 non-petroleum product imports added up to \$14.9bn in 2023, of which \$5.6bn (37.4%) was sourced from China.



FIGURE 5: OUR TOP 15 IMPORTS (EX. PETROLEUM PRODUCTS), YEAR TO DEC 2023



Source: StatsNZ³

Confidential items include goods where there is a known dominant purchaser of a good. By design, we can't be certain exactly what this import is. Examples of this include imports of thermal coal, where Genesis Energy and NZ Steel are dominant purchasers. Another example is bauxite, where NZ Aluminium Smelter is likely the only purchaser.

China's rapidly increased role in our imports is due to its strength as a global centre of manufacturing. China imports inputs from across the world, including hard-to-measure technical know-how and design. These are increasingly supplemented or supplanted by its rapidly expanding home-grown innovation. Chinese factories transform these inputs into both final consumer goods and intermediate inputs.

This is reflected in China's share of global manufacturing value add.⁴ Figure 6 below shows the top ten countries by this measure. In 2001, China was the third largest, but with just 7.1% of global value add. In 2020 (the latest data available), China accounts for 29% - the largest by a considerable margin.

This reflects a realignment from the old manufacturing powerhouses – the US, Japan, and Germany. Lowered barriers to trade and better transport links have enabled countries to focus on their comparative advantages and achieve scale economies.

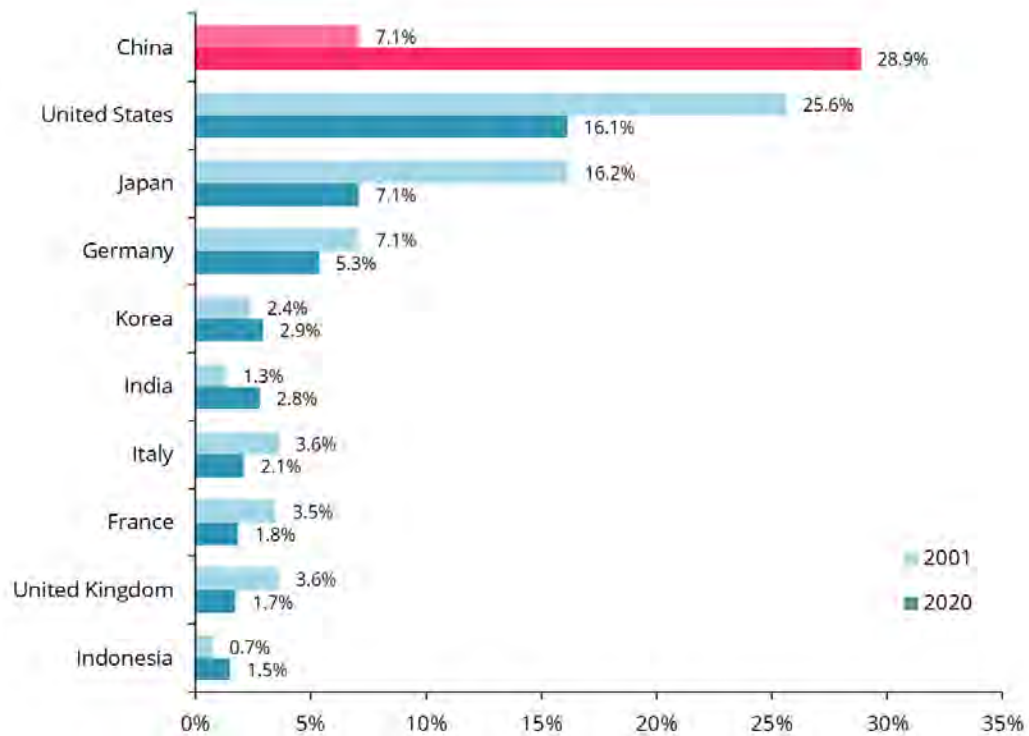
³ Electro-thermal appliances include hairdryers, kettles, irons, microwaves, and heaters. Seats includes a wide range of household furniture, like couches, bars stools, and futons. It also includes seats for cars, trucks, and planes. The only "seats" not included are specialist seats, like dentists' chairs or barbers' chairs, which have their own classification.

⁴ In economics, "value add" covers all the value added to a product at each stage of production. This includes the value embedded by services, like transportation. Although it doesn't change the product itself, transport still adds value by getting it to where it needs to be.



And, simply put, China has one heck of a comparative advantage in manufacturing. By and large, this has been a boon for consumers in New Zealand and around the world.

FIGURE 6: SHARE OF VALUE ADD IN GLOBAL MANUFACTURING – TOP 10



Source: OECD

New Zealand as a hub, not the end of the line – the Southern Link vision

This report documents New Zealand's significant goods imports from China. But these are dwarfed by China's exports to other markets across the globe. These include some major emerging markets in Latin America – on the opposite side of the Asia-Pacific region to China. Exports from those economies to China are growing rapidly as well.

Enter the Southern Link – the vision that New Zealand could be both an end destination for Chinese exports and also a logistics hub for Chinese (and other Asian) e-commerce and other goods destined for Latin America, and vice versa.

Research published by the New Zealand China Council in 2021 confirmed that transiting New Zealand was the shortest and quickest, and therefore potentially cheapest and greenest, aviation route from many parts of Asia (including manufacturing bases in southern China) to Latin America. At scale, New Zealand could become an indispensable two-way distribution centre providing infrastructure and services for e-commerce and other goods trade. New Zealand goods and services exporters would also benefit from the enhanced air and shipping connectivity that increased traffic would deliver.



This could strengthen New Zealand's ability to withstand future supply chain shocks. In the wake of 'blank sailings' and supply chain failures during Covid, the merits of a 'just in case' approach to stockpiling essential goods in New Zealand are being assessed as an alternative to 'just in time' supply chains. In this light, logistics expert Dene Green has proposed Te Aoutanga Aotearoa , a free trade zone which could receive and hold bulk items destined for New Zealand (or elsewhere) before they cross the border in response to smaller fulfilment orders.

So what's stopping the Southern Link? Our 2021 report concluded that it was now for business to advance a specific commercial proposal. Some charter flights during Covid (for example delivering urgent PPE from China to Latin America) demonstrated proof of concept. But airports, airlines, freight companies and cargo owners will need to present a concrete plan to the New Zealand government for regulatory consideration. At present, thin air connectivity between New Zealand and Latin America, New Zealand's continued requirement that Chinese and some other travellers hold transit visas to pass through New Zealand even if not leaving the international transit area, and regulatory issues around long-term bonded storage of goods, all need to be addressed. But in future, New Zealand may no longer be the 'station at the end of the line'.

New Zealand China Council

Growth in our major imports from China is strong – for EVs it is exceptional

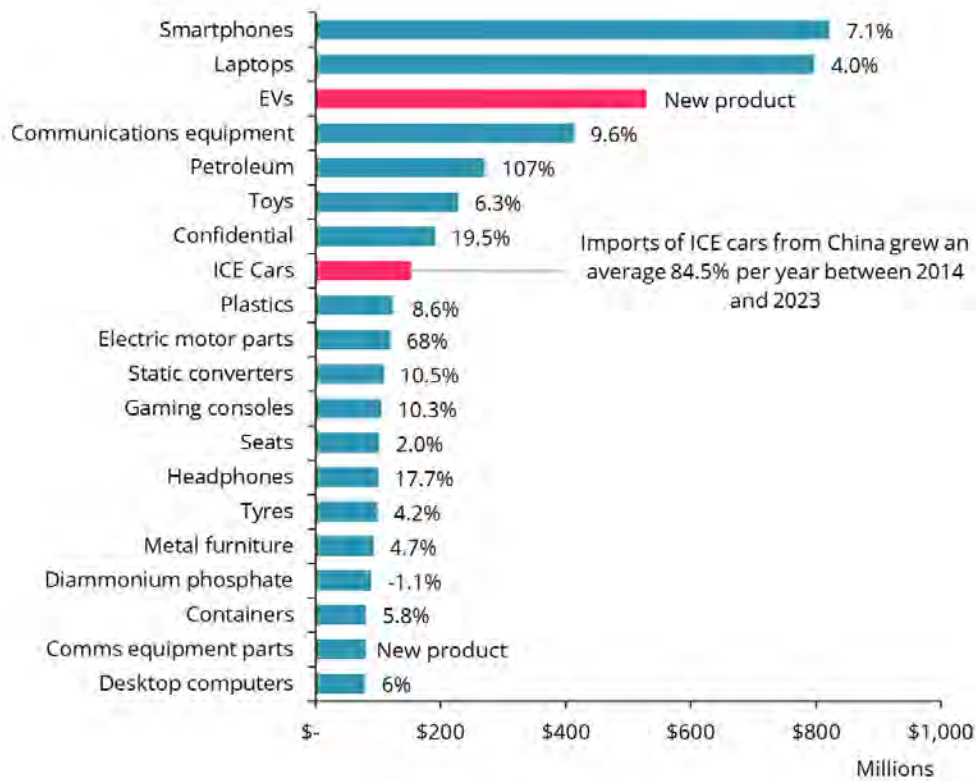
Our largest imports from China have experienced strong annual growth since 2014. Figure 7 below summarises our largest imports by value and shows their average annual growth since 2014. In particular, China has made a barnstorming entry into the global EV market. Imports of EVs from China topped \$545m in 2023, over 10,600 vehicles.⁵ This is up from just 752 EVs in 2020.

Chinese car manufacturers accounted for 43% of our imports of EVs, but even their internal-combustion engine (ICE) cars are making strong headway into our market. Imports of Chinese ICE cars have grown by an average 85% per year since 2014, albeit from a low base.

⁵ Sense Partners analysis of data from COMTRADE and StatsNZ.



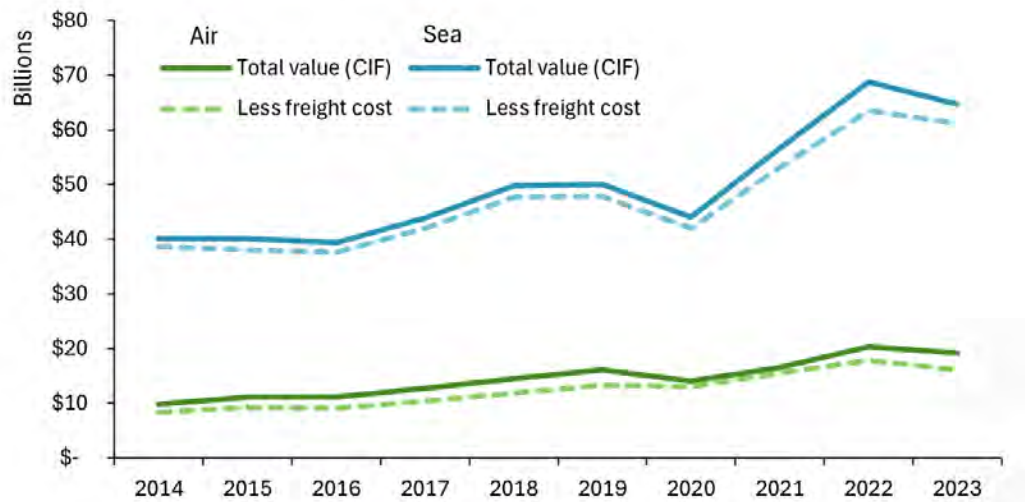
FIGURE 7: TOP 15 IMPORTS FROM CHINA, 2023 (HS6 LEVEL)



Source: StatsNZ

The bulk of our imports arrive by sea – maritime links are crucial

FIGURE 8: IMPORTS OF GOODS BY AIR AND SEA



Source: StatsNZ

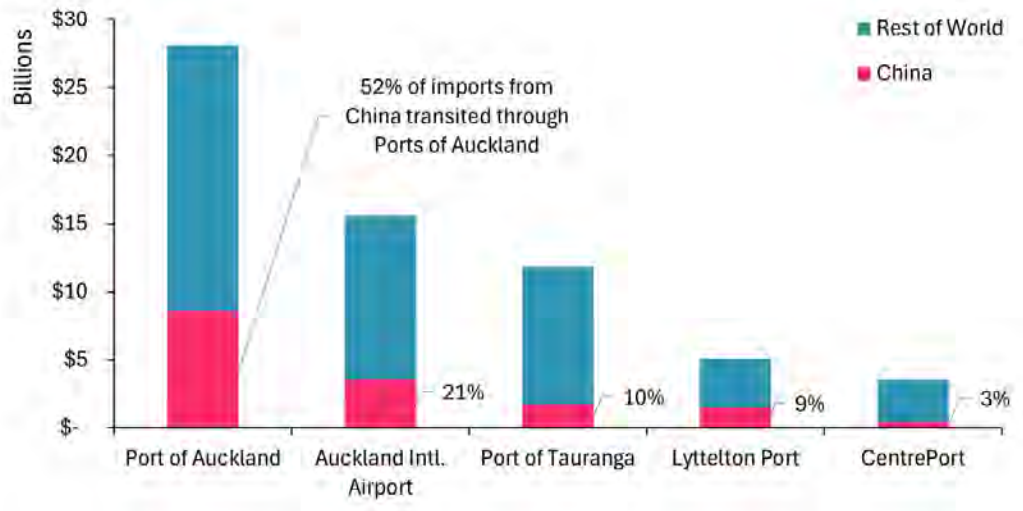
Our largest import terminal is Port of Auckland. Situated in the heart of our largest city (and therefore largest consumer market), this is an eminently sensible arrival point for Chinese



consumer goods. As a result, Port of Auckland handles just over 52% of imports from China by value.

Figure 9 below shows the top 5 handlers of Chinese imports into New Zealand. Auckland Airport, equally well placed to furnish our largest consumer market, handles 21% of imports from China by value. Overall, some 73% of imports from China land in Auckland one way or another.

FIGURE 9: PORTS OF ENTRY – 5 LARGEST ENTRY POINTS FOR CHINESE IMPORTS, 2021



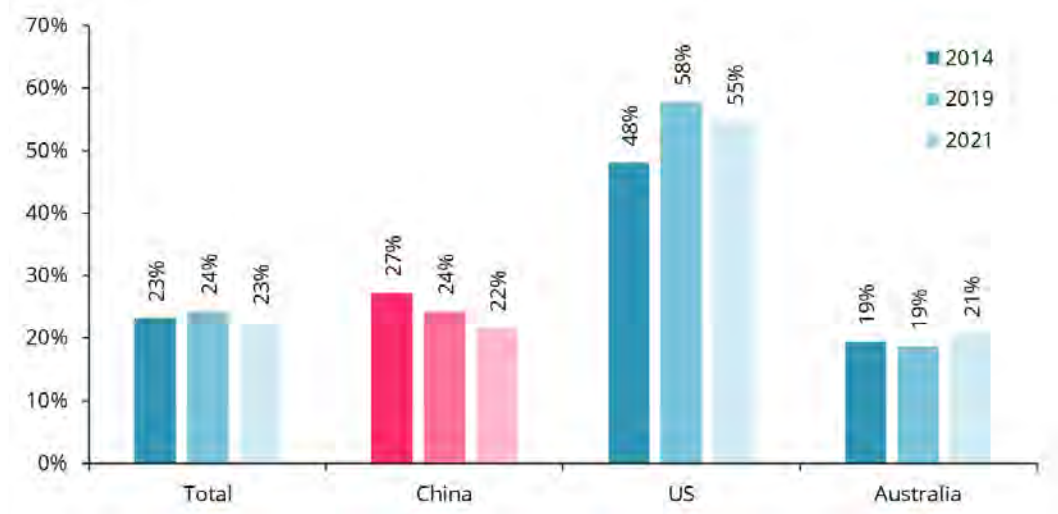
Source: StatsNZ

By value, air links bring in a little under a quarter of imported goods, a ratio that has been relatively stable during the pandemic disruption. This is largely a reflection of a higher per-unit value of goods imported via air.

The value per tonne, including shipping costs, of goods imported via air was \$223,500 in 2023. Using imports of transportation services, we estimate the air freight cost neared \$36,150 per tonne in 2023. This high freight cost, around 16% of the product's value, is justified by the underlying value of the goods being imported by air.



FIGURE 10: SHARE OF IMPORT VALUE BY AIR, 2021



Source: StatsNZ

Goods of high enough value to travel *par avion* include medical equipment, electronics, and high-value machine parts (particularly when needed in a hurry). E-commerce packages ordered from China from companies like Alibaba, Temu, and Shein also tend to arrive by air. Plastics, clothing, vehicles, and furniture all tend to be brought in by sea.

Goods that came via sea averaged a value of just \$2,860 per tonne. Of this, we estimate the maritime freight component was \$155 per tonne in 2023, roughly 5.4% of the good's value.⁶

China remains a smaller supplier of services, but there is growth

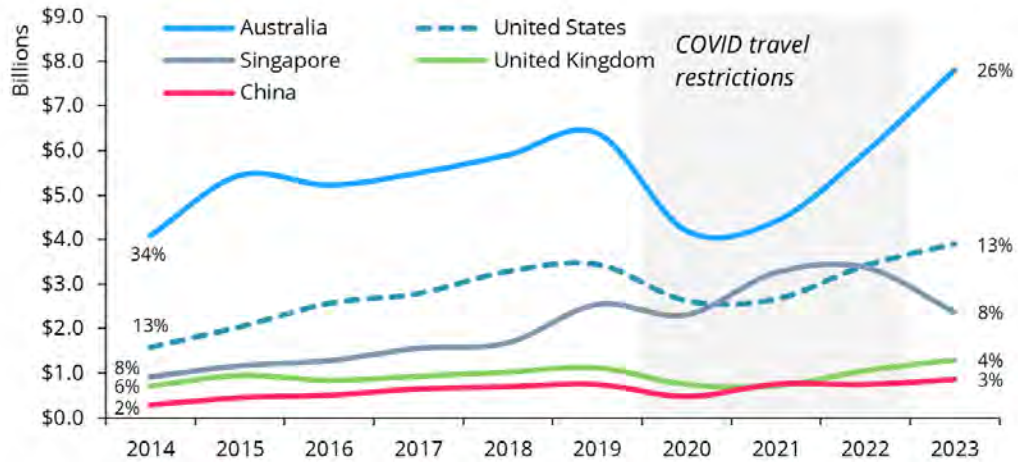
China is our eighth largest source of services imports and is growing in both value and share. Services imports have grown an average of 8% each year since 2015, reaching \$874m in 2023. This compares to \$1.3bn from the UK (4% annual growth since 2014), \$2.4bn from Singapore (9% annual growth), \$3.9bn from the US (8% annual growth), and \$7.8bn from Australia (5% annual growth).

New Zealand's services imports from China (i.e. services from Chinese service providers to New Zealand) have mainly comprised travel services, business services (for example, trade facilitation services, and market research) and transportation – see Figure 12.

⁶ Data on imports via air and seaports is only available in CIF format – that is, it includes the cost of insurance and freight. The high share of value in imports via air is partly a reflection of the high cost of shipping by air.



FIGURE 11: SERVICES IMPORTS BY COUNTRY, TOP 4 SOURCES AND CHINA



Source: StatsNZ

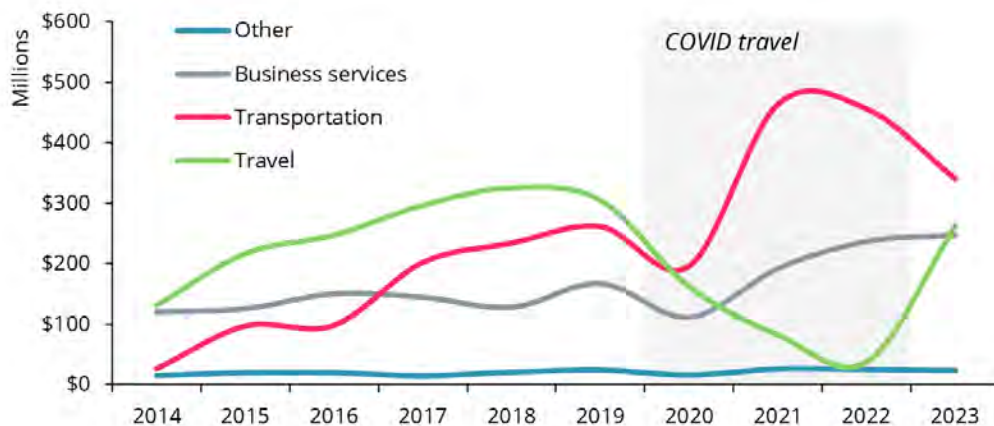
Chinese shipping services kept New Zealand global during the pandemic

The COVID pandemic naturally had a massive impact on tourism, business, study and other forms of travel to and from China. The shutdown cut off tourism rapidly, falling 49% in 2020, and halving each year thereafter through to 2023.

The fall in the travel sector from 2021 onward coincided with a strong boost to services imports in the transportation sector. This reflects payments to Chinese shipping companies during the global surge in shipping prices over 2021-22. Imports of “Sea Transport” services surged from zero on the eve of the pandemic to a peak of \$354m in 2021.

They then slumped to just \$14m in 2023. This surge indicates the role that Chinese shipping companies played in keeping New Zealand connected to global markets just when maritime supply routes were at their tightest crunch. Air freight services also saw a jump from just \$4.4m in 2019 to over \$96.5m in 2022.

FIGURE 12: SERVICES IMPORTS FROM CHINA, YEAR TO DECEMBER



Source: StatsNZ



Our China exports need China imports!

Importing goods from China benefits New Zealand in another important way – facilitating our export logistics.

Most of New Zealand's goods exports leave us by ship. Some products are sent unpackaged as 'dry bulk' commodities. But most of our goods leave our shores in shipping containers, measured as TEUs (Twenty-foot Equivalent Units).

Supply of containers is an important but sometimes overlooked component of our export sector. We can't export if we don't have them. And as an island country we can only get them when they enter New Zealand, by ship. As our largest source of goods imports, containers from China help to ensure we have a supply for our cargo owners and shipping lines.

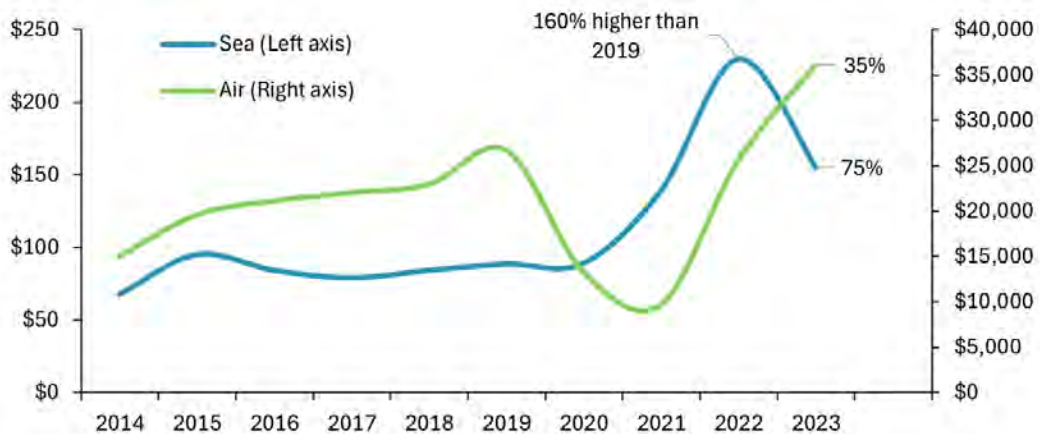
We import from China for the quality and price point of the goods we receive, not the 'box they come in'. But container supply is another part of the complex jigsaw puzzle of our international trade.

New Zealand China Council

Pandemic disruption came in two distinct waves

The COVID pandemic, at first, had little direct impact on imports. Air links were affected, but a 50% price fall in 2020, paired with government subsidies, kept air freight moving. Despite the near complete halt in passenger travel, the value of imports by air, less the air freight cost, fell only 2.1% between 2019 and 2020. Sea imports were largely unaffected.

FIGURE 13: IMPORT FREIGHT COST – PER TONNE



Source: Sense Partners, StatsNZ

It was the 2021 global opening up that threw global supply chains into severe disruption. This saw inflation in both transport costs, and the price of imports themselves. Maritime shipping costs on our imports surged, rising 160% to a peak of \$230 per tonne in 2022. Air freight costs rose to a high of \$36,140 per tonne in 2023, 35% above their pre-pandemic level.



Pressure has eased on maritime shipping as economies around the world attempt to tackle high inflation. However, shipping costs remain 75% above their pre-pandemic level. For importers, disruption to supply chains has yet to end.

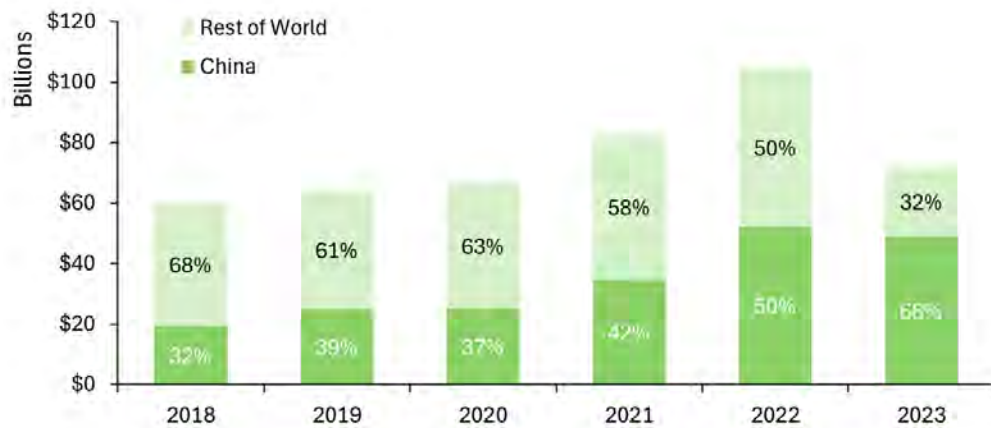


2.2. Highlighting green value chains

China is a key node in green value chains

As a manufacturing hub, China is deeply embedded in global value chains. The efficient manufacture of complex products is a key part of a transition to decarbonised economies. China is playing a leading role in the supply of many green energy technologies, such as solar panels.

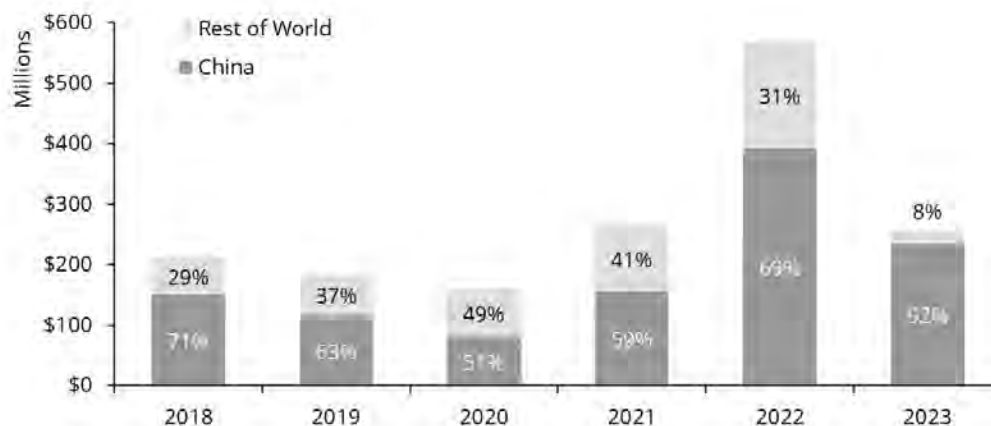
FIGURE 14: GLOBAL EXPORTS OF SOLAR PANELS AND COMPONENTS (USD)



Source: COMTRADE

China is also a major supplier of rare earth minerals. These are crucial inputs into many green technologies including solar panels, fuel cells, batteries, and wind turbines.⁷ Imports from China will play a key role in our own decarbonisation in New Zealand.

FIGURE 15: EXPORTS OF RARE EARTH MINERALS (USD)



Source: COMTRADE

⁷ Zhou, B. Li, Z. & Chen, C. (2017) "Global Potential of Rare Earth Resources and Rare Earth Demand from Clean Technologies," *Minerals*. 7(11).



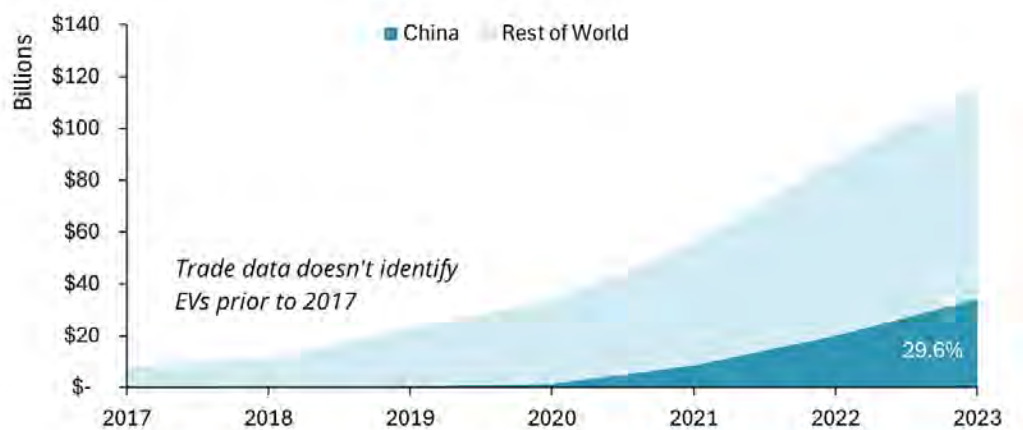
Of particular note, China has stormed into the world EV market. From almost nothing in 2020, Chinese exports of EVs have soared to over US\$34bn in 2023. By value, China now has a 29.6% market share of global EV exports.

Crucially, by the number of vehicles, China's share is 45% - over 1.5m vehicles. China is leading the way in cheaper EVs. Affordable options will accelerate the uptake of EVs and decarbonisation of the vehicle fleet.

The recent decision by the United States to impose an additional 100% tariff on Chinese EVs,⁸ as well as EU investigations, are likely to send ripples through the global EV market. US imports of Chinese EVs were already small,⁹ so the tariffs will shape the future trade relationship.

The real losers of these tariffs are likely to be US consumers, who lose access to affordable EVs. For New Zealand consumers, the effects are likely to be minor. Less competition from US consumers for those EVs may lead to lower prices for Chinese EVs. But any real bargain will attract the attention of consumers from all other parts of the world, bidding up the price.

FIGURE 16: GLOBAL EXPORTS OF ELECTRIC VEHICLES (USD)



Source: COMTRADE

China creates decarbonisation potential

These examples offer some snapshots of China's role in global green value chains. For a more comprehensive view, we look at China's role in the use and supply of all environmental goods.¹⁰

⁸ Office of the United States Trade Representative (2024) *Request for Comments on Proposed Modifications and Machinery Exclusion Process in Four-Year Review of Actions Taken in the Section 301 Investigation: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*. USTR-2024-0007

⁹ In 2023, China exported 12,388 EVs to the USA. In the context of 1.5m vehicles exported in total, this is not much more than the 10,625 units exported to New Zealand. Source: COMTRADE.

¹⁰ We use the Environmental Goods List in Annex 22A of the NZ-UK FTA to identify relevant products.



Figure 17 below shows China's total exports and imports of environmental goods. In 2023, China exported US\$480bn worth of environmental products, up 75% since 2013. China has been expanding its contribution to green supply chains.

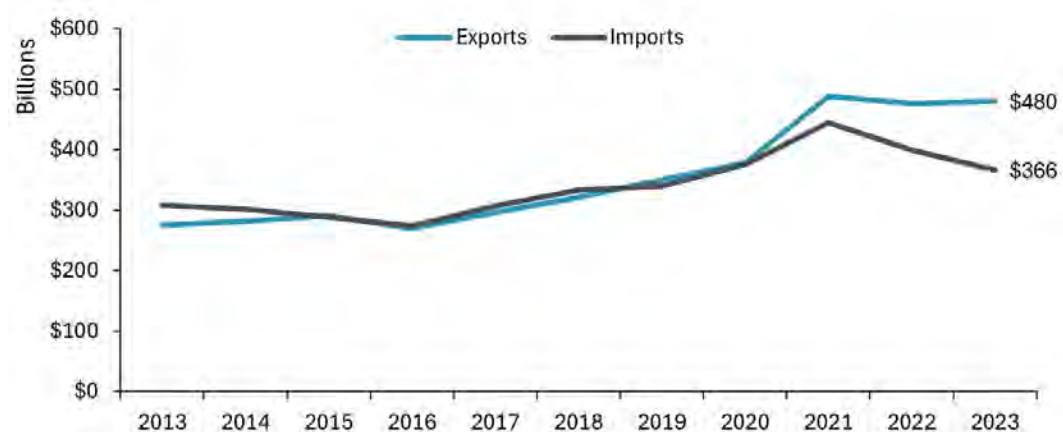
For example, China exported US\$39.6bn in lithium-ion batteries in 2023, accounting for 49% of global exports. They also exported \$30.9bn (35%) worth of static converters – essential components of electrical grids. Decarbonising our own energy systems will benefit hugely from Chinese products.

Many of the goods we look at are inputs into green technologies, such as solar panels. As China is the world's factory, its role in green value chains includes the import of these inputs, transforming them into the final green technology we need to decarbonise.

China's imports of environmental goods reached US\$367bn in 2023. A good example of green transformation is their \$10.7bn in imports of heliostats. These are a component of solar panels that track the sun's movement to maximise energy production. China imports these as inputs into their own solar panel production, which they then export.

China contributes to decarbonisation by taking inputs and realising their decarbonising potential.

FIGURE 17: CHINA'S ROLE IN GREEN VALUE CHAINS



Source: COMTRADE

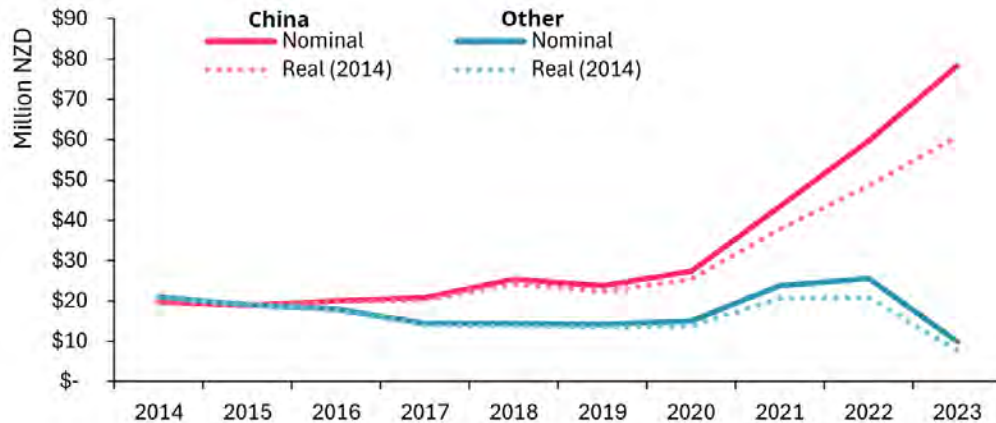
New Zealand taps into this decarbonisation potential via imports

New Zealand stands to benefit from China's role in green value chains. Several key green-energy technologies are produced in China. Having access to suppliers in China will help us decarbonise our own energy system. This is already showing up in the trade data.

Imports of solar PV, for example, have shot up, rising 208% in real (inflation adjusted) terms since 2014. The nominal value of solar PV imports (including their components) was \$88.4m in 2023, with China supplying 89% by value. China's share is up from 49% (\$19.8m) in 2014.



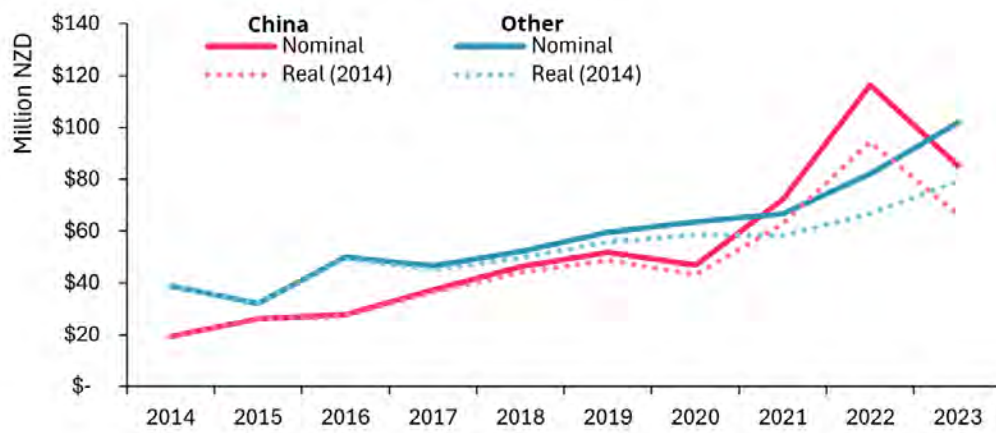
FIGURE 18: NZ IMPORTS OF SOLAR PANELS AND PARTS



Source: StatsNZ; Sense Partners analysis

China is also a significant supplier of rechargeable batteries. Energy storage technologies will help to integrate variable wind and solar power into the national grid. Figure 19 below shows our imports of rechargeable batteries, excluding batteries used in internal combustion engine (ICE) vehicles. Real imports from China have grown 241% since 2014. Of our total imports of \$187.3m in 2023, 46% (\$85.3m) were sourced from China.

FIGURE 19: NZ IMPORTS OF RECHARGEABLE BATTERIES (EXL. ICE VEHICLE BATTERIES)



Source: StatsNZ; Sense Partners analysis

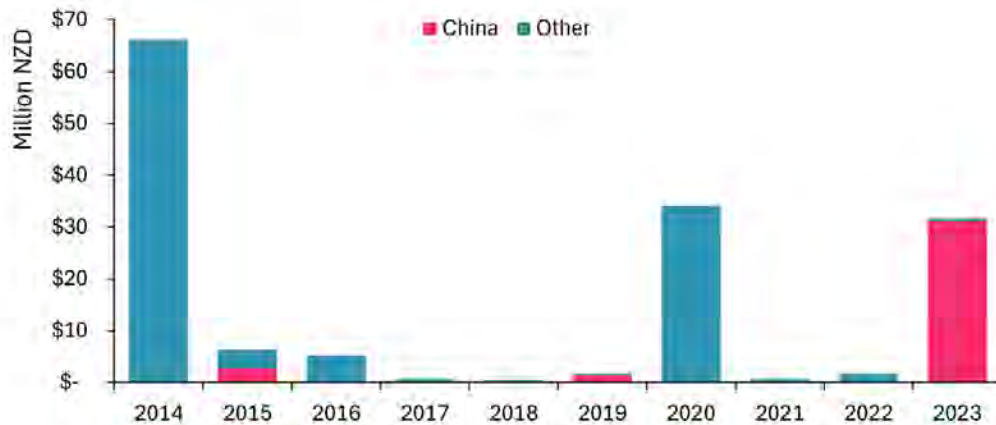
Wind farms are a major infrastructure undertaking, and are only commissioned periodically. This shows up in the data on imports of wind turbines into New Zealand, shown in Figure 20 below. Most years, import values are low. Those years with large transactions tend to coincide with the commissioning of major wind farms in New Zealand.¹¹

¹¹ The data is potentially incomplete. In some years there may be a single developer purchasing turbines, in which case the data could be made confidential.



Although the data is only periodic, at least one major transaction has occurred with China in 2023. With China being a leading producer of wind turbines globally,¹² there is every possibility that this could be the start of a trend. Having access to Chinese suppliers will provide considerable option value for energy producers in New Zealand.

FIGURE 20: NZ IMPORTS OF WIND TURBINE GENERATORS



Source: StatsNZ; Sense Partners analysis

Zero emissions between China and New Zealand?

The shipping sector is a crucial facilitator of global trade, carrying approximately 80 per cent of all goods traded internationally.

The sector also accounts for roughly 3 per cent of global CO₂ emissions – for now. In July 2023 member states of the International Maritime Organization (IMO), including New Zealand, announced a target of net-zero greenhouse gas emissions from shipping by 2050. This is a significant raising of ambition over 2018, when members agreed merely that GHG emissions should be halved by 2050.

As a key aspect of the new strategy, the IMO seeks a reduction in carbon intensity of international shipping by at least 40% by 2030. That's just around the corner, so urgency is required.

The rapid development of green shipping corridors is likely to be part of the solution. Green corridors are zero-emission maritime routes between two (or more) ports. According to McKinsey analysis for the Getting to Zero Coalition, they can deliver impact at scale by involving all value-chain actors (fuel producers, vessel operators, cargo owners, and regulators); provide offtake certainty for fuel producers; and send strong demand signals to shipyards and engine manufacturers.

¹² Wood Mackenzie (2024) *China leads global wind turbine manufacturer's market share in 2023*. <https://www.woodmac.com/press-releases/2024-press-releases/global-wind-oem-marketshare/>



Planned corridors already announced including Antwerp-Montreal, Los Angeles-Shanghai and Singapore-Tianjin.

And as for New Zealand? As well as our IMO membership, New Zealand is one of almost 30 signatories to the 2021 UK-led Clydebank Declaration which pledged to support the establishment of at least six green corridors by the 2025. Auckland is also a member of C40, a global network of nearly 100 mayors committed to confronting the climate crisis: the Los Angeles-Shanghai corridor grew from this alliance.

For now, our shipping industry is still discussing a viable preferred fuel solution. And the current focus of both our industry and government is on smaller-scale domestic decarbonization efforts such as electric ferries. Realistically, green corridors to New Zealand will not deliver the early global scale of impact of busier Europe-Asia-North America routes.

But as those pilot efforts bed in, and shipping lines as well as New Zealand trading companies consider all possible options to reduce the carbon footprints of their business activities, pressure will build on New Zealand to contribute to the IMO's goals. Could we start with a New Zealand – China green shipping corridor?

New Zealand China Council



3. Measuring our import exposure

3.1. Direct imports

Ultimately, risk is specific to products and firms

Our analysis above indicates how valuable our trade relationship is with China. However, recent world events have prompted people to worry about the risks of over-exposure to any one source of imports.

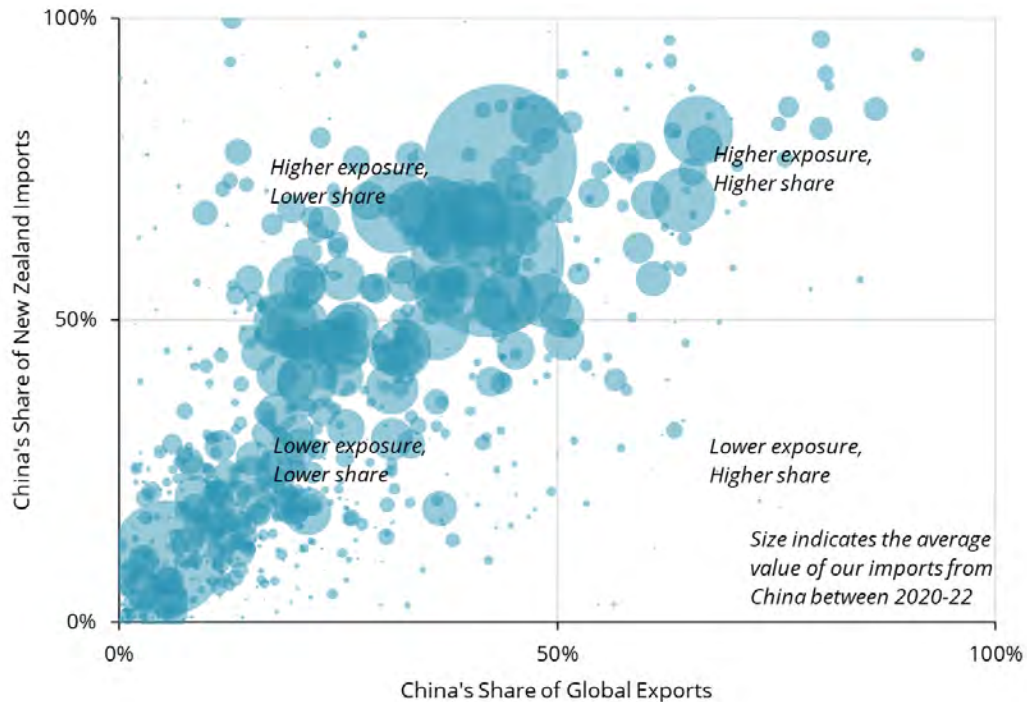
We can get a pulse-check on overall risk by looking at products where China is our dominant supplier, and whether there are alternative suppliers.

If China has a large share of global exports, then there are fewer alternative suppliers to go to. This can be a risk. Alternatively, if China has a low share, there are many other suppliers, and so less risk.

Similarly, if China supplies a high share of particular imports to New Zealand, then we don't have many alternative supply relationships with other countries. It is the combination of China's high share of our imports, and China's high share of global exports where there is likely to be some risk.

The result of our analysis is shown in Figure 21 below. Each dot represents a product we import from China, with the size reflecting value. The quadrants show the different levels of risk, with the top right quadrant showing where risk is highest.

FIGURE 21: NZ IMPORTS FROM CHINA, 2020-2022 AVERAGE SHARES (HS6)



Source: Sense Partners, StatsNZ



Risk is always specific to each product. The ability to pivot to a new supplier or substitute for another product will depend on the goods in question. For example, China is dominant in the supply of pigs' hair, used to make paint brushes. Despite its 84% market share, having to find an alternative to pigs' hair, or go without, is unlikely to pose a major cost or risk for Kiwis.

Risk is also specific to the firm producing the good and its own unique commercial arrangements.

We use 50% as a threshold to determine whether the risk is high or low. By value, 82% of our total goods imports fall into the lower left quadrant. These imports have relatively less exposure to China, and there are plenty of alternative suppliers. 14% fall into the upper left quadrant, where China is a dominant supplier to us, but globally there are alternatives.

Where there is likely to be some risk is the top right quadrant. Here, China is a dominant supplier to both us and the world. There are few alternatives. Just 3% of our imports by value fell into this quadrant.

These include toys (\$319m in imports, 81% from China), lamps (\$316m in imports, 70% from China), gaming consoles (\$217m in imports, 51% from China), and plastic household items (\$117m in imports, 79% from China.)

TABLE 1: IMPORTS OF GOODS IN THE TOP RIGHT QUADRANT, TOP 10 BY VALUE FROM CHINA

Product	NZ imports from World (NZD)	NZ imports from China (NZD)	China's share
Toys	\$319.3m	\$259.7m	81%
Lamps	\$315.8m	\$220.8m	70%
Gaming consoles	\$216.9m	\$110.6m	51%
Plastic household items	\$117.3m	\$82m	70%
Metal household items	\$87.2m	\$67m	79%
Rubber/plastic footwear	\$115.6m	\$65.7m	57%
Tobacco products	\$70.8m	\$54.3m	77%
Tarpaulins & camping supplies	\$70m	\$53.9m	77%
Electric household appliances	\$84.7m	\$52.5m	62%
Women's clothing	\$71.1m	\$50.5m	71%

Source: StatsNZ, COMTRADE

A majority of these more exposed goods are generic household items and appliances. 66% of these imports, by value, fall into consumer goods categories.

Losing access to these imports would impose a cost on households, but it is not likely to pose a systemic risk to our economy or standard of living.



3.2. Indirect imports

China is embedded in global value chains

China's manufacturers are embedded in chains of production which stretch across the globe. Much of what China produces are intermediate inputs into other final products. This means that looking only at what we import directly from China doesn't give us the full picture of our trade links.

Understanding our trade relationship with China, and where we may be exposed to risk, requires us to look deeper into the global supply chains we buy from. For this, we can draw on analysis done by the OECD that quantifies the total contribution made by each country to our own domestic consumption.¹³

Figure 22 below shows that of the contribution other countries make to our economic output via imports, just over 20% ultimately comes from China in some form or another. This is higher than China's 16.5% share of our direct goods and services imports, reflecting its contribution to supply chains in many other countries we buy from.

FIGURE 22: SHARE OF OVERSEAS CONTRIBUTION TO NZ OUTPUT,¹⁴ TOP 10, 2020



Source: OECD

We aren't particularly exposed to foreign inputs compared to others

Of our total economic output - 18.9% comes from foreign sources. As Figure 23 shows, over 81% of the value of what we produce, export, and consume is sourced from right here.

Compared to our other major import partners we aren't particularly exposed in this regard. A lower domestic level of value add in places like Singapore (44% foreign inputs) reflects a high

¹³ OECD (2023) *Trade in Value Added: TiVA indicators: 2023 edition*.

¹⁴ The OECD provides estimates of the origin of value add in final demand. For simplicity, we refer to final demand as output. Final demand includes our exports, what our households and government consume, and capital formation. It is not the same as GDP, because we don't net off imports.

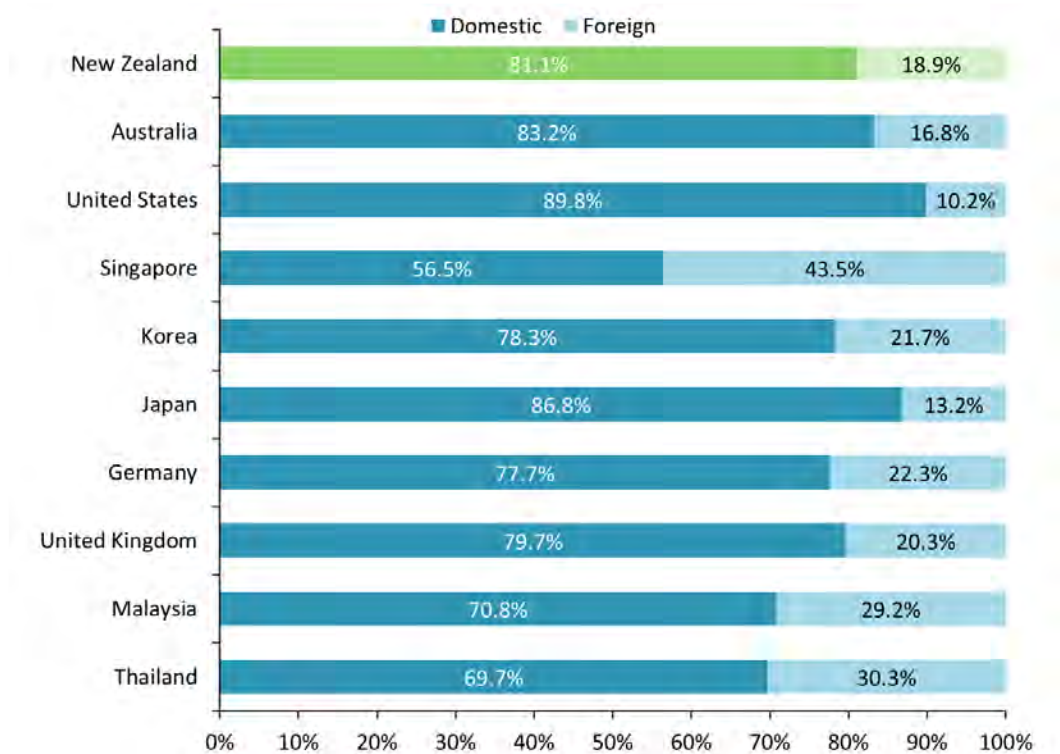


level of global integration. This indicates that an economy like Singapore is potentially far more exposed to shocks in the international trading system.

This integration could arise when a country performs a large number of relatively low-cost transformations of inputs. For example, assembling parts manufactured elsewhere, which are then exported.

Our major import partners are a useful comparison in this regard. This is because we can start to see how our imports from other places still draw on Chinese inputs. Many of the consumer goods we import are at the end of global value chains. They may cross through many countries, but China is often a key node at some point in the chain.

FIGURE 23: SOURCES OF ECONOMIC OUTPUT



Source: OECD

Of course, the foreign share is an imperfect measure of risk. Japan has a low share of foreign sources in its output (13.2%) because much of its manufacturing is in very high value transformations. This is despite Japan being reliant on imports for food and many raw materials.¹⁵

As valuable as those transformations may be, they may nevertheless be dependent on foreign inputs. A small share of foreign inputs may be just as critical as a large share. Ultimately, risk

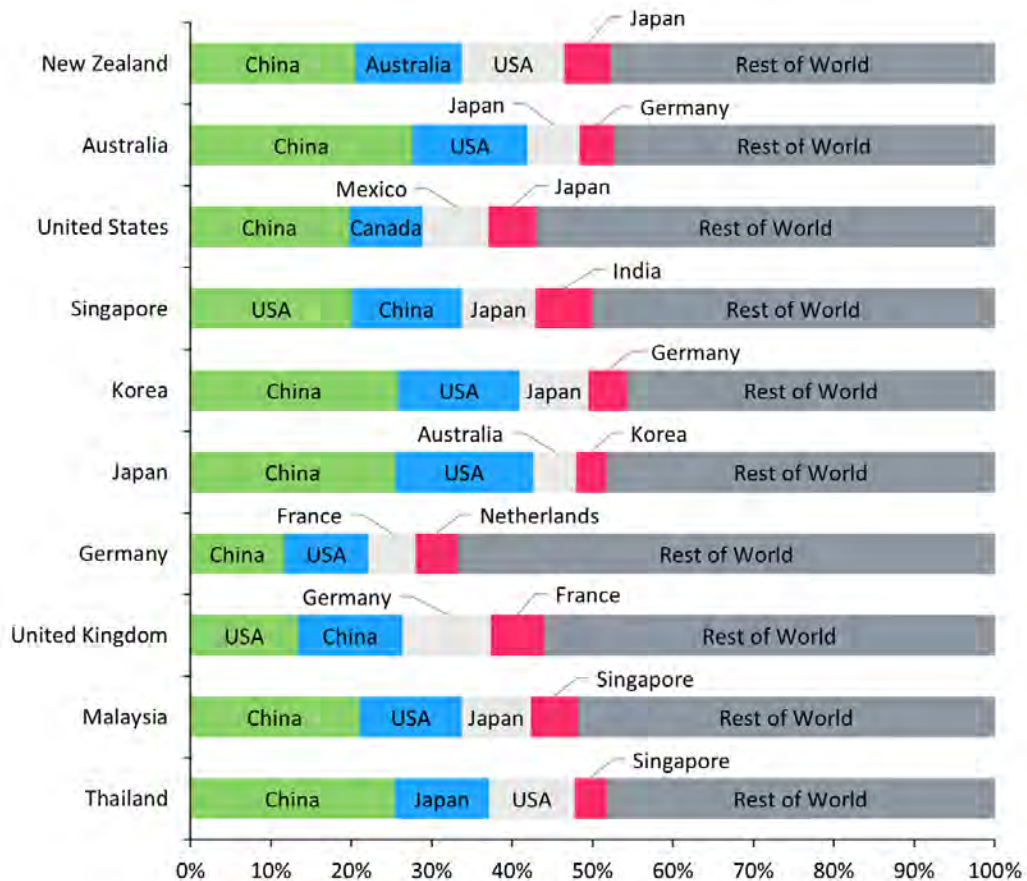
¹⁵ Primary and raw materials make up 18% of Japan's total imports. This compares to a world average of 9.2% - only 14 countries have a higher share of raw imports in total imports. Source: COMTRADE.



comes down not just to specific products, but to individual firms and their unique commercial arrangements.

China contributes to the outputs of many economies

FIGURE 24: SOURCES OF OVERSEAS CONTRIBUTION TO OUTPUT – 4 LARGEST



Source: OECD, Sense Partners

Figure 24 above zooms into the foreign contribution to output in each of our major trading partners. For most, China is the main source, with a share ranging between 12% in Germany and 28% in Australia. For the two exceptions, Singapore and the UK, China is the second largest source at 14% and 13% respectively.

Across these countries, China's average share of the foreign contribution is 20.4%. This is just a rounding-error away from our own share with China, at 20.5%. Our middle-of-the-pack status doesn't indicate an unusual level of exposure to China.



We can zoom into the product level to assess risk

The OECD inter-country input-output tables provide analysis of global linkages across 75 countries and 45 industries.¹⁶ To get a sense of exposure at the product level, we match import products to these industries. We can then follow the links to see where China sits and the role it plays.

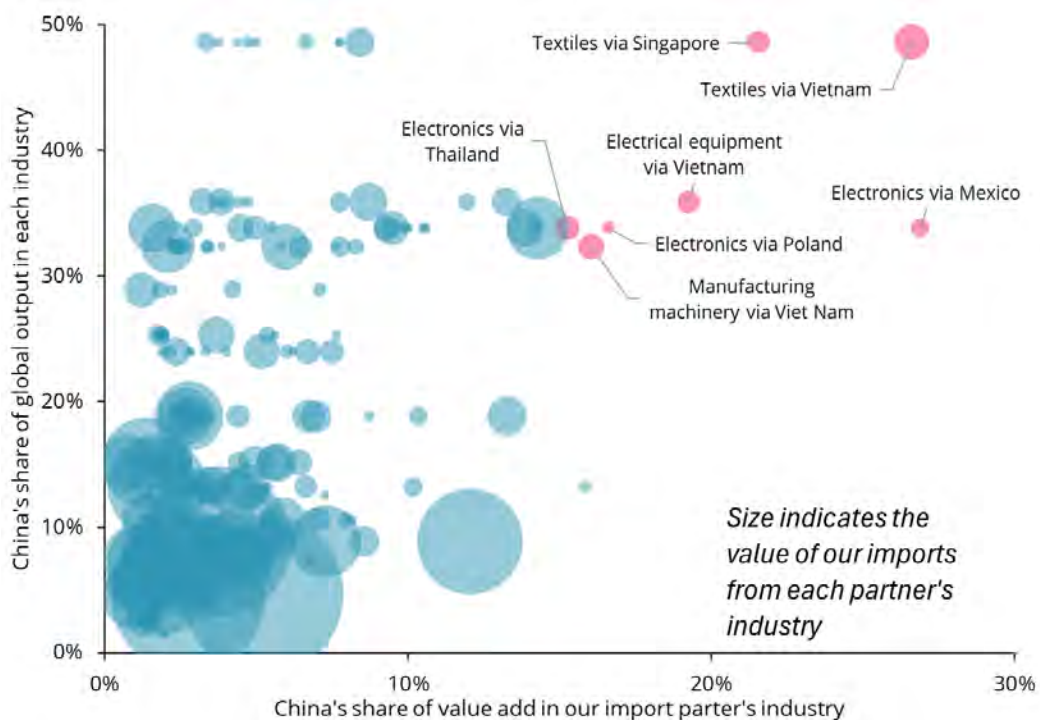
Figure 25 below shows all our non-China import products, from each import source, with a value over \$10m matched to an industry. The vertical axis shows China's share of global output in that industry, including the indirect contribution it makes through other products that feed into that industry.

The horizontal axis shows China's contribution to output, as a share of output, in that sector within each of our import partners. This is China's indirect contribution in the form of imports used in each partner's industry.

Where China has both a high share of global output in an industry, and a high contribution to output in our import partner's industry, we can expect some risk. This is because our import partner mostly sources from China, and there are few alternatives.

A lower contribution to our partner's industry implies less exposure. Likewise, a lower share of global output in that industry implies plenty of alternatives.

FIGURE 25: CHINA'S INDIRECT CONTRIBUTION TO OUR IMPORTS



Source: OECD data; Sense Partners analysis

¹⁶ OECD (2023) *OECD Inter-Country Input-Output Database*. <http://oe.cd/icio>



It's not clear that there is any undue indirect risk

For a macro-level view, we compare China's contribution to our import partners relative to its global share. This allows us to judge risk relative to global trade patterns.

Of our imports with value greater than \$10m, 12.7% by value was sourced from countries where China's input in that country's industry is higher than its global share in that same industry.

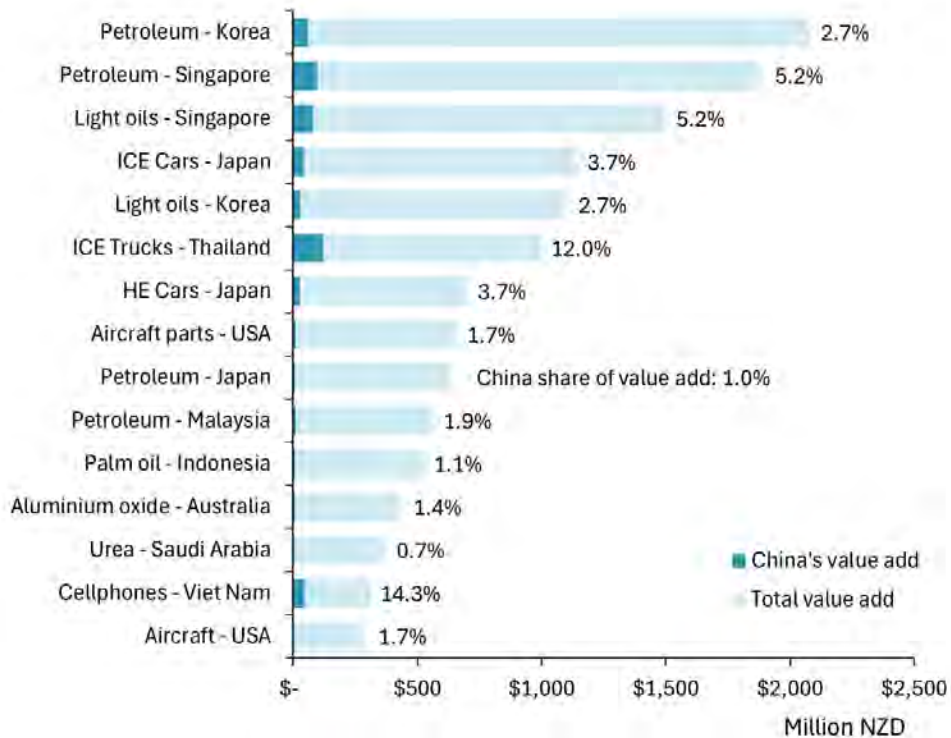
For example, as Figure 26 below shows, we imported \$1.4bn of goods from Thailand's motor vehicle and trailer sector. China's contribution to this sector, as a share of total output, in Thailand was 12%. In comparison, its global share was 8.9%. This implies that buying from Thailand involves more exposure to China than China's global share would imply.

The remaining 87.3% of our imports over \$10m come from countries where China made a smaller contribution than its global share would imply. For example, we imported \$10.2m worth of goods from Australia's textiles, leather, and footwear industry. China's contribution to Australia's textiles is 7.7% of the sector's output. This is far below their global share of 48%.

This means buying textiles from Australia is relatively less exposed to China compared to other countries. Of course, this doesn't mean there is no exposure, just comparatively less exposure.

Of our largest imports, China's indirect contribution is small

FIGURE 26: CHINA'S CONTRIBUTION TO IMPORTS FROM OUR TOP 15 PARTNERS



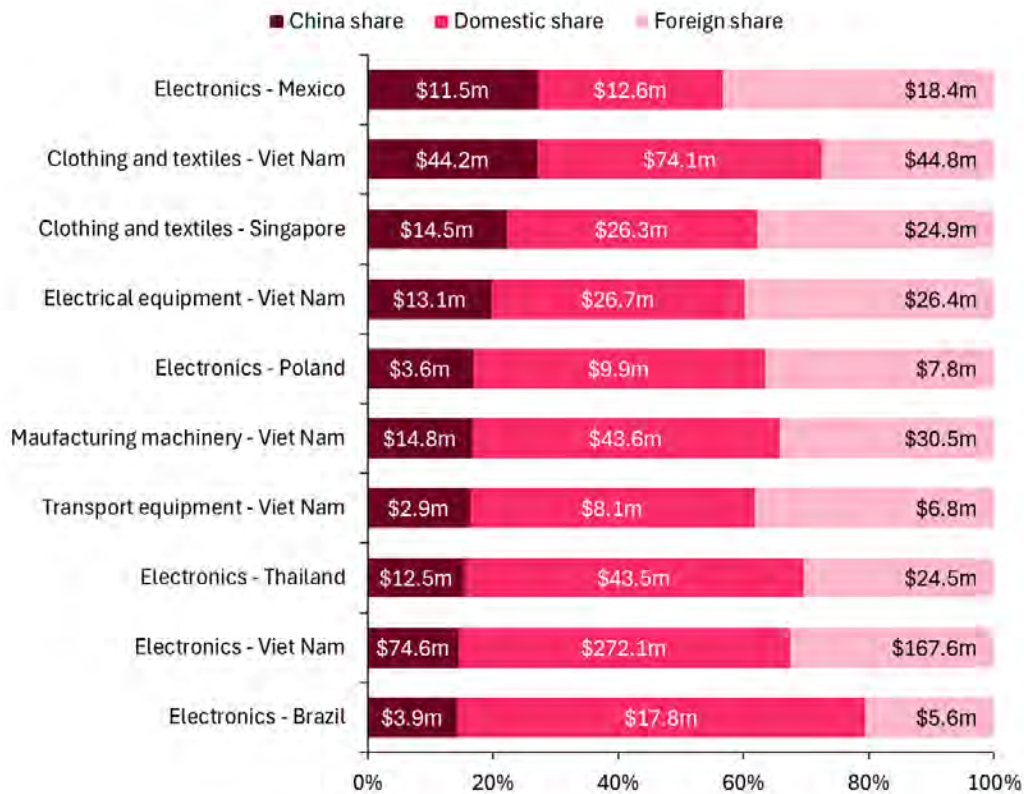
Source: OECD, Sense Partners analysis



China's contribution to our major imports from other countries is generally at the lower end. When looking at our major import products and trading partners, China typically contributes only a small share of output. This ranges from 14% of imports of cell phones from Viet Nam to just 0.7% of imports of urea from Saudi Arabia.

China does make an important indirect contribution to several smaller import categories

FIGURE 27: CHINA'S CONTRIBUTION TO IMPORTS – 10 LARGEST BY SHARE



Source: OECD

Figure 27 shows the ten largest of China's indirect contributions, by share, to our imports from another country. The highest is 27% of electronics from Mexico. In every instance, it is still smaller than the domestic share and the combined contribution from other countries.

China's indirect share may be relatively small across many of our imports, but it still makes a significant contribution to these value chains. Even when importing from elsewhere, we are still linked with China.

Diversification is an expensive insurance policy that may not work

One approach to managing our potential exposure to China is to try and diversify to other sources. This has three potential drawbacks.



First, we buy from China for a reason – they have a massive comparative advantage in manufacturing. This enables them to offer us the best value for money. Finding a new supplier will often mean paying a higher price.

Second, even if we do buy from elsewhere, we will never fully decouple from China. China's role in global value chains means it contributes to our imports regardless of where we buy. For example, recent research has found that US tariffs on China simply diverted trade to countries who are themselves integrated in value chains running through China.¹⁷

Finally, in the event of some disruption, those who do buy from China will attempt to find alternative suppliers. Even if we diversify now, others will bid up the price in an attempt to divert supplies their way. There may be some first mover advantages, but supply contracts are unlikely to be wholly resilient to offers of much higher prices from other bidders.

¹⁷ Freund, C. Mattoo, A. Mulabic, A. Ruta, M. (2023) *US-China decoupling: Rhetoric and reality*. VoxEU.org.



4. Looking to the future

4.1. China faces challenges, as do we all

Do not underestimate China's policy options

Much like every economy, China is facing challenges. These include economic decline, high debt, property speculation, international tensions, climate change, and more. It is easy to over-egg these, particularly if we fail to keep in mind that China has always faced seemingly insurmountable challenges.¹⁸

When looking at these challenges, we have to keep in mind the scope for a response from both policy and prices. It can be tempting to project a trend forward and preach doom accordingly. It is more complex to unpack the potential for Chinese government policy and market prices to respond.

China's growth model is facing challenges

To demonstrate the potential of policy responses, we look at a commonly cited driver of economic decline - demographic change. China's working age population peaked in 2015 at 998.2m people. Since then, it has declined by 15.3m people, a 1.5% loss. The UN projects this will continue, with further reduction of 10.5 million (-1.1%) people by 2030.¹⁹

Given China's growth model has historically relied on low-cost labour,²⁰ this would seem to pose a challenge to sustained growth. This could jeopardise China's economic competitiveness.

Yet the government has policy options – it can respond

An issue with these projections is they typically disregard the options that the Chinese government has available to respond to demographic decline.

For example, the current effective retirement age in China is a spritely 54 years old.²¹ Raising this by just 3 years, as the CCP already intends to achieve by 2030, could increase the working age population by 40 million people.²² A retirement age of 65, for example, could see an extra 225 million people remain in the workforce by 2030.²³

China's government is also encouraging greater manufacturing automation and the development of a skilled workforce able to design and build manufacturing systems, not work on the factory floor. Digitisation, technological innovation and HR training and development

¹⁸ Wang, T. (2023) *Making Sense of China's Economy*. Routledge.

¹⁹ United Nations Population Division (2024) *Population by 5-year age groups and sex*.

²⁰ Cai, F (2021) *Understanding China's Economy: The Turning Point and Transformational Path of a Big Country*. Springer.

²¹ China has a relatively complex retirement age. The official retirement age is 60 for men, 55 for women in white collar jobs, and 50 for women in blue collar jobs. However, there are allowances for male retirement at 55 and female retirement at 45 for those engaged in physical labour in certain industries. (see OECD: *Pensions at a Glance 2023 – China*). Here, we refer to an effective retirement age estimated in Wang, T. (2023) *Making Sense of China's Economy*. Routledge.

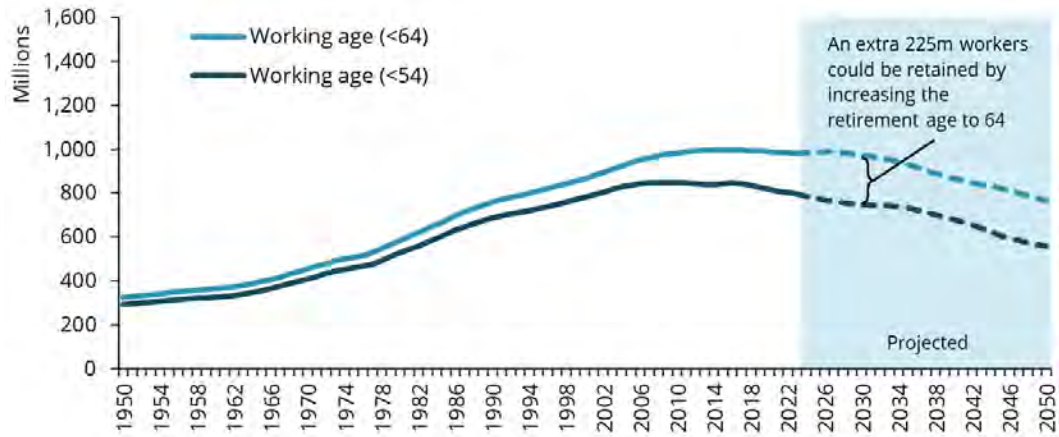
²² Wang, T. (2023) *Making Sense of China's Economy*. Routledge.

²³ Calculated from United Nations Population Division population projections for China.



are key elements of China's "new quality productive forces" which featured prominently in the government's annual work report at this year's National People's Congress.²⁴

FIGURE 28: CHINA WORKING AGE POPULATION GROUPS (FROM 15 YEARS AND ABOVE)

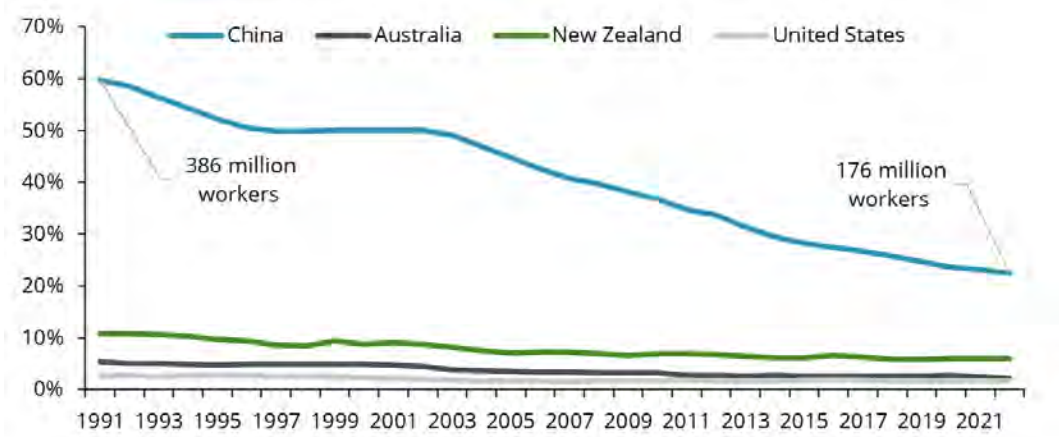


Source: United Nations Population Division

There remains vast human potential to tap into

Perhaps a far more underappreciated source of future workforce growth is the agricultural sector. Agriculture accounts for over 22% of employment in China, some 176 million working aged people.²⁵ This compares to 2% in Australia, 6% in New Zealand, and 2% in the United States.²⁶

FIGURE 29: SHARE OF EMPLOYMENT IN AGRICULTURE



Source: World Bank

²⁴ Kroeber, A (2024) *Unleashing "new quality productive forces": China's strategy for technology-led growth*. The Brookings Institution.

²⁵ Calculated from World Bank data (2024) *Employment in Agriculture (% of total employment)(modelled ILO estimate)* and World Bank data (2024) *Labour Force, total*.

²⁶ World Bank data (2024) *Employment in Agriculture (% of total employment)(modelled ILO estimate)*



Enabling migration of the workforce from the agriculture sector into manufacturing and services jobs has the potential to offset any decline in the workforce from ageing. For example, achieving an agricultural employment share similar to New Zealand (6%) would free up 129.4m people for work in non-agriculture sectors. However, this is easier said than done.

Achieving this will require further reform of labour mobility

Tapping into the rural workforce to fuel growth will require reform. First, land market reform is needed to enable smallholder farmers to sell up and migrate to cities.

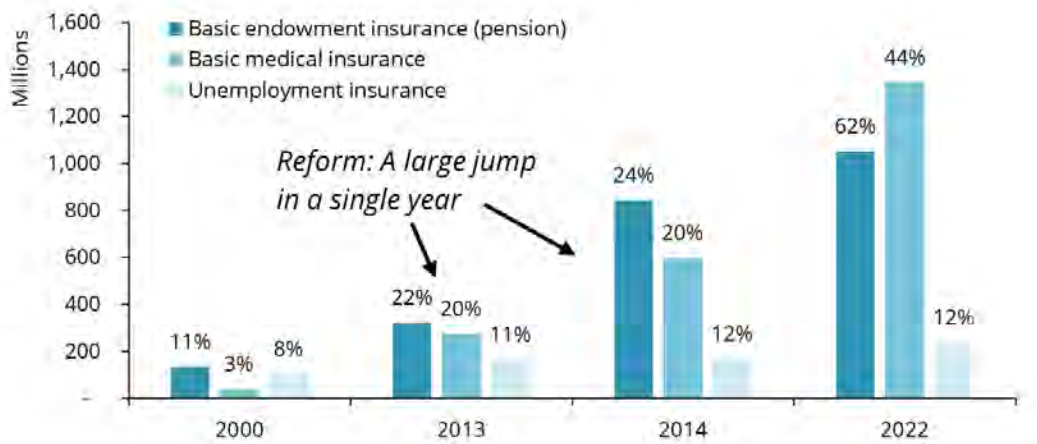
Rural land is owned collectively by villages. The right to farm this land is parcelled out to village families, with terms lasting 30 years. Village authorities have the power to periodically redistribute land, even in the middle of a tenant's contracted term.²⁷ This reduces the gains to acquiring new farmland occupancy rights, limiting rural families' ability to sell up.

Second, rural families need access to urban social safety nets if they are to migrate. Rural migrants, who do not hold urban *Hukou*, have severely limited access to the urban social safety net, including healthcare and education.²⁸ This disincentivises rural-urban migration.

Much of this reform is already underway – there is momentum

In 2014, the Chinese government implemented reforms to the *Hukou* system to give rural migrants better access to urban public and social services.²⁹ Basic health and income insurance has been expanded, with 95% of the population now having some form of coverage.³⁰

FIGURE 30: PARTICIPANTS IN MAIN WELFARE SCHEMES (% OF POPULATION)



Source: National Bureau of Statistics of China

²⁷ Wang, T. (2023) *Making Sense of China's Economy*. Routledge.

²⁸ Wang, T. (2023)

²⁹ Chan, K. (2021) "What the 2020 Chinese Census Tells Us About Progress in Hukou Reform," *China Brief*, 21(15). The Jamestown Foundation.

³⁰ National Bureau of Statistics of China (2023) *China Statistical Yearbook 2023*. China Statistics Press.



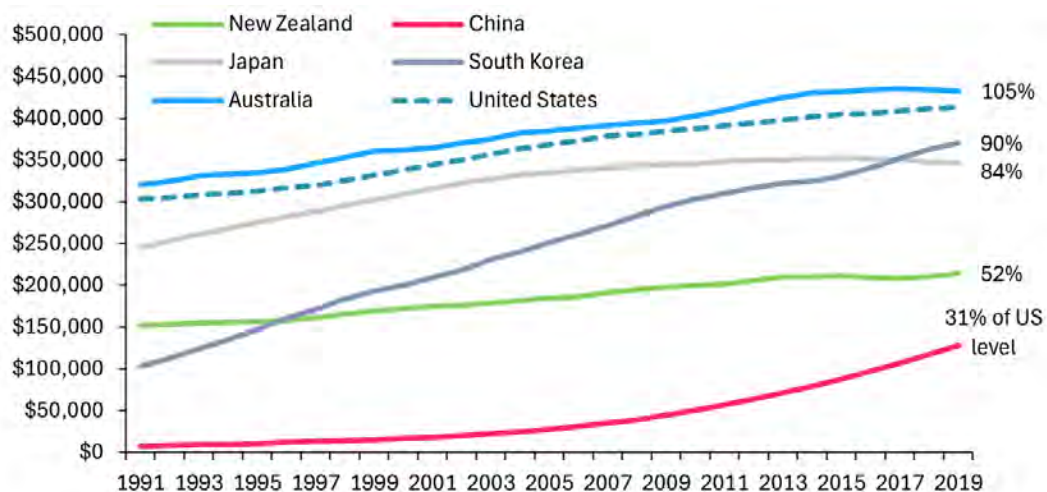
In addition, 2014 reforms to land markets gave rural families the option to sell their occupancy rights to others.³¹ These 2014 reforms have contributed to increasing the share of urban residents who hold urban *Hukou*. However, nearly 29% of urban residents still lack an urban *Hukou*, and the access to welfare it provides.

Reform is not the only option – economies have built in adaptation

There are built-in adjustment mechanisms that do not rely on difficult reform. As the labour supply falls, the price of labour will rise. As the price rises relative to capital, the economy will shift to more capital-intensive forms of production. This includes encouraging agricultural mechanisation, as well as capital growth in other sectors.

China's growth has been driven by both labour and capital formation. This has led to concerns that China has over invested, and that as well as running out of labour, it has exhausted the growth potential of capital accumulation. This would limit the ability for businesses to migrate toward more capital-intensive operations in response to rising labour costs.

FIGURE 31: CAPITAL PER WORKER (2017 USD)



Source: St Louis Federal Reserve,³² World Bank

However, research from the World Bank indicates that, on the contrary, capital formation in China's business sector has not been excessive.³³ Rapid growth in the past decade has largely been in the housing, government, and infrastructure sectors. There remains scope for productivity driven capital accumulation in the business sector.

China's capital per worker is still considerably lower than other developed countries. It is roughly 31% of the value of capital per worker in the US. China has made strong progress over

³¹ Ye, J. Cai, L. & Shi, X. (2024) "Pursuing a brighter future: Impact of the *Hukou* reform on human capital investment in migrant children in China," *China Economic Review*. 85(1).

³² Feenstra, A. Inklaar, R. & Timmer, P. (2015) "The Next Generation of the Penn World Table," *American Economic Review*, 105(10), pp. 3150-3182.

³³ Herd, R. (2020) *Estimating Capital Formation and Capital Stock by Economic Sector in China: The Implications for Productivity Growth*. Policy Research Working Paper 9317. World Bank Group.



the last 20 years, and there is little to indicate this trend won't continue. China's economy is not capital saturated.

Sourcing ethically from China – The Warehouse Group experience

Sourcing imported products ethically from offshore suppliers is an increasing focus for New Zealand companies, driven by their own corporate values as well as consumers seeking reassurance on issues ranging from child and forced labour to safety standards and environmental and climate concerns.

The Warehouse Group (TWG) is one example of a Kiwi company making considerable efforts to ensure the products it sources from overseas are manufactured ethically. TWG's programme covers its private label supply chain, covering about half of its products within The Warehouse and Warehouse Stationery, with the company's other suppliers completing their own due diligence for their own products.

Dating back to 2004, the programme primarily covers suppliers in China, Bangladesh, India, Viet Nam, Malaysia and Pakistan. China is significant within this mix – sales from the company's imports from there totalled \$NZ1.3 billion in 2023, comprising 63% of all The Warehouse and Warehouse Stationery products. The second largest overseas source country, Australia, supplied just 7.2%.

TWG's internal ethical sourcing policy is benchmarked against international standards in this area, and comprises 10 pillars – management systems, child labour, voluntary labour, health and safety, wages and benefits, working hours, freedom of association and collective bargaining, environment and climate, subcontracting and business integrity. TWG's assurance focus is on the final manufacturing workplaces in China and elsewhere. In the case of commodities like paper, wood, and textiles this work extends deeper into the supply chain to include material and component manufacture as well.

Every supplier wishing to work with TWG undergoes an assessment by a suitably qualified 3rd party, as well as ongoing monitoring by TWG's own China in-country team which can include in-person onsite assessments, training, and deeper forms of direct engagement with workers and factory management.

How does China stack up? TWG's Head of Ethical Sourcing Trevor Johnston says China's rapid acceleration of manufacturing capabilities since the 1980s has been accompanied by a corresponding improvement in labour, safety and environmental management. This is due in no small part to the ethical sourcing requirements of foreign customers such as TWG – factories are often supplying multiple international customers, many of which implement similar sourcing policies. And in more recent times, younger Chinese workers have developed greater expectations about working conditions as well. Johnston says the audits and monitoring will continue, but he is confident TWG's Chinese suppliers can meet its own requirements and those of Kiwi customers.

New Zealand China Council



4.2. Policy trends reflect the geopolitical risks

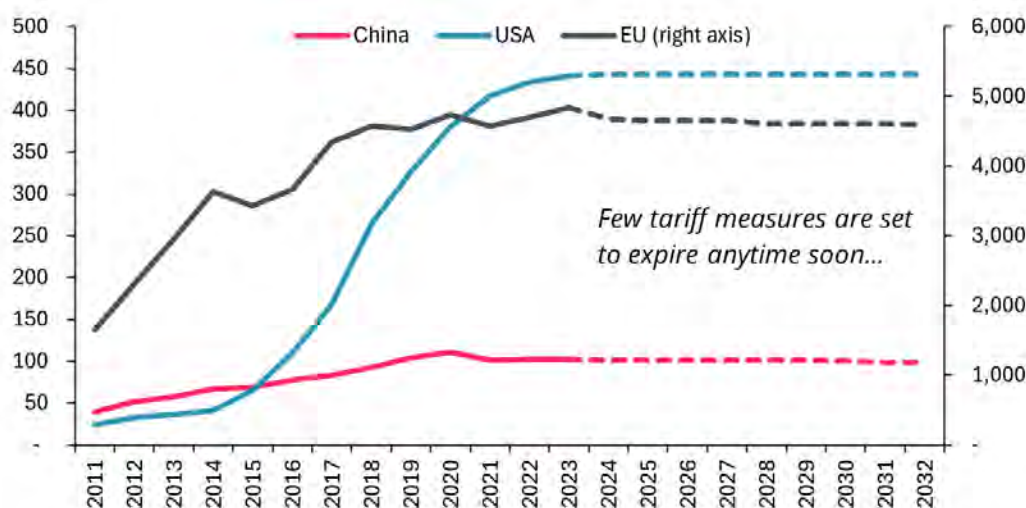
Trade policy is shifting toward active measures

The post-war period approach to trade has been to focus on lowering barriers to trade, like tariffs, subsidies, quotas, and the like. China's 2001 accession to the World Trade Organisation (WTO) is a perfect example of how impactful this can be. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)³⁴ is another example of recent trade advances that focused on lowering barriers to trade.

More recent is the Indo-Pacific Economic Framework (IPEF). Traditional market access tools, like lowering tariffs or removing quotas, are not part of the deal. However, there are other aspects, like negotiating regulations, that can lower transaction costs.³⁵

Both the traditional approach to lowering barriers and the IPEF approach are passive measures. We lower barriers to trade, including transaction costs, and then sit back and let the market decide.

FIGURE 32: STOCK OF TARIFF MEASURES CURRENTLY ACTIVE



Source: Global Trade Alert

In comparison, more active measures, like subsidies and increasing tariffs, are used to directly generate the desired outcome. There is no sitting back and letting the market decide. Rather, governments are resurrecting industrial policy in order to make the desired outcome happen.

Some of this is visible in the surge in tariff barriers erected over the past decade. As Figure 32 above shows, the number of tariff measures implemented by the US has risen from 41 in 2014 to a little over 440 today. During the US-China trade war, US average tariffs on Chinese goods rose from 3.9% to 21%, while Chinese tariffs on US goods rose from 8.3% to 21.8%.³⁶

³⁴ Comprehensive and Progressive Agreement for Trans-Pacific Partnership

³⁵ Ministry of Foreign Affairs & Trade (2024) *IPEF Overview*

³⁶ Peterson Institute for International Economics (2023) *US-China Trade War Tariffs: An Up-to-Date chart*. April 6 2023.



The US has also begun to use subsidies targeted at manufacturing. For example, the CHIPS and Science Act provided US\$39bn in subsidies for semiconductor manufacturing, as well as US\$13.2bn in research and workforce development subsidies.³⁷

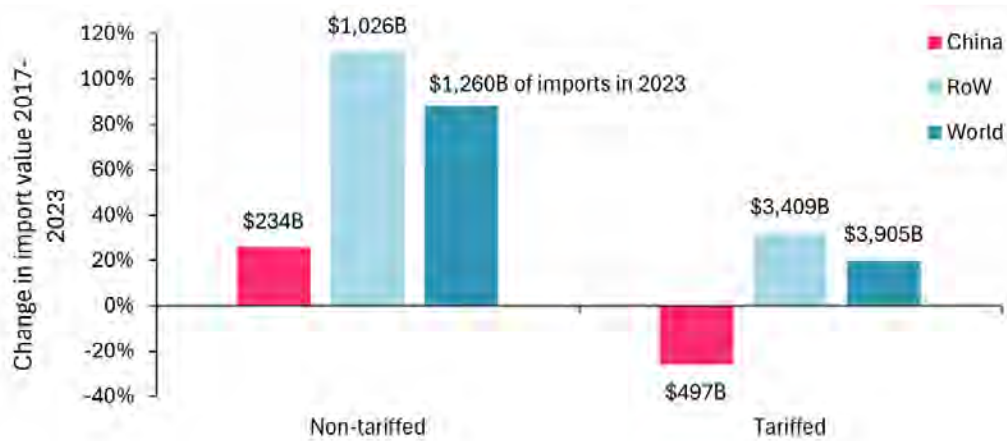
The America COMPETES Act provides a further \$45bn in manufacturing subsidies, as well as an additional \$52bn subsidies for semiconductor manufacturing.³⁸

For New Zealand importers, this is going to be a far more complex environment to attempt to navigate. Tariffs will have flow on effects throughout global supply chains. Subsidies will skew supply chains along geopolitical grounds.

It will take more than removing trade barriers to shift GVCs

However, China has both a comparative advantage in manufacturing and momentum on its side. Really undoing global value chains “could only be induced by pronounced and prolonged government intervention.”³⁹

FIGURE 33: US IMPORTS SPLIT BY WHETHER TARIFF APPLIES AS AT 2023 (NZD)



Source: Sense Partners, COMTRADE, Global Trade Alert

Those US tariff barriers did change bilateral trade patterns. As Figure 33 shows, imports of Chinese products under tariffs shrank by 26% between 2017 and 2023. Products from other countries, even those subject to some tariffs, kept growing regardless.

However, recent research has found that much of this production was not brought back to the US. Instead, it was diverted to other countries, many of which were deeply integrated in global value chains running through China. The tariffs did not reduce US exposure to China, they simply shifted it to a more indirect form.⁴⁰

³⁷ The White House (2022) FACTSHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China.

³⁸ U.S. Congress Joint Economic Committee (2021) *The America COMPETES Act Would Invest in Cutting-Edge Science and Technology to Protect Critical Supply Chains, Support Manufacturing Jobs, and Maintain America's Competitive Edge.*

³⁹ Freund, C. Mattoo, A. Mulabdic, A. Ruta, M. (2023) *US-China decoupling: Rhetoric and reality.* VoxEU.org.

⁴⁰ Freund et al (2023).



This is important for us, because any attempt by us to diversify away from China will run into the same challenges. Even those alternative suppliers we may buy from are still, themselves, deeply integrated with China.

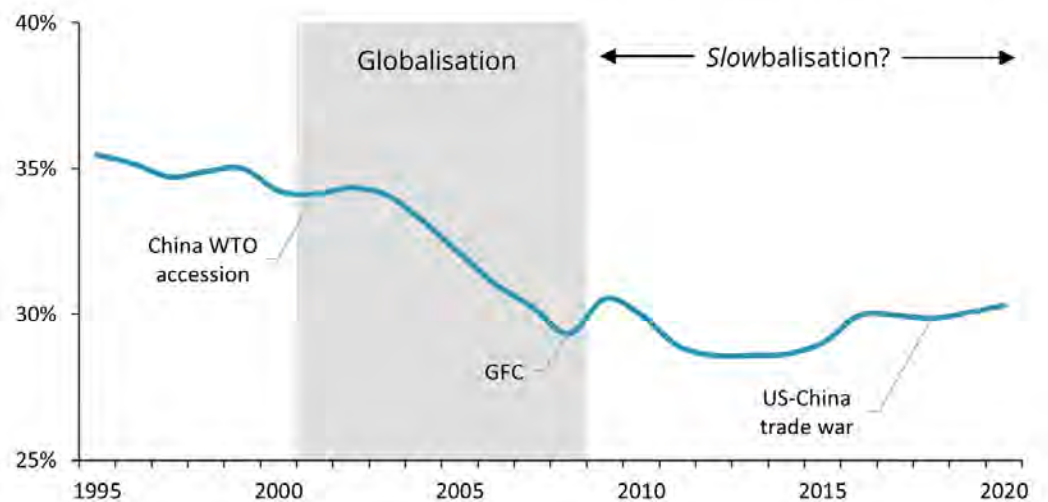
GVCs are showing few signs of unwinding, though growth has stalled

The decade leading up to the 2008 global financial crisis (GFC) was a period of rapid globalisation, particularly in manufacturing. We can measure this by looking at the share of value added⁴¹ in gross output across all countries. This is shown in Figure 34 below.

A higher share indicates that more value is being added domestically and within the same firm. A lower share reflects the opposite. Firms are doing less value adding because they are outsourcing more parts of production to other firms, including overseas firms.

Between China's accession to the WTO in 2001 and the GFC in 2008, the average value added in manufacturing dropped from 34% to 29%.

FIGURE 34: WORLD VALUE ADDED SHARE IN MANUFACTURING PRODUCTION



Source: Baldwin (2022),⁴² OECD⁴³

The total global value added in manufacturing doubled, rising an average 8.9% per year. China's share of this value added rose from 7.3% to 13.9%. They took on a more prominent role in global value chains. This period of globalisation wasn't just a shifting of supply chains. It was a period when immense global value was created by tapping into more efficient production systems.

Globally, the share of value added in gross output has plateaued since 2008, around the 30% mark. Growth in total added value has slowed to just 2.4% per year on average. However,

⁴¹ In economics, "value added" covers all the value added to a product at each stage of production. This includes the value embedded by services, like transportation. Although it doesn't not change the product itself, transport still adds value by getting it to where it needs to be.

⁴² Baldwin, R. (2022) *The peak globalisation myth: Part 3 – How global supply chains are unwinding*. VoxEU.org

⁴³ OECD (2023) *Trade in Value Added: TIVA indicators: 2023 edition*.



China has continued to increase its share, now accounting for 29% of manufacturing value add.

Globalisation hasn't stopped. But it has slowed, and its ability to add new value has slowed. Meanwhile, China has continued to grow its role in the global economy. The stalling of globalisation goes back earlier than current trade tensions, to the GFC. 'Slowbalisation' is not new.

Decoupling will impose large costs on everyone – nobody wins

Research into the impacts of the US-China trade war, and economic fragmentation more broadly, is starting to come in.⁴⁴ And it's not good news.

Cross-border integration linked comparative advantages across countries, creating more productive supply chains. This boosted incomes in new manufacturing areas and lowered the cost of goods in the developed world. Policies that undo this integration also undo the benefits it created.

Estimates of the long-term lost output caused by fragmentation vary. For strategic decoupling, where only certain sectors like semiconductors are targeted, global output may fall by 1%. For full technological decoupling, the fall may be 12%.⁴⁵

Ultimately, some decoupling seems inevitable. Current policy settings, and the policy mood, will see to that. However, we noted above research indicating the impact of tariffs didn't reduce US exposure to China. Yet it did impose a cost on the US.

Further efforts may be just as futile and even more costly. This is the global policy context that New Zealand importers will need to navigate.

⁴⁴ For a good overview, see: Aiyar, S. & Ilyina, A. (2023) *Geo-economic fragmentation and the world economy*. VoxEU.org.

⁴⁵ Aiyar, S. & Ilyina, A. (2023)

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