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MORPHING RISKS TO AUSTRALIA'S GOODS TRADE WITH CHINA: THE US–CHINA ECONOMIC AND TRADE AGREEMENT AND DETERIORATING AUSTRALIA–CHINA RELATIONS

Abstract

In the past 12 months, Australia's trading interests in China have been threatened by two major challenges.

The first is the February 2020 US-China Economic and Trade Agreement, which commits China to expand its purchases of US goods and services by US$200 billion over 2020 and 2021 and potentially beyond. This has possible implications for around one-third of China's merchandise imports from Australia (or two-thirds of imports other than iron ore). The second challenge is the widely publicised deterioration of Australia's bilateral relationship with China, which has already affected exports of a number of products.

This paper examines both challenges and looks in some detail at the risks to Australia's trade for a wide range of commodities. It also reviews the way in which the Biden Administration is likely to carry forward the US-China relationship and considers policy implications for Australia, including strategies for engaging with the United States and China.

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EXECUTIVE SUMMARY

At the start of 2020, the **US-China Economic and Trade Agreement (the Phase One Agreement or Agreement)** captured the attention of Australian policy makers and business. China had agreed to substantially increase goods imports from the United States in 2020 and 2021 and to accept certain US standards and conformity assessment procedures to assist US companies to access Chinese agricultural markets. The Agreement covered commodities representing about one-third of China's merchandise imports from Australia or around two-thirds excluding iron ore – perhaps the only secure component of our goods export trade with China over the next 5-10 years.

From the middle of the year, Australia's attention switched as an essentially US-China crisis, from an Australian perspective, morphed into a more immediate and influential **Australia-China crisis** that engulfed crucial Australian trade interests. Political tensions led quickly to coercive actions and threats against Australia's trade interests in the Chinese market.

This paper reviews the content of the Agreement, risks to Australian commodity exports to China from the Agreement and deteriorating Australia-China relations, and policies and strategies for engaging with the United States on the Agreement and US-China relations.

There is a real prospect that the trade distorting impacts of the Agreement will continue over time should China's purchasing commitments be rolled over or broadened into a Phase Two Agreement. For the Biden Administration, the Agreement is already delivering trade benefits for the United States and has strong political support. For China, it is a price that continues to be worth paying to maintain a strong presence in the US market. And for both countries it probably draws a line under the destabilising tariff increases of the recent past. Evolution into a Phase Two Agreement could be part of re-setting relations.

A broad range of commodity trades of high interest to Australia are at risk at least partly from the Agreement. They include liquefied natural gas (LNG) over time, and more immediate risks to crude oil, some oil products, beef, dairy, wheat, cotton, tree nuts, and some iron and steel products. Chinese import demand for them is growing quickly, and the United States has a demonstrated capacity to ramp up production quickly.

While far from achieving the targets set out in the Phase One Agreement, the United States made sizeable inroads into the Chinese goods market during 2020. For example:

- The United States took 6.5 per cent of China's crude oil imports over August-November 2020 compared with 1.6 per cent in the same period in 2019. Given the massive volumes traded, this surge probably represented China's easiest option to inch towards Phase One energy targets.
- After a lengthy hiatus, China started buying US LNG in April and May 2020. US exports were recorded by Chinese Customs in every month from April to November 2020 with the United States taking 3.3 per cent of the import market over the 11 months to November. Imports surged in October and November.
- The US share of China's fresh or chilled beef imports increased from around three per cent in March-May 2020 to 19 per cent by August-November.
- US wheat sales to China soared. China is on track to import more US wheat in the 2020-21 marketing year than in any year during the previous five.
- China once again is the top US export market for cotton and US cotton the primary source of China's imported cotton. The US share of China's import market rose to 47 per cent in the first 11 months of 2020 compared with 20 per cent for the whole of 2019.

The extent to which rapidly growing US-China trade is displacing Australia-China trade is difficult to judge precisely because it merges with our bilateral problems with China. But it was clear enough in commodities like cotton, chilled beef and wheat by the second half of 2020. There is no evidence to date that the Phase One Agreement has had any significant impact on Australia's dominant position in the Chinese LNG market, but it could be a game changer over time if US producers use the Agreement (or any successor) to insert US LNG more centrally into China's medium-to-long-term energy plans.

Any evolution of the Phase One Agreement or of negotiations for new US-China trade agreements will, understandably, promote US national interests and cannot be expected to do Australia any favours. This needs careful watching.

Deteriorating Australia-China relations are the primary risk for several major Australian commodity exports to China, including metallurgical and thermal coal, barley, sheep meat, vegetables, fruit, wine, rock lobsters, and wood products.

Chinese trade action against Australia is targeted at industries that are usually prominent suppliers. Australia, for example, supplied over half of China's coal imports in 2019, well over half of its barley imports over recent years, and overtook France as China's leading source of imported wine by value from 2019.

Targeting also seems to be directed at Australian industries like wine and lobsters that are increasing their shares of the import market. The impact of targeting, whether via formal regulatory processes or rumour or fuzzy communication of Chinese policy, can be immediate and brutal. For example, our share of rock lobster imports collapsed from 44 per cent in the 10 months to October 2020 to 1.5 per cent in November, while wine imports fell in December 2020 to their lowest monthly level in nearly two years.

In almost all cases, China's apparent aim in targeting specific industries is to damage Australian interests - and stir domestic criticism of the Australian Government's approach to China - at little or no cost to itself because it has access to alternative sources of supply. For example, Indonesia, Russia and Mongolia now supply a substantially increased share of China's thermal coal, and the Ukraine was the main beneficiary of Australia's misfortunes on barley, as was Vietnam in the case of rock lobsters.

Metallurgical coal and sheep meat are exceptions to this targeting strategy. China is building up trade in metallurgical coal with countries like Russia and Mongolia, but still needs to consider carefully the implications for its steel production and hard infrastructure programs of any lengthy ban on Australian metallurgical coal. And China does not have many options in diversifying imports of sheep meat. The possibility of substituting New Zealand for Australian product seems real enough at the margin. But beyond this, there is a dearth of alternative suppliers that could match the volumes and high animal health credentials of Australia.

Then there are **commodities** like greasy wool, iron ore, most other metal ores and concentrates, gold and copper **that are at no immediate risk either from the Phase One Agreement or deteriorating bilateral relations**. Most obviously this is because they are not covered by the Agreement: greasy wool is the exception but the United States has no comparative advantage in this commodity. It also is because, for the most part, China needs Australia in these trades just as much as Australia needs China:

- Australia's share of China's import market for greasy wool averaged around three-quarters in the 11 months to November 2020. China cannot disrupt the wool trade with Australia without undermining domestic and international supply chains that are critical for its wool textile industry.
- Over the medium term China is likely to import more iron ore from Brazil, and massive Chinese iron ore-related investments in physical and skill-related infrastructure in central Africa could unlock some of its potential. In the meantime China will continue to depend on Australia because it has no readily available alternative.
- To a lesser extent these assessments also apply to other metal ores and concentrates. In general, Australia is a major supplier and trade is increasing in response to strong Chinese import demand as China invests heavily in infrastructure. But Australia's share of import markets has generally declined somewhat since 2015 as new sources of supply have come on stream.

Twists and turns in the Australia-China relationship do not appear to have had any significant impact on Australia's trade in gold and copper, and the chances of this changing seem remote. The broadly based international markets for these metals would ensure that any trade lost with China would be made up quickly elsewhere. This fact alone should temper possible Chinese economic coercion.

So what concrete steps can the Australian Government take to protect Australia's trading interests? Australia will have an early, but transient, opportunity to engage the **Biden Administration**. Australia should deliver three clear messages.

First, Australian and US interests do not just line up on addressing China-related problems on protecting intellectual property and forced technology transfers. They also line up on China's coercive actions on trade to achieve political ends.

Second, Australia should be frank about keeping alliances and national security out of engagement on the open trading system, and upfront about not joining any US-led coalition that seeks to 'contain' China. Australia has a firm interest in working with China on an issue-by-issue basis within broad-based groups that hopefully include the United States and China.

And third, the Biden Administration's forthcoming review of the Phase One Agreement will be an opportunity for Australia to outline our major concerns about the minimum import commitments in the Agreement for 2021 and the possibility that they might be extended. Ideally the commitments should be scrapped immediately because they distort trade, but the bottom line is that they should not be allowed to distort trade beyond the end of 2021.

Australia also needs to clarify if, and under what circumstances, the Biden Administration might consider negotiating a Phase Two Agreement. Australia, along with other countries, could benefit from steps over time to improve access for Chinese goods and services to the US market in return for broad-based Chinese reforms in areas like industrial subsidies, state enterprises and protecting intellectual property. But we would not stand to benefit from a bargain that prolonged and increased China's minimum import commitments to purchase US goods.

In relation to China, **the immediate imperative for Australian trade and foreign policy is to stop the selective targeting of Australian energy and agricultural commodities**. That must involve stabilising and then improving relations. Four ideas are advanced.

First, Australia should continue to push for moderation and good sense. The Australian Government has been very clear that it wants to restore relations.

Second, Australia should continue to be positive about the Australia-China relationship and on how we would like the trade and broader relationship with China to develop over the next decade or more.

Third, Australia is not on its own in dealing with the consequences of a rising and far more powerful China. As a mid-sized economy, advancing many of our national trade interests must depend on working effectively with partners bilaterally, regionally, and globally, who may or may not share our values but who face similar challenges.

Finally, advancing Australia's trade and wider interests ultimately comes down to having the clarity to assess Australia's national interest in a multipolar world. This requires a lot of smart thinking: the ideas and energy of our public service and universities are national assets that must not be squandered.

INTRODUCTION

At the start of 2020, the US-China Economic and Trade Agreement (hereafter the Phase One Agreement or Agreement) came both as a relief to the Australian Government and to many Australian exporters to China, as well as a cause for some apprehension. It was a relief because it carried the hope of stabilising US-China relations and stopping the bizarre dance of rounds of tariff increases interspersed by posturing and threats, talks or proposals for talks, truces, and escalation beyond tariffs into trade and investment in key technology sectors and areas like currency manipulation.

It was a source of apprehension because it raised some difficult questions about how the Agreement might impact on Australia's major goods trades with China. Could it lead to significant trade diversion if China met its ambitious minimum import commitments to the United States? What was the capacity of the United States to supply more energy and agricultural commodities to China? Could the Agreement lead to the United States diverting product from its domestic market or from third country markets to China, thereby creating gaps in the market for Australian suppliers? And could the Agreement limit opportunities for growth in trade with China in areas where Australia was competitive internationally but where we had not yet established much of a foothold in the Chinese market? The answers to these and other questions were not readily available, but international evidence strongly suggested that the Agreement had powerful trade diversionary potential, particularly for agriculture (Freund et al. 2020; World Bank 2020).

By mid-2020, discussion on these sorts of issues was overtaken, in the case of Australia, by a more immediate and influential threat to our trade with China as an essentially US-China crisis morphed into an Australia-China crisis. Australia-China relations peaked in 2014-15 when China's President Xi Jinping visited Australia and the China-Australia Free Trade Agreement (ChAFTA) was signed and entered into force.[1] But strains soon

1. In November 2014, President Xi Jinping addressed the Australian Parliament. He and Australia's Prime Minister, Tony Abbott, agreed to characterise the bilateral relationship as a Comprehensive Strategic Partnership. In mid-2015, ChAFTA was signed and entered-into-force at the end of that year.

emerged over a range of international issues and claims of Chinese interference in Australian domestic politics. They then deteriorated quickly after Australia became the first country to ban Huawei from all parts of our 5G telecommunications network (August 2018) and Australia's diplomatically ill-prepared proposal for an international inquiry into the origins of COVID-19 (April 2020). The erosion of trust and good will in bilateral relations was displayed starkly in the Chinese Embassy's '14 point charge sheet' of grievances about Australian policies and actions (November 2020).

Following a recipe developed by China over the previous decade in disputes with Norway, Canada, Japan, South Korea, and the Philippines, among others, political tensions quickly led to coercive actions and threats against Australia's trade interests in the Chinese market. While Australia refutes these claims, some can be pursued through international legal processes as in the case of rebutting punitive duties imposed on Australian barley and wine. Others are vague, such as biosecurity concerns on commodities like wheat, rock lobsters and wood products. And yet others are kept deliberately murky as China relies on the rumour mill to damage trade by spreading concerns over bans or impending bans on commodities like coal, cotton and lamb. But whatever their form, these actions and threats have damaged, and continue to damage, roughly half of Australia's major exports to China.

The impact of the Phase One Agreement on Australian commodity exports to China has to be seen in the context of the biggest setback in Australia-China relations in decades and how this setback has released influences on trade which, in many cases, are far more powerful than those released by the Agreement. The aim of this paper is to assess where the Agreement continues to have a significant impact on Australia's goods exports to China and why; how it interacts with influences released by deteriorating bilateral relations; and where the Agreement has little or no impact on Australia's trade.

The starting proposition is that, notwithstanding obvious uncertainty in the US-China relationship, the Biden Administration is likely to retain the Agreement and may want to extend it over time. This is because it is delivering trade benefits for the United States. US business wants a sound framework for continued trade and investment with China: by and large US business did not heed the Trump Administration's call to bring back their operations to the United States. And China is managing its purchases from the United States in a measured way to neutralise criticism about not honouring commitments.

The Agreement also is likely to survive the twists and turns of China's domestic politics. China's unequal treatment under the Agreement must rankle in some quarters but, overall, it is probably seen as a price that continues to be worth paying to maintain a strong presence in the US market: China is playing a long game. Some Chinese officials also might see increasing US dependency in some areas of the Chinese market as a bankable asset that could increase Chinese leverage in future trade negotiations or in negotiations beyond trade.

Both countries probably see the Agreement drawing a line under the destabilising tariff increases of the recent past, and may see its possible evolution into a Phase Two Agreement as part of re-setting relations. What this might mean precisely is far from clear. It certainly does not mean going back to relations pre-Trump, but it could mean dealing with a practical and reasonably defined agenda for both bilateral US-China and wider relations.

The sustainability of the Agreement has important ongoing implications for Australia. It covers about one-third of China's merchandise imports from Australia. Excluding iron ore as perhaps the only component of our goods export trade with China that seems secure over the next 5-10 years, the share of our non-iron ore trade that could be subject to trade distortion over time from the Agreement – or a successor – rises to about two-thirds. The potential for more managed trade between the United States and China creates more space for discretionary action by Chinese officials and agencies that might add to access problems faced by Australian business. China's substantial and unusually fast progress in accepting US standards and conformity assessment procedures for a broad range of agricultural products puts Australia at a significant disadvantage in the world's largest agricultural import market unless the Australian Government can negotiate similar access arrangements.[2] And, of course, these challenges are greatly magnified by collateral damage from deep problems in the Australia-China relationship.

The paper is structured as follows. The first part is divided into four sections. It looks briefly at the content of the Agreement, key differences in Australian and US goods trade with China, and China's uneven, but in some ways credible, attempts to implement the Agreement's minimum import provisions. It also looks at commodities and products of great interest to Australia that are covered by the Agreement like liquefied natural gas (LNG,) coal, beef and oil/petroleum products, and commodities that are not covered, predominantly various metal ores and concentrates and some simply transformed metals.

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2. In a matter of weeks, China implemented 50 of the 57 agricultural regulatory commitments (e.g. recognising US food safety standards) that were subject to specific deadlines in the Agreement. The United States also went from having around 1500 facilities approved to export agricultural products to China prior to February 2020 to 4000 facilities as of October 2020 (Office of the USTR/Secretary for US Agriculture 2020).

Risks to Australian commodity exports to China arising from the Agreement and the bilateral relationship are considered from three perspectives:

- Commodity trades at risk both from the Agreement and deteriorating bilateral relations
- Commodity trades where the primary risk is from deteriorating bilateral relations
- Commodity trades at little immediate risk either from the Agreement or deteriorating relations

Some policy implications are considered in the final part. They cover policies and strategies for engaging the United States on the Agreement and US-China relations, including on reconciliation of Australian and US interests on not misusing trade to achieve political ends, and on being frank that Australia will join international groupings that seek to engage with China but will not join coalitions that seek to contain it. There also is a brief discussion on approaches to engaging China.[3]

PART 1: PHASE ONE OF THE US-CHINA ECONOMIC AND TRADE AGREEMENT: OVERVIEW

1. The Phase One Agreement is a significant move into managed trade

The United States is no stranger to managed trade with a long history of negotiating market sharing arrangements (e.g. on semi-conductors and passenger motor vehicles with Japan) and using tariffs and dumping duties on a variety of products from a long list of countries to limit import competition. But that fact notwithstanding, the Agreement is unlike almost all international trade agreements negotiated over the past two decades by the United States.[4] Apart from not covering substantially all trade or having provisions to reduce or eliminate tariffs,[5] the Agreement ignores the principle underlying modern agreements that they create opportunities for business rather than mandating specific trade outcomes. The principal purpose of the Agreement is to improve US preferential access to the Chinese market in selected sectors.

Other features of the Agreement are:

- It includes issues like trade secrets, macroeconomic policy and exchange rates – which are new or mostly new to US trade agreements - but is much narrower in scope on traditional trade priority issues than in other trade agreements signed by the United States in recent years. Examples are protecting intellectual property and financial services, though there is a separate chapter on the latter. The original intention was to take forward these types of issues in Phase Two negotiations.
- It does not address other problems cited by the United States like cyber theft, China's industrial subsidies and other policies supporting China's growing technological sophistication. These again were supposed to be dealt with in Phase Two negotiations.
- It does not have an independent mechanism to resolve disputes. US political authorities assess China's conformity with commitments and can impose penalties for apparent non-conformity. China then has the option of either accepting US verdicts or withdrawing from the Agreement

China has entered into two types of commitments. The first set involves China accepting certain US standards and conformity assessment procedures. The agricultural chapter is by far the most detailed and sets up an institutional structure to assist US companies' access the Chinese market across dairy, infant formula, poultry, beef, live breeding cattle, pork, processed meat, electronic certification for meat and poultry, seafood, rice, plant health, feed grain, pet food, and agricultural biotechnology. The Agreement also is very detailed on the timeframes for China to approve licensing arrangements for US companies across the breadth of financial services. (Agriculture and financial services are the only industries/sectors with separate chapters in the Agreement, which suggests their importance to the United States.) There are generally no comparable obligations covering issues like standards and approvals placed on the United States with respect to Chinese products and services. The United States confirmed status quo treatment to China: China accepted a higher set of obligations perhaps because, in late 2019, it was seeking an instrument that might pause, for a time, rapid deterioration in the US-China relationship. That pause of course did not happen.

3. This is taken up in more detail in a forthcoming IIT policy brief.

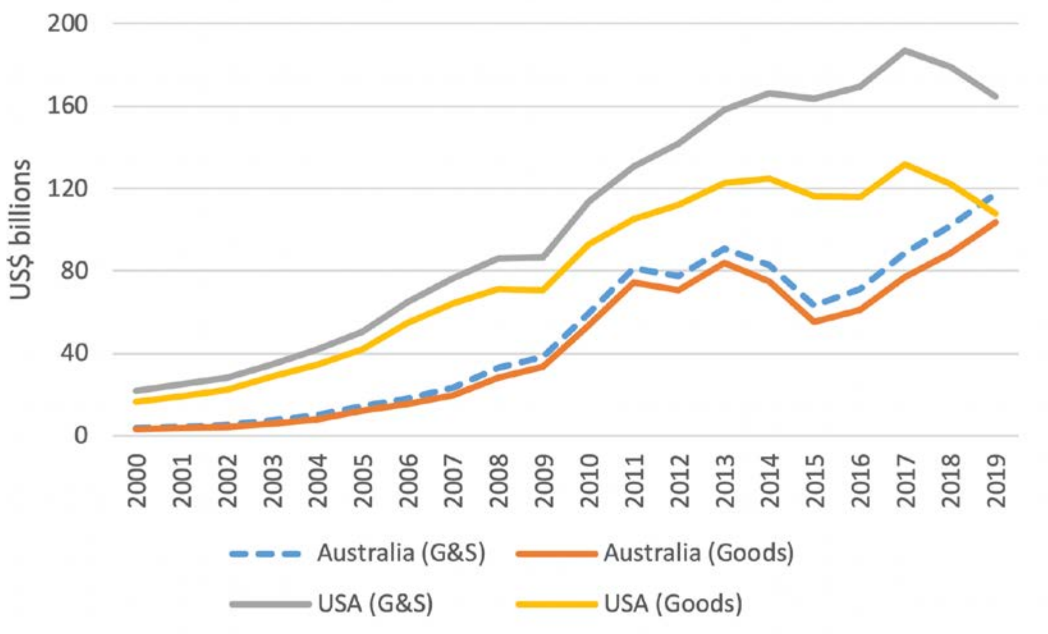
4. Phase One of the US-Japan Trade Agreement (signed in September 2019) comes closest to the US-China Economic and Trade Agreement in the sense of being very narrowly focused on a sub-set of trade but differs insofar as it provides some apparent reciprocal benefits.

5. The legal text does not even mention tariffs except in the context of agricultural tariff rate quotas. This leaves average tariff levels on both sides at around 20 per cent. Prior to escalating US-China trade tensions, the average US tariff on Chinese imports was 3.8 per cent and on US exports eight per cent (Freund et al. 2020, p. 2).

The second (and headline) set of commitments are one-sided undertakings on the part of China to substantially increase imports from the United States to achieve defined targets. These import expansions amount to US$200 billion above 2017 levels over 2020 and 2021. The 2020 target was for additional sales of goods and services of US$76.7 billion, of which US$63.9 billion was for goods (made up of US$32.9 billion of manufactures, US$12.5 billion for agricultural goods, and US$18.5 billion for energy) and US$12.8 billion was for services. For 2021, the target was for additional goods and services exports of US$123.3 billion, of which US$98.2 billion was for goods and US$25.1 was for services. Importantly, the baseline for measuring additional exports - 2017 – was the year of peak US exports to China prior to escalating trade tensions.

Had the trade expansion targets for 2020 been achieved in full, the United States would have achieved sales of goods for those covered by the Agreement of around US$159 billion, based on its own export data. This compares with US exports of goods to China in 2017 covered by the Agreement estimated at US$95 billion. As Section 3 (and especially Figure 3) indicates, China has been lagging well behind the level required to achieve this target. The target for 2021 is for goods exports covered by the Agreement to reach around US$193 billion, again based on US export data. There is the potential for yet larger increases over the medium term because the Agreement makes provision, though this is not elaborated, for the trajectory of increases in manufactures, agriculture, energy, and services purchased and imported into China from the United States to continue in calendar years 2022 through 2025.[6]

FIGURE 1: EXPORTS OF GOODS AND SERVICES TO CHINA



Source: Australian Department of Foreign Affairs and Trade (DFAT), US Bureau of Economic Analysis. Exchange rates used are period averages from Westpac.

Note: Australian data are on a recorded trade basis for goods and a balance of payments basis for services.

Increases of this magnitude over the short or medium terms could only be achieved if the Chinese Government directs state enterprises responsible for sourcing imported products and services to purchase from the United States rather than from other suppliers.

2. Similarities in US and Australian trade with China hide fundamental differences in goods trade

The Agreement's product coverage accounts for around 70 per cent of US merchandise imported by China in the peak year of 2017 but around one-third of merchandise imports from Australia (or around two-thirds of China's non-iron ore imports).

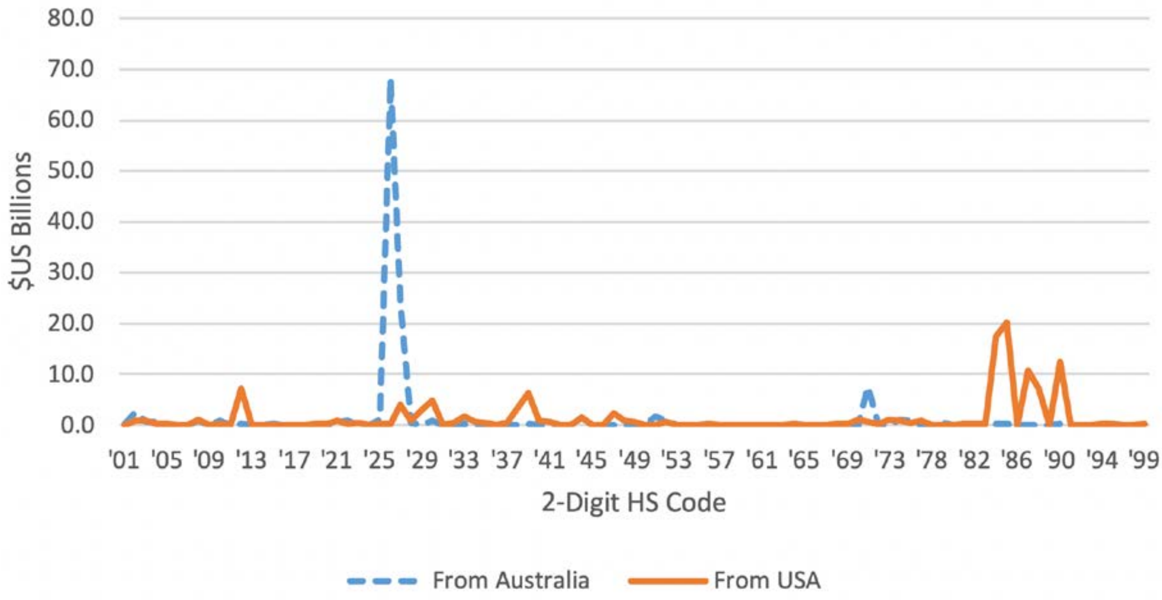
China's merchandise imports from Australia and the United States were approximately the same value in 2019 at US$120 billion and U$123 billion respectively (Figure 1). But their composition was quite different. The Finger-Kreinin index, widely used to compare the similarity of merchandise trade flows and running from 0 (completely dissimilar) to 100 (identical in composition), was only 7.36 for China's 2019 goods imports from the two countries. If iron ore is excluded, the index rises to 11.46.[7]

6. These medium-term targets would be negotiated as a follow-up Phase Two Agreement. President Trump announced in mid-July 2020 that Phase Two negotiations were not a priority for his Administration. The Biden Administration is considering its options.

7. The index has been calculated here from 4-digit HS imports using data from the ITC Trade Map Database. It is obtained by summing, for each item of merchandise trade, the minimum of Aust(i) and US(i), where Aust(i) is the percentage share of commodity i in Chinese imports from Australia (excluding unclassified commodities under Heading 9999) and US(i) is the corresponding figure for the United States.

Figure 2 illustrates the differences by showing, at the broad 2-digit level, a breakdown of 2019 merchandise imports by China from each country using the Harmonized System (HS) codes employed to classify merchandise trade. China's imports from Australia are focused on two HS items, HS26 (essentially metal ores, mainly iron ore) and HS27 (mineral fuels, mainly LNG and coal). The United States has a more modest presence in these two codes, mainly in mineral fuels (largely crude oil, though trade fell dramatically in 2019). Other mineral or metal items where Australia has a significant presence include gold (within the broader HS71 category), a variety of minerals within HS25, and copper and nickel (HS74 and 75 respectively). Imports from the United States are typically much smaller than those from Australia in these items (though this is not the case for copper): in fact the United States hardly registers as a source of metal ores and concentrates (apart from lead-related) and its significant trade in gold collapsed in 2019.

FIGURE 2: CHINA: GOODS IMPORTS FROM AUSTRALIA AND THE US: 2019



Source: ITC Trade Map Database

In the case of agriculture (which is principally, but not exclusively, found in HS01 through to HS24), both Australia and the United States have a significant presence. There are important differences, but also some similarities. China's imports from Australia include meat (HS02), wool (HS51), wood (HS44), beverages (HS22), cotton (HS52) and cereals (HS10). Oilseeds, in practice almost entirely soybeans in HS12, are China's biggest agricultural import. This trade (which largely does not compete directly with Australian products) was a high profile casualty of US-China trade tensions, along with corn. Both are being revived by the Agreement. Record US sales of soybeans and soymeal, for example, were achieved during 2020 even though Chinese demand declined after African swine flu eliminated more than a third of China's pig herd – the principal consumers of soybean products. And soybean sales for the 2021 season were reported to be off to the strongest start in history (Office of the USTR/Secretary for US Agriculture 2020, p.6).

More important from an Australian perspective, the United States supplies China with products that figure significantly in imports from Australia such as meat, dairy, fruit, tree nuts, fish, some cereals, and wine. In the case of fresh and chilled beef (HS0201), the United States has markedly increased its market share as Chinese beef consumption rose in response to the impact of swine flu on pork supplies. Wheat and cotton are other examples of a much increased US market share.

Manufactures of various kinds are the biggest goods export from the United States spanning the bulk (but not all) of products in HS28 through HS97. Big items for the United States include:

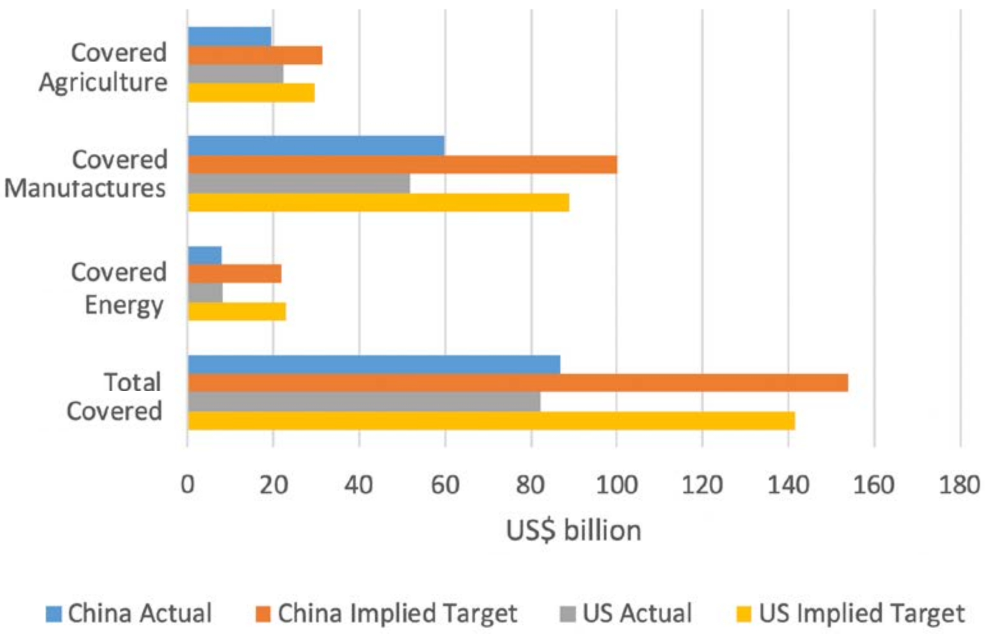
- Electrical equipment (HS85), where the principal item is electronic integrated circuits
- Machinery (HS84), with the largest item being turbojets and related products
- Optical equipment and measuring instruments (HS90), where the biggest item is instruments and appliances used in medicine, dentistry and so on
- Vehicles (HS87), dominated by passenger vehicles

Other large items are aircraft (HS88), plastics (HS39), pharmaceutical products (HS30), and various chemical products in HS29 and HS38. Australia's presence in this part of the HS spectrum is limited and mainly comprises items closely related to agricultural products or to minerals in the areas already noted. But there are some partial overlaps with the United States on manufactures (for example, pharmaceutical products).

3. The product coverage of the Agreement includes a wide range of products that are of strong interest to Australia: what is at risk?

China's performance in meeting its commitments under the Agreement in 2020 was highly variable but, overall, fell well short of import targets. Work by the Peterson Institute for International Economics shows that China's imports of covered goods through to November 2020 were only about 56 per cent of what would be required by adding up the implied monthly targets derived from China's annual commitment for additional purchases and the level of trade in the base year (2017), after seasonal adjustments. When US exports of covered goods are used as a measure (which is equally valid under the Agreement), the result is much the same. Figure 3 shows China's performance for the three broad sectors of merchandise trade, as well as for all merchandise trade covered by the Agreement. The Peterson Institute has not calculated similar ratios for services trade, where monthly data are unavailable.

FIGURE 3: ACTUAL US-CHINA GOODS TRADE THROUGH NOVEMBER 2020 AGAINST PRO RATA 2020 TARGET



Source: Data and methodology from the Peterson Institute for International Economics. See Bown (2021).

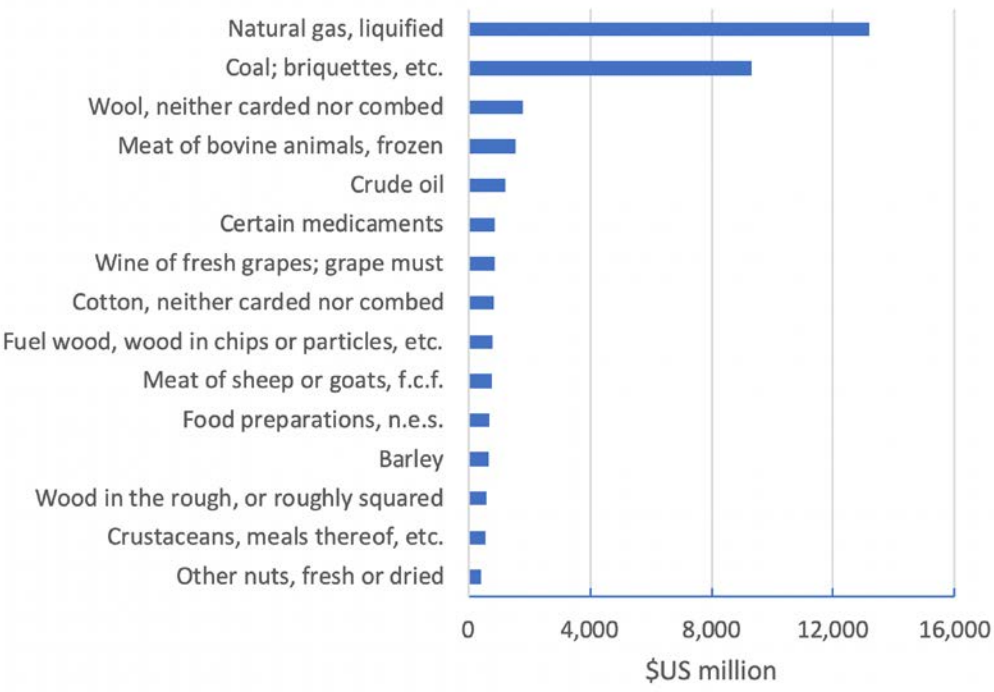
Note: 'China Actual' gives China's merchandise imports from the US for January to November 2020 covered by the Agreement, while 'US Actual' gives covered US merchandise exports to China for the same period. The implied targets are the values for Chinese merchandise imports from the US and US merchandise exports to China through to November implied by the 2020 target under the Phase One Agreement. That is, they are the 2017 level of trade covered by the Agreement (given that 2017 is the base year) plus the additional trade commitments for 2020, converted to cumulative monthly targets after seasonal adjustments.

Australia's interests in the covered items are mainly focused on a narrower range of goods. Figure 4 shows the top 15 Chinese merchandise imports from Australia that are covered by the Agreement. Goods imports are dominated by LNG and coal, although wool, beef, crude oil, medicaments and a range of agricultural products and processed foods are also important. In all, Australian products directly affected by the Agreement constituted about a third of China's imports from Australia in 2019.

The risk to Australian goods exports impacted by the Agreement can be explored in various ways. The best is to examine supply, demand and competitiveness for each major commodity in the Chinese and global markets, as well as the specific interests that might be affected for China under import expansion. This is taken up in Part 2.

At a much broader level, it is possible to draw some tentative conclusions by examining the US share of China's import market for each of the principal commodities and comparing it with Australia's share. The intuition behind this approach is that the United States is more likely to present a greater risk to Australia if its share of the Chinese market is comparable to, or larger than, Australia's, since this suggests that it is already competitive in the market.

FIGURE 4: CHINA'S 2019 IMPORTS FROM AUSTRALIA OF KEY PRODUCTS COVERED BY THE PHASE ONE AGREEMENT



Source: ITC Trade Map Database.

Note: Products affected by the agreement are ranked in order of the 2019 value of imports from Australia. n.e.s. means not elsewhere specified, and f.c.f. means fresh, chilled or frozen.

Figure 5 presents the results of this exercise for the top 15 goods of interest to Australia. The US share is well below Australia's for the majority of the 15, including the biggest four for Australia (LNG, coal, wool, and beef). However, the US share exceeds or is comparable to Australia's for some significant products, among them certain medicaments, cotton, wood in the rough, and other nuts not elsewhere specified.[8]

Another observation is that the US share of China's import market declined over 2017-19 for many of the products in the chart. Notably the US share of the cotton import market dropped from 45 to around 20 per cent and for crustaceans from 12 to two per cent. Australia's share remained relatively steady for most of the 15 commodities, but rose appreciably for LNG, wine and 'other nuts, fresh or dried', while falling for barley. To varying degrees, substitution within each of these product groupings allowed Australia in some cases to increase exports sharply to China in 2018 and 2019, taking advantage of falling US exports associated with rising US-China trade tensions. An obvious question is whether that advantage is likely to disappear with the Phase One Agreement and deteriorating Australia-China relations.

Another broad approach is to look at the US role in global trade and changes over time for each of the commodities of special interest to Australia. Figure 6 does this by looking at an index of revealed comparative advantage of the United States for the 15 commodities for 2010, 2015 and 2019. The revealed comparative advantage index can be thought of as a measure of US global specialisation on each product relative to that for the world as a group. A result that is above one indicates a revealed comparative advantage in the commodity, while a result which is rising indicates greater specialisation on the commodity. Where these conditions hold, there may be a risk to Australian exports to China. The United States, for example, has a very strong revealed comparative advantage for cotton and for 'other nuts, fresh or dried', but also scores greater than one for frozen beef, various types of wood, and 'food preparations n.e.s.'

Finally, it is useful to examine monthly data on Australia's market share in China for the part of 2020 for which data are available (at the time of writing up to November 2020) against the background of the level of trade in 2019. Figures 7 and 8 do this for the top 15 commodities of interest to Australia that are covered by the Agreement. Examining the monthly data should point to areas of significant trade diversion to other countries including the United States, though it is often difficult to draw firm conclusions given that the series are highly volatile and that the Agreement did not enter into force until mid-February 2020 (though the principal commitments on goods relate to the calendar years 2020 and 2021).

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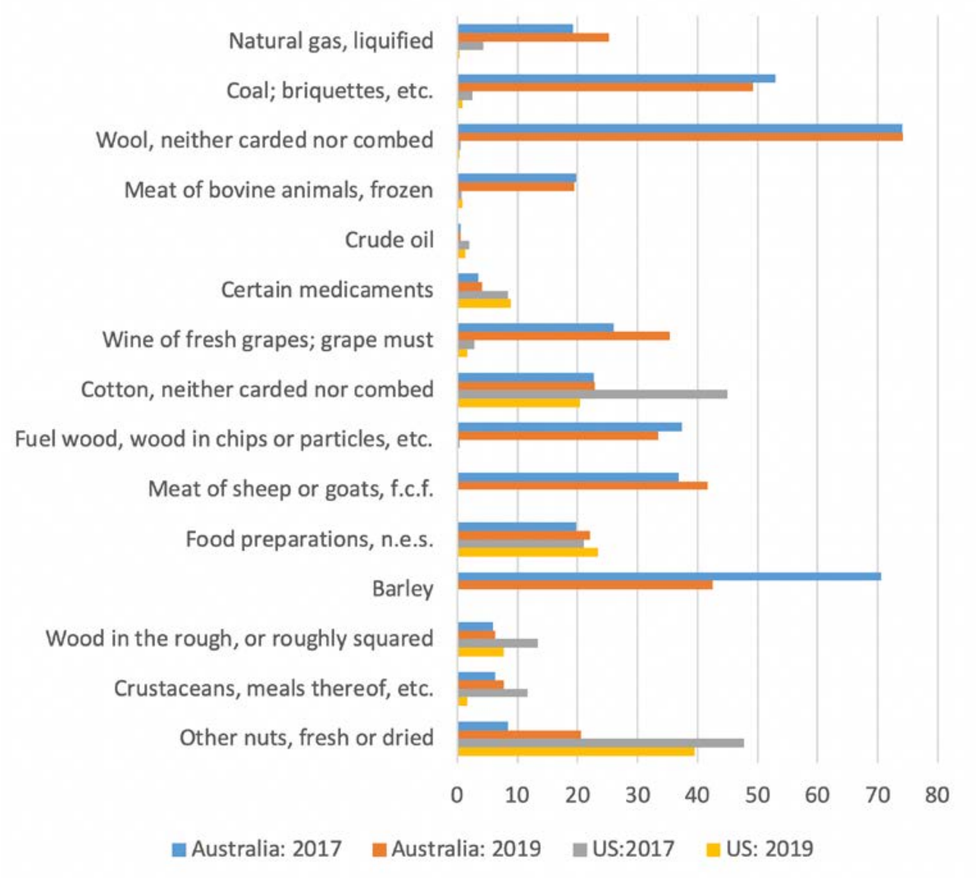
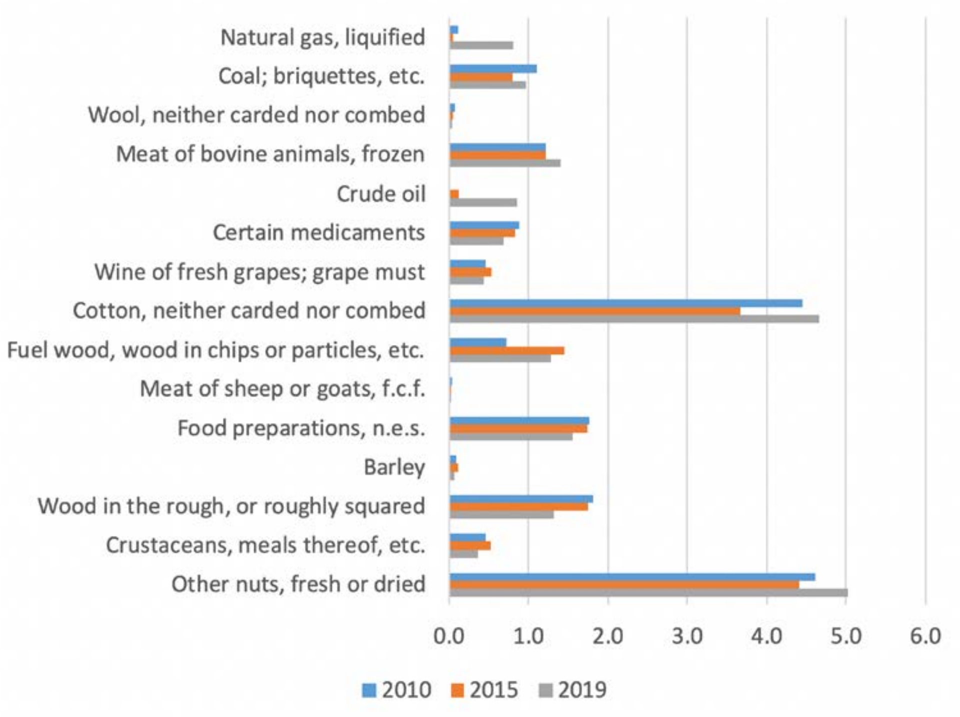
8. Wheat would typically be included among Australia's top 15 exports to China covered by the Phase One Agreement but it is not included in Figure 5. This is because Australian exports to China were badly impacted by drought in 2019, falling from nearly 2Mt in 2017 to below 0.2Mt in 2019.

FIGURE 5: SHARES OF CHINESE IMPORT MARKET, 2017 AND 2019, PER CENT



Source: ITC Trade Map Database.

FIGURE 6: REVEALED COMPARATIVE ADVANTAGE FOR THE UNITED STATES, 2010, 2015, 2019



Source: Authors' calculations from ITC Trade Map data.

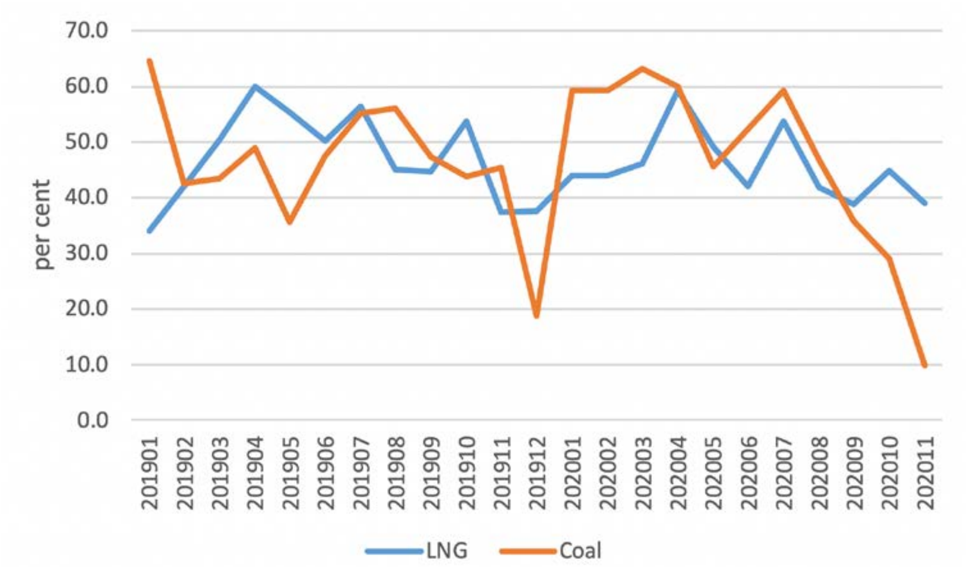
Note: The index of revealed comparative advantage for the United States measures its share of world merchandise exports in one of the given products, divided by the US share of all world merchandise exports. An index greater than one indicates a greater degree of US specialisation on the commodity than for the world as a group and is taken to indicate a revealed comparative advantage in that product.

Comparisons over time should be interpreted with caution in view of the possibility of changes affecting the coverage of the HS headings/codes. Data for world trade used to calculate the index often involve estimates from partner country data.

Figure 7 separates out the two biggest of the 15 from Australia's perspective - LNG and coal. It suggests that Australia's market share for LNG has fluctuated in roughly the same range in 2020 as it did before. But Australia's share of the import market for coal plummeted after July, falling from over 59 per cent then to under 10 per cent in November. There had also been an appreciable fall at the end of 2019, but the 2020 decline occurred earlier and was more pronounced. The background to this change is taken up in greater detail in the case study material on coal (see Section 6).

Figure 8 focuses on three more cases – wool, frozen beef and barley - where 2019 imports by China from Australia were substantial. For wool, there is no apparent trend towards decline in Australia's share of the import market, though the falling US dollar value of China's global imports of this commodity meant that the value imported from Australia did decline appreciably. With frozen beef and barley Australia's market share clearly trended downward over the course of 2020. The pattern of imports of barley shows a similar decline in 2019, but the primary reason for the downward trend in 2020 was the imposition of an 80.5 per cent tariff in May 2020 comprising both an anti-dumping and countervailing duty. Beef too was subject to action by the Chinese authorities, with imports banned from a number of abattoirs during 2020 on grounds ranging from labelling and health certification issues to the presence of COVID-19 among abattoir workers.

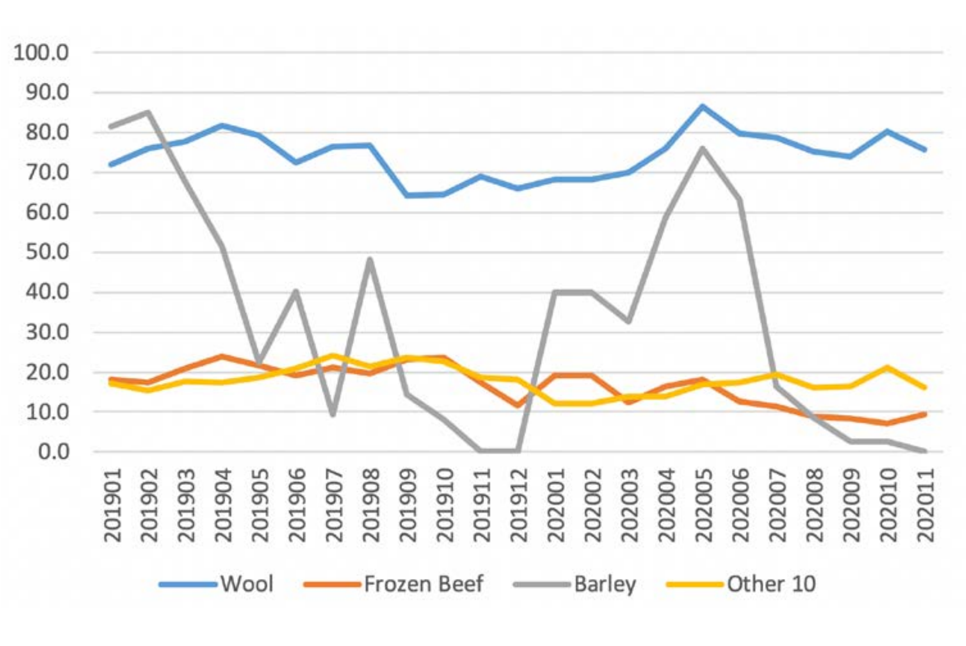
FIGURE 7: AUSTRALIA'S SHARE OF CHINA'S IMPORT MARKET FOR LNG AND COAL: MONTHLY DATA



Source: Chinese Customs (GACC) online data.

Note: Data for January and February 2020 are not reported separately by GACC, but totals for the two months are given. The above chart reports half of the two-month totals for January and half for February.

FIGURE 8: AUSTRALIA'S SHARE OF CHINA'S IMPORT MARKET FOR OTHER KEY PRODUCTS COVERED BY THE PHASE ONE AGREEMENT: MONTHLY DATA



Source: Chinese Customs (GACC) online data.

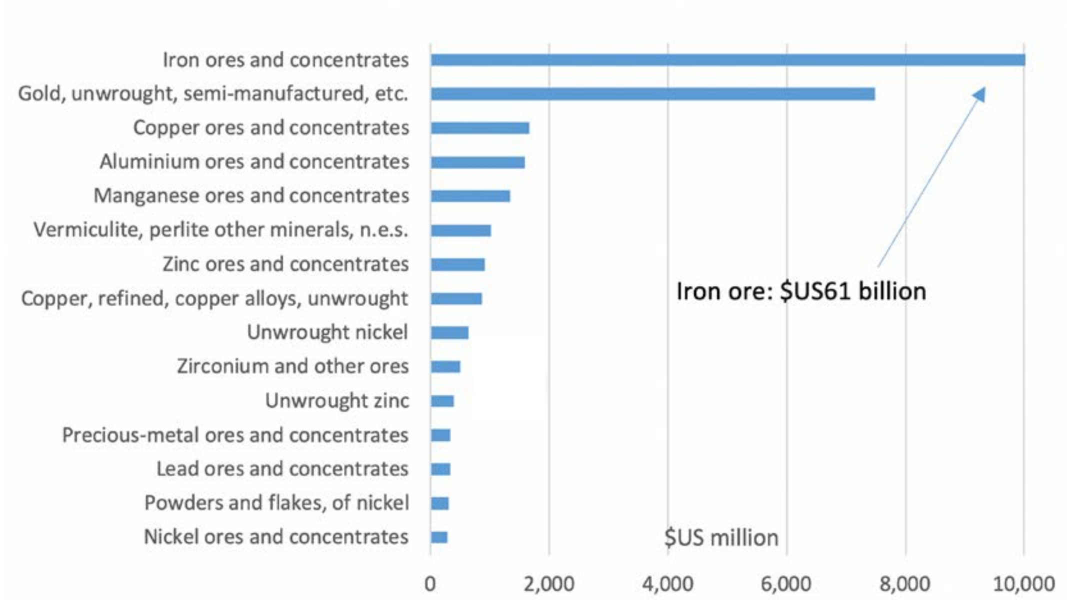
Note: Data for January and February 2020 are not reported separately by GACC, but totals for the two months are given. The above chart reports half of the two-month totals for January and half for February. The data for the 'other 10' is an unweighted average of the shares for the 10 commodities it covers (an unweighted average is chosen for reasons indicated in notes to the text).

Figure 8 also gives an unweighted average of Australia's market share for the residual category of 10 commodities.[9] It shows a decline of almost four percentage points comparing the simple average share for the first 11 months of 2020 with the corresponding figure for the 12 months of 2019.[10] The biggest factor in this decline – almost two percentage points – was due to Australia's loss of market share for cotton. Another big contribution was from fuel wood, wood chips and the like: this accounted for almost one percentage point of the decline. Sheep meat accounted for slightly under half of a percentage point. Smaller contributions to the decline were made by crustaceans, medicaments and tree nuts. Wine actually increased its average market share across the two periods, though it has now been hit by extremely high tariffs that will almost close the market to Australia.

4. Many of Australia's major exports to China are not included in the Agreement

In all, around 690 4-digit HS headings are not included among China's import expansion commitments. Importantly, merchandise imports under items not covered amounted to about two thirds of China's total merchandise imports from Australia in 2019. Figure 9 illustrates this by showing the top 15 items not included in the Agreement, ranked in terms of the 2019 value of China's imports from Australia. Most notably this includes iron ore, gold, and copper and aluminium ores and concentrates. The top 15 items shown in the Figure are all mineral ores or metals at an early stage of processing.

FIGURE 9: CHINESE 2019 IMPORTS FROM AUSTRALIA OF KEY PRODUCTS NOT COVERED BY PHASE ONE



Source: ITC Trade Map Database.

Note: Products not affected by the Phase One Agreement are ranked in order of the value of 2019 Chinese imports from Australia. n.e.s. means not elsewhere specified. The total for iron ore imports, at around US$61 billion, is not shown to scale.

United States exports to China are limited in most of these cases. Figure 10 compares the US shares of the Chinese import market with those of Australia for the 15 products. The United States barely registers for the majority. Exceptions for 2019 are lead ores and concentrates; zirconium and other ores; powders and flakes of nickel; and vermiculite, perlite and other minerals, not elsewhere specified (n.e.s.).[11] At a more disaggregated level, however, the last category has different areas of specialisation for the United States and Australia: for the United States, it represents almost entirely imports by China of rare earth metals, whereas for Australia it refers to imports by China of 'other mineral substances n.e.s.' Retaliatory Chinese tariffs on US commodities had little or no impact on these trades.[12] Our overall judgement for these 15 products is that China is very unlikely to purchase additional quantities of US commodities where its presence – and by implication its competitiveness - is extremely limited. In other words, any threat to Australia's interests in most of China's metal ores and metal markets is unlikely to come from the United States.[13]

9. The average formed by taking the value of imports from Australia for the 10 as a share of China's total imports of these commodities from all sources is not particularly informative. It is dominated by crude oil, where Australia's market share is very small and China's imports are very large. The analysis and chart therefore use an unweighted average of market shares for the 10 commodities.

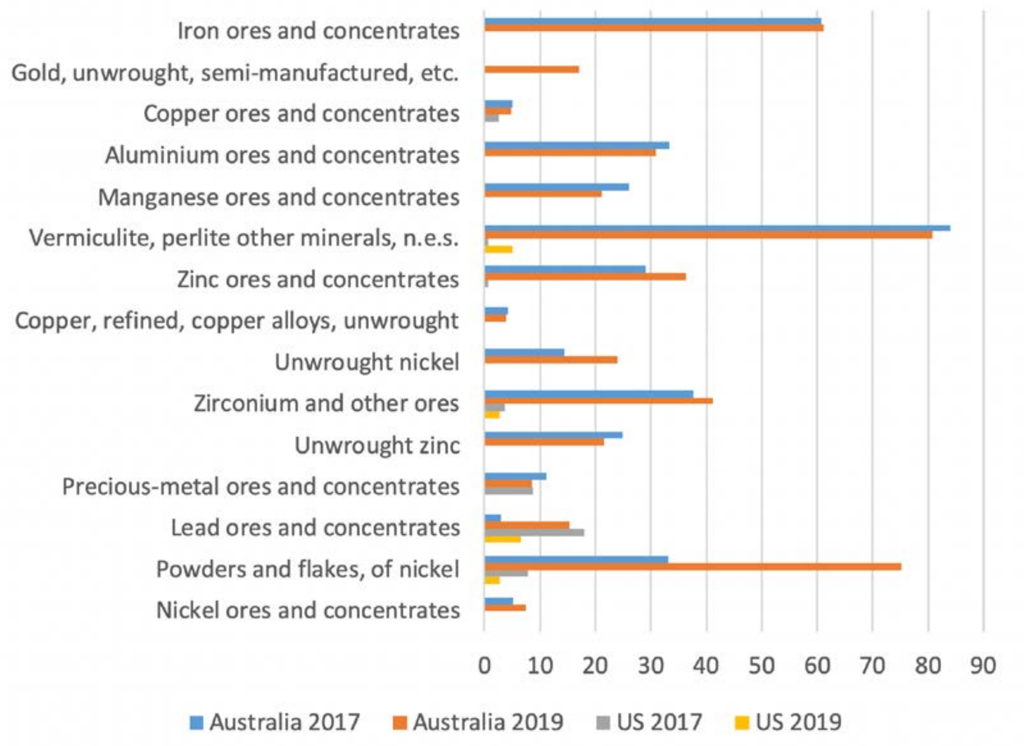
10. There is a slightly larger decline in market share when the August-November periods of 2019 and 2020 are compared.

11. Some of the 2019 shares differ markedly from those in 2017 for both Australia and the United States. With lead ores and concentrates, for example, Australia gained market share at the expense of the United States. This was also true of powders and flakes of nickel.

12. A 10 per cent tariff may have played a very small role in the slight loss of US market share for unwrought copper. A 10 per cent tariff also was imposed on hydrazine hydrate (included with zirconium and other ores in HS2615) but China did not import this product from the United States between 2017 and 2019.

13. The 2019 market share data on which this is based is not, of course, the end of the story. Commodity values can fluctuate appreciably from one year to the next and statistics from different sources may differ on the challenge presented by the United States. With gold, China's import data indicates very substantial (US$2.7 billion) imports from the United States in 2018, but trade dried up in 2019. Even so, our conclusion is that, on current evidence, Australia's gold will not be impacted by the Agreement (see Section 7 for a fuller discussion) even if it has been markedly affected in other ways.

FIGURE 10: SHARES OF CHINA'S IMPORT MARKET IN 2017 AND 2019, PER CENT



Source: ITC Trade Map Database

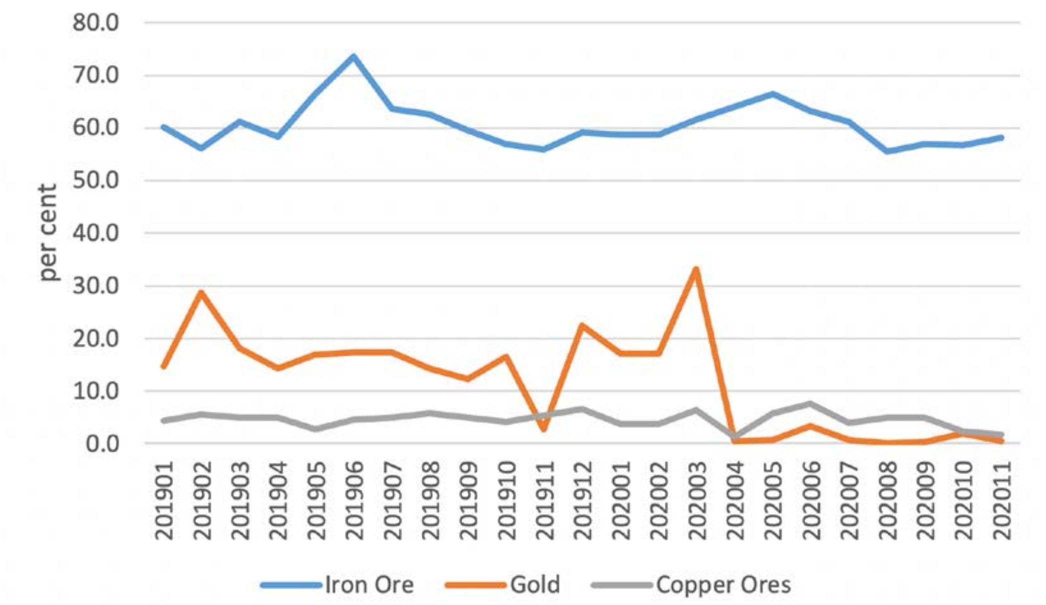
A further issue is whether China has targeted Australia's top 15 commodities not covered by the Phase One Agreement as relations deteriorated over the course of 2020, by diverting purchases to other countries, including those other than the United States. To explore this, Figures 11 and 12 look at Australia's share of China's import market for five commodities – iron ore and concentrates, gold, copper ores and concentrates, aluminium ores and concentrates, and manganese ores and concentrates. Figure 12 also shows an aggregate for the 10 residual commodities on the list of 15 of those of key interest to Australia. For gold, it is clear from Figure 11 that Australia's market share collapsed in April 2020, but for the other four major commodities and for the residual 10 commodities not covered by the Phase One Agreement, the change over time does not appear to be appreciable at first glance, at least when the volatility of each series is taken into account.

Closer analysis suggests a slightly different picture. For the majority of the 15 commodities there is a decline in Australia's market share when the simple monthly average for the first 11 months of 2020 is compared with the corresponding average over the whole of 2019.[14] The data show a bigger decline when the average for the four months August to November 2020 is compared with the same period in 2019. Over the two August-November periods, Australia's market share declined for 11 of the 15 commodities – for example by 1.9 percentage points (ppt) for iron ores and concentrates, 10.8 ppt for gold, 1.5 ppt for copper ores and concentrates, 6.8 ppt for aluminium ores and concentrates, 3.1 ppt for manganese ores and concentrates, 10.6 ppt for vermiculite, perlite and other minerals n.e.s., 9.7 ppt for zinc ores and concentrates, and 7.6 ppt for lead ores and concentrates. The share rose for only four commodities – notably unwrought nickel by 4.1 ppt and unwrought zinc by 2.3 ppt. Overall, the simple average of Australia's market share for the 15 commodities declined by 4.6 ppt between the two August-November periods.

Multiple factors drove this outcome: China's desire to reduce purchases from Australia may well have been one but this was not necessarily so for all commodities. To take one example, aluminium ores and concentrates, the fall in Australia's market share over the two August-November periods reflects a somewhat atypical pattern of supply in September, October and November of 2019. The US dollar value of China's imports declined appreciably in September and October. There was an even sharper fall in imports from Guinea, which had emerged as the dominant supplier by 2017. Its market share fell to a little over 30 per cent in September and October 2019 and to under 28 per cent in November. Australia's market share rose as high as 48.3 per cent in October 2019. 2020 also marked the continued return of Indonesia as a major supplier: China's imports from that country were appreciably greater in the first 11 months of 2020 than they had been for all of 2019.

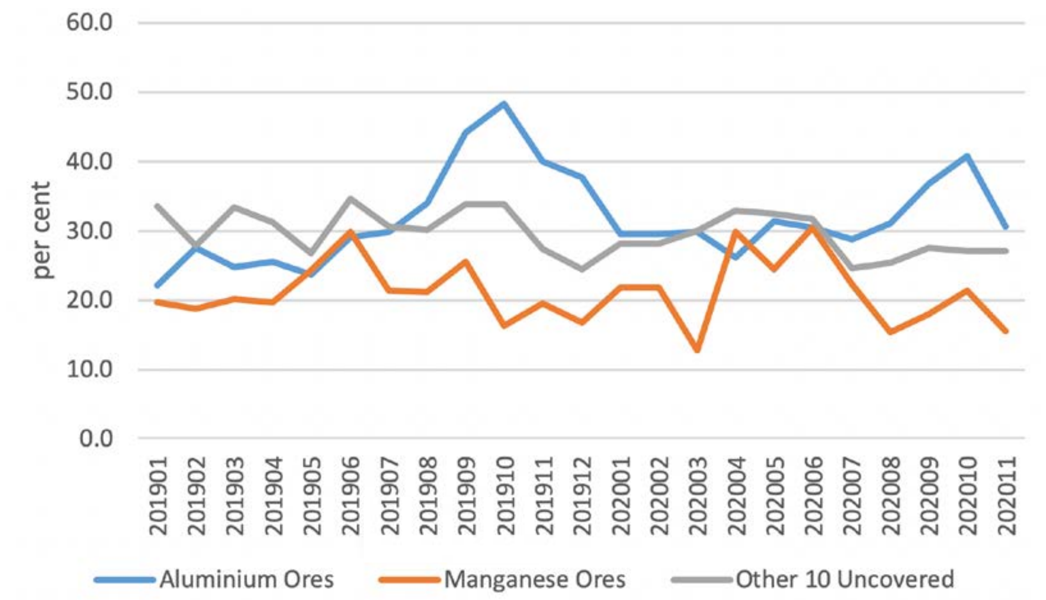
[14] As with part of Section 3, the averages in this paragraph are all simple averages of monthly data.

FIGURE 11: AUSTRALIA'S SHARE OF CHINA'S IMPORTS: SELECTED COMMODITIES



Source: Chinese Customs (GACC) online data.

FIGURE 12: AUSTRALIA'S SHARE OF CHINESE IMPORT MARKETS



Source: Chinese Customs (GACC) online data.

To take a second example, lead ores and concentrates, Australia had been an irregular supplier to the Chinese market for several years and it may not be surprising that its sales declined to low levels for March to August of 2020. Other big suppliers, Russia and Peru, increased their share of the market substantially between August to November 2019 and the same interval for 2020. They may have been assisted in this by the large depreciation of their currencies against the Australian dollar though 2019 and 2020. The rouble fluctuated but declined in these terms by over 20 per cent between early August 2019 and late November 2020, while Peru's Sol declined by around 14 per cent over the same period, again in terms of its Australian dollar value.[15] China's reluctance to source product from Australia cannot be ruled out as a contributing factor, but is unlikely given that Australia's exports picked up strongly in September 2020 and remained solid in October, before falling back again in November.

15. Empirical data on Armington elasticities of substitution between competing sources for imports of specific commodities are hard to come by, but those for minerals are thought to range from moderate to high. The most recent documentation for the GTAP model places this elasticity for 'minerals, not elsewhere classified' at 1.8 (for all importers, not just China). This means that changes in relative prices would have an appreciable impact on relative volumes supplied by different countries. See Hertel & van der Mensbrugghe 2019, Table 14.2.

PART 2. RISKS FOR AUSTRALIA IN THE CHINESE MARKET

5. Australian commodity trades that are at risk both from the Phase One Agreement and deteriorating bilateral relations with China

LNG: Australia is the dominant supplier of LNG (HS2711.11) to China: trade has grown quickly over time – import volumes rose by 35 per cent per year over 2015-19 and Australia accounted for 46 per cent of China's import market in 2019 with trade valued at US$13.1 billion. Roughly a couple of dozen countries export LNG to China. Of these, seven – Australia, Qatar, Malaysia, Indonesia, Papua New Guinea, Russia, and Nigeria – supplied over 90 per cent of China's imports in 2019. The United States was ranked 15th in that year (with a market share of about 0.4 per cent) down from 6th in 2018.[16]

Is it feasible that the United States could increase LNG exports substantially to China? The answer is an unambiguous yes. The United States accounted for about five per cent of the import market in 2017 and 2018 and supplied roughly ten times more LNG to China (measured by volume) in 2018 than in 2019. US exports slowed in 2018 after China imposed a 10 per cent tariff on LNG in September that year and came to a standstill once the tariff was raised to 25 per cent in June 2019 (EIA 2020a). After a lengthy hiatus, China started buying US LNG in April and May 2020: Chinese General Administration of Customs statistics record imports from the United States in every month from April to November 2020 with the United States taking 3.3 per cent of the import market over the 11 months to November. Industry data suggested a surge in imports from the United States in October and this has been borne out by the most recent Chinese Customs statistics, which show imports of US$89 million in that month and US$172 million in November, the latter being the biggest monthly import value from the United States in 2020 (McCormick & Brower 2020).

Given prevailing low prices, such purchases were a cheap way for China to build up reserves. But the main reason for the dramatic turnaround in US-China LNG trade was China's willingness to start granting exemptions on additional taxes on US LNG imports following signature of the Phase One Agreement.

On available evidence, these developments have had no significant impact on Australia's dominant position in the Chinese LNG market. Over 2019-20, Australian LNG shipments to China rose seven per cent to 29.3 million tonnes, well beyond long-term contract volumes of 19.1 million tonnes and only just short of shipments to Japan of 30.2 million tonnes (Smith & Macdonald-Smith 2020). And Australia has maintained its share of the import market

16. In 2019, Australia accounted for 45.7 per cent of China's LNG imports. Other principal suppliers in that year were Qatar (16.1 per cent), Malaysia (9.4 per cent), Indonesia (7.4 per cent), Papua New Guinea (5.4 per cent), Russia (3.9 per cent), Nigeria (3.1 per cent), Oman (1.9 per cent), Trinidad and Tobago (1.2 per cent), and Brunei (1.0 per cent) (ITC Trade Map Database).

at 46 per cent in the eleven months to November 2020 (General Administration of Chinese Customs database), or at almost exactly the same proportion as in 2019. Australia's share inevitably has fluctuated from month-to-month. Our share in August to November was under 41 per cent, but it would be premature to call a declining share for Australia.

The assessment that Australia's dominant position in the Chinese market seems secure for now is supported by market dynamics. China is increasing the share of natural gas in its overall energy mix as part of improving urban air quality and reducing greenhouse gas emissions. The gap between domestic production and consumption is widening, creating opportunities both for LNG and pipeline deliveries. And Australia has many advantages in the Chinese market. We have a good reputation for delivering on time and at competitive prices. The great bulk of Australia's LNG trade with China takes place through long-term contracts that run to around 2030, while most US trade takes place on the spot market. Furthermore, Chinese state enterprises like Sinopec and CNOOC have equity stakes in our LNG industry and therefore have an interest in its long-term success.

But all this needs careful monitoring, particularly from a medium-to-long-term perspective, because the Phase One Agreement could be a game changer:

- The United States, like several other countries, has made massive investments recently to expand natural gas production and LNG export capacity, has massive new capacity coming on stream in the near future, and is projected to account for the lion's share of global growth in LNG trade in the period to 2025 (IEA 2018, Ch 4; EIA 2020a,b). There are predictable uncertainties about the pace of growth in China's import demand. But we can expect that US producers will use the Agreement (or any successor) to insert US LNG more centrally into China's medium-to-long-term energy plans.
- There are signs that some US LNG exporters are moving to negotiate long-term agreements with Chinese buyers.[17]
- Rapidly growing supplies of US LNG coming onto Chinese and other regional markets could retard investment in Australian LNG.
- Tensions in the Australia-China relationship could discourage Chinese companies from signing long-term contracts to take product from new proposed projects around Australia.
- China is honouring long-term contracts with Australia but, at least in some cases, is taking the minimum 85 per cent under 'pay or take' provisions.[18] China is buying the rest on the spot market. This obviously is a commercial decision but problems in the bilateral relationship may play a part.
- If the United States, along with other suppliers like Russia, take a large slice of the Chinese market, it is not clear what will happen beyond 2030, when many of Australia's long-term supply contracts expire.

Crude oil: The gap between production and consumption of crude oil (HS2709) is large and increasing in China. Most crude production comes from legacy fields that require expensive oil recovery techniques to sustain production. Consumption of petroleum and other liquids continues to grow quickly – China accounted for around two-thirds of incremental global oil consumption in 2019 – and China is building up its Strategic Petroleum Reserves. To deal with demand pressures, China is accelerating its coal-to-liquids program, which now accounts for around one-fifth of total liquids production. It also is increasing oil imports. China became the world's largest crude oil buyer in 2017 (EIA 2020a).

Australia and the United States are minor suppliers of crude oil to China: the market is dominated by suppliers from the Middle East, Russia and some African countries. Australia's share peaked at one per cent in 2016 and was half of that by 2019. The US share rose over the same period from 0.1 per cent to 1.4 per cent on International Trade Centre data: China was the US's second largest export market for crude oil after Canada in 2017 and was the third largest on increased sales after Canada and South Korea in 2018. Trade, however, fell precipitously after October 2019 and the US market share halved following China's decision to impose a five per cent tariff on US crude oil in September of that year.

Just as quickly as the oil taps were turned down, they were turned back on again following entry into force of the Phase One Agreement. China's decision to reduce the tariff to 2.5 per cent in February 2020 and to then offer tax exemptions on US crude oil resulted in US crude starting to flow in very large quantities to China from May and June. In these months China became the largest destination for US crude oil exports.

This upsurge, and its continuation over the most recent months for which data are available, has benefited both the United States and China. For the United States, it has come at a critical time in supporting multi-decade low

17. Cheniere Energy, a US LNG producer and exporter, has recently signed a framework agreement with China's Foran Energy Group to sell 26 LNG cargoes between 2020 and 2025 (Paraskova 2020).

18. Information provided to the authors by the Department of Industry, Science, Resources and Energy.

oil prices. For China, it has helped to build up domestic reserves cheaply. It also probably represents, given the big volumes involved, the easiest option for China to inch towards the energy targets set out in the Phase One Agreement. Chinese Customs data show that the United States substantially increased its share of crude oil imports in the latter part of 2020: over August-November it took 6.5 per cent of the market compared with 1.6 per cent in the same period in 2019. Of the two big suppliers, Saudi Arabia experienced a slight decline in market share in the first 11 months of 2020 (15.7 per cent) compared with the corresponding period of 2019 (16.7 per cent). There was not much movement in the share held by Russia, the other big supplier.

Australia's share of the market has been small. While fluctuating, it remained at 0.4 per cent for January to July 2020. But Chinese Customs data record no imports from Australia for September through to November. This collapse in share is in one sense surprising. Australia supplies both ultra-light and heavy crude oils and would normally be expected to be shielded to some extent from volatility in Chinese and other Asian markets. The United States supplies mostly light 'sweet' (low sulphur) crude.

Barring geopolitical convulsions, the supply and demand forces that propelled rapid growth in China's total oil imports over the last decade or more should continue to operate at least for the next several years. This should lead to significant growth in crude oil imports, particularly given the expectation that Chinese production will continue to decline.

The United States has a proven capacity to increase crude oil exports quickly. US crude oil production has risen steeply and production is expected to grow over the medium term with the United States leading the way as the largest global source of new supply (IEA 2018: 2020).

This potential should put the United States in a strong position in the Chinese market with two caveats: first China will continue to diversify its sources of supply to increase energy security; and second China requires mainly medium and heavy grades oil while the United States produces mainly lighter grades. Australia's capacity to produce a range of crude oil means that it should be able to supply the Chinese market. If this last assessment is correct, a key risk to Australia's future trade is likely to come from political volatility in the bilateral relationship, but competition from the United States will still need to be watched closely.

Oil products: Rapid development of China's petrochemical industries is pushing up demand for oil products like liquefied petroleum gases (LPG). To deal with demand pressures, China is rapidly expanding its capacity to produce oil products and is increasing imports.

Australia and the United States compete in some Chinese oil product markets such as propane and butane. The value of imported Australian propane, for example, increased ten-fold between 2015 and 2019 in current US dollars while China's total imports increased by two-thirds. During much of this period the United States held between a quarter and a third of the Chinese import market. Similarly, butane imports from Australia roughly trebled in value over the same period while China's total imports rose by less than three-fifths. The US market share peaked at 3.9 per cent in 2017 when it was the sixth largest supplier.

The United States has a strong interest in oil products – propane, butane and five other products are identified in the Phase One Agreement – and is in a good position to increase sales in the Chinese market. Indeed, it is already doing it. For example, Chinese Customs data show that the US share of liquefied propane imports rose from negligible levels in 2019 to 25 per cent in the first 11 months of 2020 and 46 per cent by October, before falling back to 28 per cent in November. Significantly, this increase does not appear to have come largely at Australia's expense: our market share for the first 11 months of the year was 4.1 per cent compared to 4.3 per cent for the whole of 2019, though there was a slightly larger decline when shares over August-November are compared. The rising US share came mainly at the expense of major suppliers from the Middle East.

The United States is in a strong position to increase trade in oil products. Growth in production of US shale oil and gas supports growth in natural gas plant liquids, including ethane, propane and butane. If domestic US consumption of refined products declines over the next couple of decades in line with forecasts (EIA 2020b), more will be available for export markets. This could have significant implications for Australia's trade in products like ethane and propane that have surged with the rapid development of our natural gas sector.

Beef: China is the world's largest importer by a considerable margin. Imports are predominantly frozen product (HS0202), accounting for 96 per cent (US$7.9 billion) of beef imports in 2019. Brazil, Australia, Argentina, Uruguay, and New Zealand are the major suppliers, accounting for 95 per cent of frozen beef imports in that year. Significant quantities of fresh or chilled beef (HS0201) are imported from Australia and New Zealand.

China took around one-quarter of Australia's total beef imports in 2019 and trade continues to grow. Australia hit the 'safeguard' – the quota beyond which tariffs rise steeply - at the end of June in 2020 and has been hitting it earlier each year since entry-into-force of ChAFTA. Reports from Australian exporters suggest that orders continued to flow in despite the higher tariff on out of quota imports: Chinese consumers simply paid more.

This good news, however, is only part of the story. Import data from China's General Administration of Customs (GACC) shows that Australia has lost significant market share over the course of 2020 both in the fresh or chilled market and in the frozen product market. In the former, our share declined from about 84 per cent over March-May 2020 to an average of 64 per cent by August-November. Over the same period, the US share increased from around three per cent to 19 per cent. We also have lost significant share in China's vast import market for frozen beef. Our share of the market - 19.5 per cent in 2019 - remained at about this level in January and February of 2020, but fell to an average of nine per cent over August-November 2020. The United States is not currently a big player in this market, and its share increased only from 0.9 per cent in 2019 to 1.6 per cent in the 11 months to November 2020, although its performance did improve appreciably in the last months of this period.[19]

Australia's beef exporters face several clear challenges in the Chinese market. An obvious one is from the United States, which is re-establishing its presence in the Chinese market after removal, in May 2017, of a lengthy ban over bovine spongiform encephalopathy (BSE) and then additional Chinese tariffs of 12-25 per cent as US-China trade relations deteriorated. The Phase One Agreement provides a platform to ramp up US beef exports to China through a combination of minimum import targets and, more especially, favourable regulatory changes and streamlined processes to increase the number of US beef facilities eligible to export to China. US beef sales in China have surged in 2020. The sustainability of this surge will depend on commercial considerations. Around 90 per cent of US beef is consumed domestically and what is exported goes predominantly to other high price markets: being both an exporter and importer, the US beef trade channels product to different markets to maximise the value of domestic production. Domestic demand is mostly for higher value beef. Lower value cuts that are exported attract higher prices in overseas markets than in domestic ones. How China eventually fits into this big picture is not clear.[20]

Another clear challenge to Australian beef exporters is that China is diversifying its sources of supply by fast-tracking approval of eligible beef exporting plants. Over the last five years, the number of Australian plants exporting to China has hardly changed and, compounding this in 2020, China has suspended the export licences of seven Australian abattoirs on labelling, residue and COVID-19 related grounds.

If Australia has a problem in the Chinese beef market, and it seems to have a big one, its precise nature is unclear. If it is simply technical, for example on labelling, then it can be resolved through technical discussions at industry-to-industry and government-to-government levels. If it is primarily the Phase One Agreement, at least in the chilled or fresh market, it can be addressed through negotiations seeking equivalent or similar terms of access to the Chinese market to that now achieved by the United States. But if the problem is collateral damage from deteriorating Australia-China relations, then finding solutions will be much more complex and difficult to negotiate and could hinge on hard to predict geopolitical developments.

Australia has a broad portfolio of established and prospective export markets. In a worst case situation, disruption to our beef trade with China could be offset to some degree by tapping into other available markets given the positive outlook for global beef trade and for international beef prices.

Dairy: With active support from the Chinese Government, China's dairy industry is growing rapidly but consumption of dairy products is growing much faster. The result, predictably, is rapid growth in dairy imports: imports grew four-fold in the decade to 2019 – imports of infant formula increasing at double that rate - and China has emerged as the world's largest country importer by a large margin. Around one-quarter of all dairy products consumed in China is now imported.

New Zealand and the European Union between them take around 80-85 per cent of the import market and Australia and the United States take much of the rest, competing in China's markets for infant formula and cheese but not to any significant extent in markets for butter, butter milk, yoghurt, and whey. Australia's dairy trade continued to grow in 2020 and Australia hit the quota limit for whole milk powder in November 2020. US dairy trade also is rebounding from the lows of 2019 with imports rising possibly to levels achieved in 2018, though still below the 2017 threshold identified in the Phase One Agreement. There is no evidence to date that the Agreement has markedly improved US performance in the Chinese market for cheese and infant formula.

Using Chinese Customs data, Australia's share of the import market for cheese has fallen from about 18 per cent in 2015 and 2016 to slightly under 14 per cent in 2019, and looks set to fall further in 2020: in the first 11 months of

19. Brazil was the big winner for the market share of frozen beef imported into China in 2020: its share in the first 11 months of 2020 was around 42 per cent compared with 26 per cent in 2019.

20. According to Chinese Customs, China's imports from the United States of fresh or chilled beef were valued at US$33.6 million in the first 11 months of 2020 and imports of frozen beef at US$138.4 million over the same period. In 2019 their combined value was well below US$100 million.

the year, it was running at around 12 per cent. The United States, however, has not picked up Australia's lost market. Its own share fell slightly in 2020.

It is much the same for infant formula. Australia's share of the market increased to 4.7 per cent over January-November 2020 (compared with 4.5 per cent over the whole of 2019), and the United States' share over these two periods decreased from 1.8 to 1.5 per cent. At least at this stage, if Australia has a problem in this particular market, it cannot be attributed to the Phase One Agreement.

Looking at the dairy industry more broadly and from a medium-term perspective, however, Australia has a problem that can be attributed to the Agreement. This is because the Agreement increases US competitiveness across-the-board by tackling in considerable detail restrictive Chinese regulatory requirements that have hitherto impeded US dairy trade. When the Agreement was announced, the Australian Government signalled that it would request China to grant similar regulatory concessions to the Australian dairy sector, recognising that the primary threat to our interests in this market is from US producers facing fewer regulatory hurdles than their Australian counterparts. This is particularly urgent with anecdotal evidence from industry of Australian manufacturers, for example of infant formula, having difficulty with getting export accreditation.

The Australian dairy industry will need to keep a close watch on US dairy exports to China. The US market is heavily over supplied owing to subsidies, farm gate price controls and the like and is looking to China to help soak up excess production, especially of cheese and butter. Strong continued growth in China's dairy market coupled with smoother regulatory arrangements between the United States and China could be key to reducing this surplus and building US market share, in part at Australia's expense.

Wheat: China is the world's second largest wheat producer after the European Union and has been a significant importer in the past decade. Since 2010, imports have ranged between 1.2 and 5.5 Mt per annum. Canada, Australia and the United States are the major suppliers, though the shares of the United States and Australia fell to 7.5 and 6.1 per cent of imports respectively in 2019 as trade collapsed owing to trade tensions in the case of the United States and drought in the case of Australia.[21]

The Phase One Agreement has delivered a massive turnaround in US wheat sales to China, just as it has for commodities like soybeans and corn. China appears to be on track to import more US wheat in the current marketing year than in any year during the last five.

The strengthening position of the United States in the Chinese wheat market – its share increased from eight per cent in 2019 to about 19 per cent in the first 11 months of 2020 – has still been consistent with healthy sales of Australian wheat. Chinese Customs data show that our share of this growing market increased from around six per cent in 2019 to about 18 per cent in the first 11 months of 2020. But they also show that imports from Australia were particularly low in August to November, when our share dropped to 2.5 per cent: there has been some substitution of US for Australian wheat.

The big unknown is the intrusion of geopolitical considerations. China's General Administration of Customs (GACC) issued a notice to the Australian Government in early September 2020 that it would apply 'enhanced inspection' of Australian wheat shipments to China. This obviously set alarm bells ringing given the value of forward sales and recent history on Australian barley: GACC first rejected barley shipments because of alleged pest contamination and then China's Ministry of Commerce followed up with steep dumping and countervailing duties. On the positive side, the warning underlines the importance of harmonising Australian and Chinese approaches to sampling for things like pest contamination if trade is to run sustainably and smoothly. It also underlines an important fact: China took 3-9 per cent of Australia's wheat exports between 2015 and 2019. If the Chinese market becomes too difficult, there are opportunities to switch into other markets in East Asia and the Middle East, which take the bulk of Australia's exports.

Cotton: China's market for imported cotton has been highly variable in recent times but has grown strongly both in volume and value terms: total imports more than doubled in volume terms between 2016 and 2019, accounting for just under one-quarter of global imports valued at $US3.6 billion in 2019. The vast majority of these was cotton neither carded nor combed (HS5201).

The United States, Australia, Brazil, and India are the dominant suppliers of cotton neither carded nor combed to China, taking between them over 80 per cent of the import market. Within that group, market shares have changed

21. Based on ITC Trade Map data, Australia supplied 40 per cent of China's wheat imports between 2015 and 2017. Over the same period the United States supplied approximately 20-40 per cent and Canada 15-35 per cent. In 2019, Canada (54.9 per cent of imports), France (14.5 per cent), Kazakhstan (10 per cent), and Lithuania (6.1 per cent) were the major suppliers along with the United States and Australia.

significantly. The United States was the major supplier with 45 per cent of the market in 2017, but this was more than halved by 2019 because of trade tensions. Brazil and Australia both took advantage of this. Brazil's share rose nearly five-fold between 2017 and 2019, and the value of Australia's exports just about doubled in 2018 and 2019 compared with 2017, though our share of China's imports did not change dramatically.

Chinese cotton imports are forecast to continue rising driven by generally flat domestic production, moderate recovery in consumption in domestic and export markets for Chinese textiles and apparel, and replenishment of state stocks. This provides a big potential opportunity for the United States given its pronounced comparative advantage in cotton (Figure 6). The Phase One Agreement and the related removal of the 25 per cent additional tariff on US cotton in February 2020 have provided the platform to turn this potential into US sales. China once again is the US's top export market, and Chinese Customs data show that its share of China's import market rose to 47 per cent in the first 11 months of 2020 compared with 20 per cent for the whole of 2019. This effectively returned the United States to the position it held in 2017. Australia was the big loser. Our share collapsed to seven per cent in the 11 months to November, less than a third of our 23 per cent share for 2019. The difference was taken by the United States (USDA FAS 2020a).

Australia's share could fall further. There are indications that the Chinese Government is instructing cotton mills to stop buying Australian cotton (Bagshaw & Gray 2020; Littleproud 2020). If these are borne out, presumably as more collateral damage from the deteriorating Australia-China relationship, our share could evaporate either directly because Chinese mills do not buy Australian product or indirectly by pushing Australia to the back of the global quota queue and therefore liable for maximum tariffs.

Tree nuts: China is among the world's leading import markets for tree nuts. With the exception of walnuts, most nuts consumed in China are imported (Austrade 2019).

Most of the trade of interest to Australia and the United States occurs under HS0802 – 'other nuts, fresh or dried, whether or not shelled or pealed excluding coconuts, Brazil nuts, cashew nuts'. It was valued at US$1.96 billion in 2019. Pistachios are China's biggest import under HS0802. The United States is the biggest supplier: Australia has a very limited presence. Almonds, nuts not elsewhere included, and macadamia nuts are the next three most important imports. For almonds and macadamias, Australia became the largest supplier by 2019, although the United States also provided substantial quantities. The value of both pistachio and almond imports grew strongly between 2015 and 2019, with sales from the United States and Australia increasing rapidly.

Chinese Customs data for the first 11 months of 2020 suggest a correction of this trend, no doubt reflecting more straitened times in China. Imports of HS0802 as a group were down by 28 per cent from the corresponding period of 2019, with imports from the United States and Australia each down by around 45 per cent. Both countries lost significant market share to Iran, which increased its market share by almost 10 percentage points, and Russia, which gained a little less than three percentage points. South Africa gained about two percentage points.

Tree nut imports can be expected to be buoyed by China's improving economic performance. Whether this will benefit Australian nut producers to the same extent as in the four or five years to 2019 is unclear. The outcome is likely to be determined by trends in domestic production, the pace and sustainability of China's recovery from the pandemic and the extent to which it translates into rising real incomes for China's middle classes.

On nut production, China is making fast progress in increasing output of walnuts and macadamias and could soon be self-sufficient, but production of pistachios is being held back by problems in identifying appropriate varieties and developing the technologies to achieve commercial outcomes. Much the same applies to almonds. Production is concentrated in the western province of Xinjiang but is of relatively low quality and little product is traded outside the province (USDA FAS 2019b).

A strong sustained economic recovery should generate strong growth in import demand for nut products generally. Per person nut consumption is still low by developed country standards but should rise with rising real incomes, growing awareness of the nutritional value of nut products, the consumerisation of tree nut products with further processing – new coatings, flavours and offerings - and attractive packaging, and increasing sales via e-commerce platforms for the gift market (Austrade 2019). If consumption rises quickly, China will probably source product from wherever it can in view of limits on domestic production. But a slower recovery associated with weaker demand pressures could make China more strategic in its purchasing decisions. This might benefit the United States as China responds to its import commitments under the Phase One Agreement. It also could benefit other countries if Australia-China relations continue to deteriorate.

Iron and steel products: Australia has a limited trading interest in these products. Chinese iron and steel imports (HS72) from Australia were valued at US$25.2 million in the first 11 months of 2020. The majority of this trade (US$14.8 million) comprised imports of flat-rolled products or iron or non-alloy steel (specifically with a width of at least 600 millimetres). The other two significant items were ferro-alloys (US$7.5 million) and angles, shapes and sections of iron or non-alloy steel (US$1.8 million). No imports were recorded of ferrous waste and scrap, which is covered by the Phase One Agreement, but where trade, once significant, has collapsed: at least in part this is because metals have been included in China's increasingly stringent ban on imported solid wastes.[22]

All of the items in HS72 are covered by the Agreement. American interest in HS72 is quite strong, with China's imports from the US running at US$365 million in the first 11 months of 2020 – almost 15 times imports from Australia for the same period. However, of the three products of key interest to Australia in 2020, Australia was the larger supplier. For example, for flat rolled iron and non-alloy under HS7208, imports from the United States were less than two per cent of those from Australia.

Chinese imports from Australia of articles of iron and steel (HS73) were valued at US$27.2 million in the 11 months to November 2020. Only six of the 26 four-digit headings under HS73 are covered by the Agreement. The key covered import from Australia was tubes, pipes and the like of iron or steel (US$7.6 million to November 2020). Imports from the United States under this item were about six times those of Australia. A wider range of products of some interest to Australia are not covered by the Agreement. They include screws, bolts and the like (where China's imports from Australia were US$6.9 million in the first 11 months of 2020), structures of iron and steel (US$3.5 million) and a residual category of other articles of iron and steel (US$4.3 million). Australia's market share for all of these items is very low, suggesting that it might not be difficult for China to substitute Australian products with those of other countries.

On balance, these small trades, and others which may emerge within HS72 and HS73, require monitoring because many could be impacted by the Phase One Agreement if the United States lifts exports appreciably. But even this prospect should not be exaggerated. For the most part it is a minor supplier relative to those in Northeast Asia and some in Southeast Asia and Europe. Reversing instances of falling US sales, and perhaps improving a little on that, might be as good as it gets for the United States. A more relevant thing to monitor would be Chinese reactions to Australia's frequent use of safeguard measures against Chinese products, especially metal products. Irrespective of their merits, in an increasingly challenging bilateral relationship, these measures could invite retaliation against Australian interests that range far beyond metals.

6. Australian commodity trades where the primary risk is from deteriorating bilateral relations

Coal: The story on Australia's coal trade with China, and how it may evolve, has little or nothing to do with the Phase One Agreement and much more to do with the state of Australia-China relations. Australia dominates the Chinese import market for coal (HS2701), supplying almost half of all imports by value in 2019. Other major suppliers in that year were Mongolia (16.2 per cent), Indonesia (15.8 per cent), Russia (13.5 per cent) and Canada (3.6 per cent). The United States supplied 0.8 per cent of the market and, at its peak, 2.5 per cent in 2017 (ITC Trade Map Database).

In volume terms, imports reached nearly 265Mt according to Chinese Customs data in the 11 months to November 2020 and were valued at US$15.2 billion.[23] Australia exceeded its 2019 market share in this period. Chinese Customs data indicate that Australia's share by value rose to 52 per cent. The picture was mixed for other major suppliers. Mongolia's share fell by around four percentage points from the 2019 level to 12 per cent because the China-Mongolia border was closed for several weeks between late January and April as a precaution against COVID-19. Indonesia - the second biggest supplier to the market – gained share slightly to reach over 17 per cent, while Russia's share remained about the same at 13 per cent. Canada's share also remained about the same, and the US share declined marginally to 0.6 per cent.

In Australia's case, imports for January-November 2020 present a somewhat misleading picture of trends in the market. As noted in Section 3, Australia's market share fell dramatically after August 2020, going from 47 per cent in August to under 10 per cent by November. China's unofficial annual global import quota or goal is thought to be around 270-300Mt. Some slowing down of imports involving tactics like slow customs clearances and long queues of coal ships waiting to discharge their cargoes was expected as China approached its annual import limit.[24] But what

22. China's global ban on imports of solid waste from 1 January 2018 was focused initially on plastic waste and unsorted waste paper and textile materials. The ban has since broadened to include other wastes, like some scrap metals. Regulators also have imposed more stringent standards on allowable contamination levels in waste materials. In mid-2020, China's Bureau of International Recycling announced scrap metal import quotas for 2020, including 176,746 tonnes for copper scrap, 209,660 tonnes for aluminium scrap and 4,990 tonnes for steel scrap (Cole 2020).

23. The tonnages here include lignite imports (which were quite substantial), but the US$ total does not include lignite.

24. Coal quotas were re-set in January 2021 so import data for the early months of 2021 will be critical in assessing whether China is waging a campaign against Australian coal.

was not expected was pressure from the Chinese Government on importers to defer taking Australian coal to harden into blocking Australian coal shipments for undefined 'environmental reasons' at a time when coal consignments from countries like Mongolia were increasing quickly (ABC 2020; Clarke 2020; Smyth & Hale 2020).

The real motivation behind these actions is difficult to discern given the often indirect ways in which China communicates changes to its coal policy. But if present policies continue in some way, they are likely to fall much harder on thermal coal than on premium Australian metallurgical coal. This is because China has abundant supplies of thermal coal, could boost production if needed and could source more thermal coal from countries like Russia and Mongolia. But China is deficient in metallurgical coal: there is a substantial gap between domestic production and consumption and China would struggle to find alternative, comparable supplies quickly that are so critical for its steel production and hard infrastructure programs.

Metallurgical coal: The United States is not a big exporter of metallurgical coal to Asian markets, including China. Metallurgical coal mines are mostly high cost, face high transport costs to Asian markets and tend to increase exports when international prices are high and/or when supplies from other sources are disrupted.

China's supply side reforms for coal have targeted smaller mines, which has had a disproportionate impact on metallurgical coal production: many small metallurgical mines, particularly in southern China, have closed (Department of Industry, Science, Resources and Energy 2020, p.43). What makes China especially attractive to US metallurgical coal miners is that around 90 per cent of Chinese steel is produced using traditional blast furnace technology, which requires metallurgical coal to produce the pig iron that is then transformed into steel (World Steel Association n.d.). Also, unlike other major steel producing countries, China has responded to the economic slow-down caused by COVID-19 by boosting steel production to historically high levels.

All things being equal, China's import demand for metallurgical coal should rise modestly over the next few years as steel production grows. The main unknown is whether ferrous scrap utilisation will increase quickly. If it does, it would slow growth in metallurgical coal imports.

There is no evidence to date of the United States benefitting from the Phase One Agreement or from disruptions to supplies from Australia to export more metallurgical coal to China. Chinese Customs data for the 11 month period to November 2020 show that the US share of imports of 'bituminous coking coal, not agglomerated' (HS2701.12.10) was 1.2 per cent, down from 1.5 per cent for the whole of 2019. Australia, on the other hand, supplied 63 per cent of an import market worth US$8.1 billion over the 11 months compared with 56 per cent in the whole of 2019. As with the broader category of coal, there was a sharp downturn in Australia's share towards the end of the year: in November, Australia's share of the market was just nine per cent.

The US Energy Information Administration forecasts that total US metallurgical coal exports to the world could fall during the early 2020s compared with 2019 (EIA 2021a, b). But the industry has demonstrated time and again that it can ramp up production quickly in response to international opportunities (IEA 2019, p. 53; Gruenspecht, 2019, p. 13). US exports could be sustained by a lift in import demand but, as a high cost producer,[25] sustained growth in exports to China would require US producers to win market share from other suppliers, in particular Australia as the major low-cost exporter but also meet competition from Russia, Mongolia, Mozambique, and Canada. To say the least this would be challenging: Australia, Russia and Mongolia all expect to increase metallurgical coal exports to China over the medium term, and Russia and Mongolia in particular are gearing up for a step change increase in exports.

Many different factors are at play in China's import market for metallurgical coal: the payoff, if any, for the United States from the Phase One Agreement; China diversifying sources of supply by building up trade with Russia and Mongolia; China building geostrategic and economic links with Belt and Road corridor countries; and China re-calibrating its coal trade with Australia in response to major problems in bilateral relations. The only thing that seems certain is that the Agreement is only a very small part of a complex and changing mosaic.

Thermal coal: US thermal coal output and consumption are both falling and are forecast to continue to fall steeply in the first half of the 2020s owing to competition from natural gas and renewables in power generation.[26] US thermal coal exports also are likely to fall over this period (EIA 2020b; IEA 2019). There has been some discussion in the US coal industry of using the Phase One Agreement to boost exports of thermal coal to China, but this seems unrealistic given deep seated structural changes within the industry. The collapse of the Millennium Bulk Terminal project on the US West Coast was possibly the final nail in the coffin: the project aimed to facilitate over 40Mt of thermal coal exports per year to Asia (Meyer 2021).

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25. Both for hard coking coal and thermal coal, US mines are considered to be at the high end of the FOB supply curve (IEA 2019, pp. 53, 75-76).

26. See, for example, Gruenspecht (2019). US demand for coal is expected to rise in 2021 as a result of higher natural gas prices, but this is not expected to improve prospects for coal over the medium term. Some big US mining companies are now increasingly shifting away from thermal coal (IEA 2020).

So what will shape Australian thermal coal exports to China over the next few years? The probable answer is not especially optimistic.

Thermal coal production is rising slowly in China and is being concentrated in larger, more productive mines in China's northwest (IEA 2020; EIA 2020a). Demand for coal for coal-fired generation is rising, but by how much is uncertain because it depends on the pace of constructing new coal-fired plants,[27] the speed of constructing new dedicated coal rail networks, the pace of development in the coal-conversion sector (which uses thermal coal) and the relationship between thermal coal production and GDP growth in China. Overall, however, there is a general sense that imports will be flat (IEA 2020) or increase very slightly, and that the Chinese authorities will continue to promote use of abundant domestic thermal coal through regulatory actions that raise or lower the price of imports to keep domestic prices within a defined band. Quotas of various kinds, delays in customs clearances and the general stop-go pattern in Australian thermal coal exports to China seem set to continue, assuming an outright ban is not sustained.

At the same time, China is likely to continue to diversify imports as part of increasing energy security. Australia has already lost considerable market share over recent years. Over 2017-19, Australia dominated China's import market for thermal coal. Chinese Customs data show that our market share for thermal coal (defined here as HS2701.12.90) was 69 per cent in 2017 and 73 per cent in 2018, but fell to 61 per cent in 2019. The movement to a lower market share has continued in 2020. In the first 11 months of the year, Australia's share dropped to 56 per cent and over August to November was just 40 per cent. In spite of our lower market share, the market for thermal coal is still a big one for Australia. China's imports from Australia over the first 11 months of 2020 were around US$2.8 billion, down from US$3.5 billion in the corresponding period of 2019.

According to Chinese Customs, a number of countries have benefitted at Australia's expense. Indonesia's share has risen from 10 per cent in 2018 to 21 per cent in the first 11 months of 2020. Russia's share also increased over this period, from 12 to 17 per cent (and 28 per cent over August to November 2020). A much smaller supplier, Mongolia, held a share of between one and two per cent over 2017-19 and its share over January to November 2020 was consistent with this, but it was over five per cent between August and November 2020. The United States did not pick up any of the market share lost by Australia. Its share over 2017-19 was very low or negligible and barely registered in the first 11 months of 2020.

The state of Australia-China relations will be vital in how China manages its diversification strategy. Indonesia's coal is of lower quality than Australia's, which makes it unsuitable (other than through mixing) for use in new generation high efficiency, low emissions coal-plants. Indonesian exports also might fall over the next few years as more coal is diverted from export markets to meet domestic energy generation requirements, but the extent of this switching is difficult to assess because Indonesia needs the foreign exchange from thermal coal exports (Adams, Brown & Wickes 2020, Ch 8). Russia's offerings are similar to Australia's, as are Mongolia's. Both of these countries have low cost mines. High transport costs are an impediment but both are expanding export capacity and building supporting infrastructure with China as the key target market.

Irrespective of the outcome of current turbulence in Australia-China relations, Australia can expect to continue to lose share in China's thermal coal market.

Barley: Australia exports high quality malting barley to China. From 2014 to 2019, total annual exports averaged 2.5Mt, worth about US$0.6 billion. Following an anti-dumping investigation, China imposed a punitive 80.5 per cent anti-dumping and countervailing duty on Australian barley effective from mid-May 2020. Trade has not been totally killed off but is a small fraction of trade in 2019. Australian exports fell sharply in the August-November period. This is typically a low (off season) period for Australian barley exports, though they still fell steeply relative to 2019. Australia had only three per cent of total barley imports into China in August-November 2020 compared with 15 per cent for the same period in 2019.

To date, the Ukraine has been the main beneficiary of Australia's misfortunes. Its share of Chinese imports rose to 44 per cent in the August-November period of 2020 compared with 35 per cent in the corresponding period of 2019. The French and Canadian shares remained about the same. But the United States has not benefitted: US imports were negligible in 2020, as they were throughout 2019. Whether this changes over time – the Phase One Agreement mandated negotiations on a US-China phytosanitary protocol on barley – remains to be seen.

The United States is a very unlikely contender to take a substantial share of China's import market for barley. US production is modest and predominantly grown under contract for domestic maltsters. Any barley that finds its way to China, at least in the short term, is unlikely to meet malting requirements and will be used for animal feed (Braun

27. There seems to be a spurt in the construction of new coal-fired power stations (Hale & Hook 2020) but whether this is sustained or not is not clear. Outcomes will be shaped by China's Fourteenth Five Year Plan (2021-25), which is expected to be released in March 2021, and by the implications flowing from President Xi Jinping's commitment in September 2020 to China's greenhouse emissions peaking before 2030 and China achieving carbon neutrality before 2060 (Xi Jinping 2020).

2020). Nonetheless, the United States is keen to begin barley exports now that an appropriate protocol is in place. The United States Grain Council (USGC), which pressed hard for the Phase One Agreement, has staff in China promoting US malting barley and barley malt (Grain Central 2020). Any substantial increase in US barley exports would require sustained substitution away from other winter crops, including wheat and canola, but this will not happen unless it is more profitable to US growers.

The poor state of Australia-China relations is the most likely explanation for Chinese dumping and countervailing duties. In recent years, China's barley production has accounted for about 15-20 percent of total supply, no doubt raising Chinese concerns about food security. Similarly, reliance on just four countries for almost all imported barley, with Australia taking the lion's share of the market (57 per cent in the five years to 2019), could be expected to raise similar concerns. These concerns presumably were downplayed or ignored when the Australia-China relationship was strong and cooperative, like it has been through most of the last few decades, but have come to the fore during a particularly rocky phase in the relationship.

Sheep meat:[28] Demand for lamb and mutton in China has grown appreciably over the last decade and surged in 2019 in response to the 'protein gap' as African swine fever decimated pig herds. This gap pushed up domestic sheep meat prices, which in turn led to more domestic production and higher imports.

Almost all of China's sheep meat imports are frozen product from New Zealand and Australia. In 2019, they were valued at US$1.9 billion, with New Zealand taking 56 per cent of the market and Australia 42 per cent. Trade has been greatly facilitated by free trade agreements that provide significant tariff preferences. New Zealand has tariff free access. From 1 January 2021, Australian product faced an average tariff of 3.73 per cent, scheduled to fall to zero from 1 January 2023. MFN rates average 14.53 per cent.[29] Uruguay and Chile were the only other suppliers of any note in 2019.[30] China did not import any sheep meat from the United States, which is not surprising given negligible US exports to the world.

In 2020, Chinese import demand was tempered by increases in domestic output, a faster than previously anticipated recovery in pig herds, and the dampening effects of COVID-19 on demand for lamb and mutton from restaurants, stalls and the like. Australia's share was 39 per cent to November in 2020, two per cent less than the corresponding figure for 2019. But comparisons for the August-November period suggest a different picture. Australia's share was 43 per cent, well down on the 52 per cent in the corresponding period for 2019. New Zealand took the bulk of the difference.[31] Chinese Customs statistics show no imports of lamb and mutton from the United States from January to November in 2020.

There are not enough data to base any firm conclusion on future trends. But the possibility of substitution of New Zealand for Australian product in the wake of our bilateral problems seems real enough to warrant careful watching: New Zealand may face reduced demand from its important COVID-affected EU market so exporting more to China would be an attractive option. That said, if China were to look seriously at diversifying imports away from Australia, the concentrated profile of world exporters, particularly of frozen product, suggests its options would be limited. Apart from New Zealand, there is a dearth of alternative suppliers that could match the volumes and high animal health credentials of Australia.

Vegetables: The Chinese import market for vegetables (HS07) has been worth around US$2 billion per year in recent times but fell below US$1.6 billion in 2019. Thailand and Canada are the biggest suppliers. Australia's exports peaked at US$37 million in 2018 (1.8 per cent of the import market) before slumping to US$7.5 million in 2019 (0.5 per cent of the market). The United States has had a similar roller coaster ride. Always a much larger supplier to China than Australia, imports were around US$40-50 million per year in 2015-17 (accounting for two per cent of the market) before falling to around US$32 million per year in 2018 and 2019.

The United States and Australia, by and large, do not compete with each other in the Chinese vegetables market. No or minimal trade is recorded for these countries on most trades at the four-digit level over the last five years. There is only one category at the four digit level – dried leguminous vegetables, shelled, whether or not skinned or split (HS0713) - where both countries compete, each recording significant sales. But even here competition is highly uneven. The United States and Australia compete in the import market for dried shelled peas, but they do not compete on dried shelled beans, where Australia is a major supplier in some years and the United States has

28. Sheep meat is defined as HS0204, excluding HS0204.50 (goat meat).

29. MFN rates are from the ITC Trade Map website. Simple average tariffs for Australia are calculated from data on the FTA Portal of the DFAT website (DFAT n.d.). The tariff rate on the most prominent sheep meat export, frozen cuts with bone (HS0204.42), which accounted for 83 per cent of sheep meat exports to China, was 2.7 per cent from 1 January 2021.

30. New Zealand and Australia accounted for around 85 per cent of world exports in frozen sheep meat and for substantially more if intra-European trade is excluded from world exports. If 'gravity' (proximity) also is taken into account, China's import profile looks broadly in line with global trade patterns for frozen sheep meat.

31. Uruguay also increased its market share in China by 0.6 percentage points from January to November 2020 compared with the same period in 2019. Uruguay accounted for one per cent of world sheep meat exports in 2019.

no market presence. And nor do they compete on dried shelled kidney beans, where the United States is at times a significant supplier and Australia has no presence.

Fruit: China's fruit imports under HS08 were around six times larger than for vegetables in 2019. Thailand and Chile now take over half the market, Thailand dominating the market for tropical produce and Chile doing the same for temperate. Australia and the United States, along with New Zealand, South Africa, Peru, and Ecuador, are also major suppliers. Imports from Australia peaked at almost US$380 million in 2019 with a market share of 4.1 per cent. Imports from the United States peaked at a little over US$420 million in 2017 with a 7.8 per cent share before collapsing in 2018 and 2019.[32]

Australia and the United States compete in areas like citrus and to a very small degree in fruit like apples where product can be kept for months in cold storage[33], and are counter seasonal suppliers of fresh oranges, fresh grapes and stone fruit, especially cherries. The import market for stone fruit is massive: the value of imports has more than doubled in size since 2015 in large part because of burgeoning Chinese middle class demand for fresh cherries (HS0809.29), often presented in elaborate gift packaging. Australian produce competes at the premium end of the market with cherries mostly air freighted to China and available for sale by retailers within four days of harvesting.

China is now Australia's premier export market for a range of fruit and other horticultural products. Counter seasonality alone suggests that Australia is well placed to withstand possible intensifying competition from the United States in the Chinese market. But a couple of factors need to be kept in mind. First, the Phase One Agreement clearly targets horticultural products like nectarines, blueberries and Hass avocadoes. And second, as for dairy and other products, the Agreement stipulates binding timelines for China to complete phytosanitary protocols to minimise technical delays. By and large these timelines have been adhered to. If clearing away some of the regulatory hurdles for US farm produce in the Chinese market is the principal legacy of the Agreement, a significant part of Australia's continued success in that market will require the Australian Government negotiating equivalent treatment.

A further factor might warrant watching. China is Australia's main export market for fresh cherries (HS0809.29). Sales could be a useful barometer of Australia-China tensions. Bans and the like would cause no damage to Chinese interests as there are readily available substitute sources - counter seasonality rules out competition with the United States but not from Chile and New Zealand - but would cause acute damage to some areas of regional Australia. If the cherry season passes without incident, it could well be an early, and fragile, sign that relations are beginning to stabilise.[34]

Wine: Any potential significance of the Phase One Agreement for Australia-China trade has been overtaken by worsening Australia-China trade relations. In August 2020, the Chinese Government launched anti-dumping and countervailing duties investigations into Australian wine exports to China following claims of injury from the China Alcoholic Drinks Association. China's investigations are expected to run for about a year. On 27 November 2020, the Chinese Government announced that interim duties of between 107.1 and 212.1 per cent would apply to Australian wine. This decision has the potential to kill the trade.

Some of the background to this decision is as follows. China has a well-established domestic wine industry centred on the Northeast provinces and is a top 10 wine producing country. Cabernet sauvignon and merlot are the main grape varieties. Domestic production peaked at 13,200 to 13,500 million in hectolitres (hl) around 2014-2016 but fell to 8.3 million hl in 2019. Consumption rose quickly for much of the last decade but has fallen in recent years, probably as a consequence of slowing economic growth and mounting pressures on middle class incomes. In 2018, consumption was estimated at 17.8 million hl, which put China in the top five consuming countries (and the largest for red wine),[35] though consumption was still low in per person terms.

The pattern is similar for wine imports. Imports grew rapidly from a low base and accounted for nearly 40 per cent of the total wine market by volume in 2017. Imports peaked in volume terms that year and in value the following year before falling sharply. Chinese Customs data indicate that they have continued to fall in value terms: in the first 11 months of 2020 they were worth US$1.65 billion compared with US$2.2 billion in the corresponding period of 2019.

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32. In 2015-2019, Australia and the United States were not suppliers to China – or were only very minor and intermittent ones - of fruits like bananas (HS0803); fresh or dried avocados (HS0804.40); citrus hybrids (HS0805.29), lemons (HS0805.30) and grapefruit (HS0805.40); melons (HS0807); fresh strawberries, blackberries, currants and gooseberries (HS0810); various dried fruits (HS0813); and peel. Australia supplied some fruit markets that the United States did not such as fresh or dried mandarins (HS0805.21), fresh mangoes (HS0804.50) and fresh peaches, including nectarines (HS0809.30). And the United States supplied markets that, on the whole, Australia did not such as fresh or dried citrus lemons and limes (HS0805.50); fresh apples, pears and quinces (HS0808); and fresh plums and sloes (HS0809.40), though Australia has recently come in to this market in a small way.

33. In 2015-2019, the Chinese import market for apples was dominated by New Zealand (taking 30-50 per cent of the market), Chile (10-20 per cent) and the United States (35-40 per cent but falling to 10 per cent in 2019). Australia's share was 0.2 to 0.5 per cent.

34. Early signs are mixed. Bilateral problems may have been a factor, but rain damage to some Tasmanian cherries has been highlighted (Tan & Leng 2021). China's semi-official Global Times also has been critical of the overall quality of Australian cherries.

35. International Organisation of Vine and Wine (OIV) 2020, *State of the World Vitivinicultural Sector in 2019*, April 2020, http://www.oiv.int/public/medias/7298/oiv-state-of-the-vitivinicultural-sector-in-2019.pdf

Australia overtook France as China's leading source of imported wine by value in 2019, no doubt assisted by zero tariffs under ChAFTA from 1 January that year.[36] Significantly, Australia's wine shipments do not appear to have been impacted substantially by the downward trend in the total value of Chinese wine imports in the 11 months to November 2020 or by the anti-dumping and countervailing investigations into Australian wine launched mid-year. Chinese Customs data show that purchases from Australia amounted to US$682 million over these months compared to US$777 million in the corresponding period of 2019. They also show that Australia's share of the import market rose from 35 to 41 per cent over these two periods, and was 43 per cent over August-November 2020 before collapsing in December to the lowest monthly value since February 2019. In contrast, France's share fell from 31 per cent to 28 per cent between August-November 2019 and the corresponding period for 2020. Chile's share also fell somewhat, squeezed as the market shifts towards higher quality wines.

The United States has continued to be a small player in the market: its share in the first 11 months of 2020 was around one per cent – a fraction of the share it held three years earlier. The Phase One Agreement has not repaired the damage to US wine trade caused by tariffs imposed in the tit-for-tat US-China trade war. The Agreement is silent on changing regulatory arrangements to facilitate China's wine imports from the United States, and wine is absent from the additional tariff exclusions listed by the Chinese Government since early 2020. In this context, the best prospect for the United States re-building a sizeable market presence is by taking share lost by Australia flowing from the punitive tariffs imposed in November 2020. To varying extents, this also applies to others like France, Chile, Italy, and Spain.

Rock lobsters: China's import market for live, fresh and chilled rock lobster has grown strongly both in value and volume terms, rising nearly three-fold in both cases between 2015 and 2019. Growth in imports from Australia has been especially marked, rising from US$7.6 million in 2015 to US$517.6 million by 2019. This remarkable growth has obviously been driven by strong growth in overall import demand but also is testament to the premium China is willing to pay for natural, pollution-free products – a fact linked to Chinese belief systems stressing the holistic health benefits of fresh and pure foods – and to cultural practices such as serving highly priced seafood dishes at banquets as a mark of respect to guests (Fabinyi 2018). Eliminating tariffs on lobsters through ChAFTA was a key enabler, contrasting with the additional 25 per cent tariff imposed on US product as part of ongoing trade US-China trade tensions. Imports of US lobster were worth US$50.8 million in 2018 but trade was halved by the additional tariff in 2019.

On the basis of Chinese Customs data, China's import demand for live, fresh and chilled rock lobster collapsed in the first four months of 2020, reflecting the effects of the COVID-19 shutdown, but then rebounded strongly. In the period from August to November 2020, Chinese imports were 43 per cent above the corresponding period for 2019 and 128 per cent above imports from January to April 2020. Australia's market share slipped from 55 per cent in 2019 to 44 per cent in the 10 months to October 2020 and then dived to 1.5 per cent in November as China's actions against Australian lobsters came into effect. Vietnam was the main beneficiary. It took under two per cent of the import market in 2019 and 21 per cent in the first 11 months of 2020. The United States also benefited. US sales collapsed in early 2020 but rallied from August, surging to US$9.7 million in November and a market share of over 10 per cent.

The overall picture of China's lobster imports in 2020 was muddied by the impact of COVID-19 and major gyrations in market shares. But one thing is clear. Australia is vulnerable when the great bulk of production of a specific commodity depends on the vagaries of a single export market, and when the cost to that market of forgoing or reducing the import is small.[37]

Wood products: [38] Woodchips, wood in the rough ('logs'), sawn wood ('lumber'), veneers, plywood, panels, poles, caskets and various other wooden articles are included in the 'Other manufactured goods' category of the Phase One Agreement. China is the world's largest exporter and importer of wood products and the United States is among the top five exporters and the second ranked importer. Despite substantial local production,[39] both countries export much less than they import: in each year from 2017 to 2019, the United States was the largest net importer of wood products and China ranked third.

China's total wood product imports in 2019 were worth US$22 billion and were made up predominantly of logs, lumber and woodchips from a range of countries including Russia (US$4.3 billion) and New Zealand (US$2.4

36. In 2019, Australia took 35.4 per cent of China's import market for wine by value. France took 28.7 per cent, Chile 14.2 per cent, Italy 6.4 per cent, Spain 5.9 per cent, the United States 1.6 per cent (down from 2.9 per cent in 2017), Argentina 1.1 per cent, Portugal 1 per cent, South Africa 0.9 per cent, and Germany 0.9 per cent (International Trade Centre Trade Map database).

37. Developments in rock lobster imports contrast with growth in other luxury trades. China, for example, was the best performing market for European luxury goods in 2020 (Romei & Hale 2020).

38. Wood products are defined here as HS44 (Wood and articles of wood; wood charcoal). Woodchips are HS4401.21 (coniferous) and HS4401.22 (non-coniferous). Wood in the rough is HS 4403 and sawn wood (including chipped lengthwise) HS4407. Cork (HS45), pulp (HS47) and paper and paperboard (HS48) products, which are often included in data and analyses associated with wood products, are not included here and are not covered in the Phase One Agreement.

39. For example, around 208 million hectares (22 per cent) of China's land area were forested in 2015, of which 93 million hectares were designated for production. China's plantation area is the largest in the world, with various conifer and hardwood species, including eucalypts. Despite having the highest afforestation rate of any country in the 2010s, China's timber production continues to lag well behind demand (Timber Trade Portal).

billion), and over US$1 billion from each of the United States, Australia, Canada, Thailand, and Vietnam. The United States was the second largest source of wood products between 2010 and 2018, but trade nearly halved in 2019 when China raised tariffs to 25 per cent on US oak and to 20 per cent on US cherry, ash and pine. Imports from the United States in that year were predominantly hardwood logs and lumber in plentiful supply in the United States such as cherry and red oak.

Australia's total wood exports amounted to US$1.7 billion in 2019.[40] China accounted for 68 per cent of them (US$1.2 billion), made up almost entirely of non-coniferous (hardwood) woodchips (US$0.6 billion) and softwood (pine) logs (US$0.5 billion). Australia was the second largest supplier of woodchips to China behind Vietnam. China has been Australia's main market for woodchips since 2015, taking over from Japan. In 2019 China accounted for 60 per cent of our woodchips exports. And Australia was the third ranked supplier of logs to China in 2019 behind New Zealand and Russia. Most were larger cuts of pine with cross-sections greater than 15 cm (HS4403.21) valued at US$0.26 billion. Australia was the largest supplier to China of smaller cuts (HS4403.22) valued at US0.13 billion. From 2017 to 2019, 99 per cent of Australia's pine exports (HS4403.21 and HS4403.22) went to China. Exports of eucalypt logs stood at $US40 million.

As Australia-China relations have deteriorated, China has followed up threats to reduce imports of wood products from Australia with bans on imports from some states – Queensland, Victoria, South Australia and Tasmania – apparently on biosecurity grounds. It can potentially follow through at little cost to itself because product can be sourced reasonably easily from alternative suppliers. The Phase One Agreement, along with China's decision after signature of the Agreement to allow importers to apply for tariff exclusions for hardwoods and softwoods (China's Tariff Commission of the State Council 2020), are unlikely to have a significant impact on Australia's trade in hard wood woodchips. US production is almost entirely for the local paper and related industries: few woodchips are exported or imported. But there may be some scope for substitution between US and Australian pine logs.

There is no current evidence of substitution. Monthly data for 2020 available to date from Chinese Customs indicate falling imports of wood products from both countries to mid-year, but an upturn in imports of pine logs in the September and December quarters. Imports from the United States have grown especially strongly: they were up by 60 per cent from August to November 2020 compared with the same period in 2019, reaching US$82 million. Imports of pine logs from Australia rose by 31 per cent to reach US$163 million. Chinese actions on Australian wood products,[41] should they continue, suggest that China would make up any shortfall in supply by increasing imports from a range of trade partners, including the United States.

7. Australian commodity trades that are at little immediate risk either from the Phase One Agreement or deteriorating bilateral relations

Wool: China is the world's largest wool consumer. Its mills produce a massive amount of fibre products for domestic and international markets. And they have a strong relationship with Australia as the world's largest wool producer based on volume and consistent supply and quality of fibre that is not available from most other sources (Wool Producers Australia 2020). On average China takes about 80 per cent of Australia's wool clip, and Australia accounts for three-quarters of China's wool imports, of which around half is now fine wool of 19 microns or less (Marshall 2020; The Woolmark Company 2018). Other major suppliers are New Zealand and South Africa. Together, these three countries accounted for 85-90 per cent of China's imports between 2015 and 2019.

The most notable trend in 2020 is arguably the continued decline in China's total wool imports, at least in value terms: in 2019 it was in both value and volume. For the first 11 months of the year, Chinese Customs data indicate that China's total imports of HS5101 were valued at US$1.5 billion, down from US$2.2 billion in the corresponding period in 2019. Growers have faced highly volatile price movements over this period attributable to factors like disruptions to US-China trade and COVID-19 – wool price volatility in 2020 was reportedly the highest in the last two decades (ABARES 2020).

There have been few significant changes in the market shares of key suppliers. Australia's share of the import market peaked in the early stages of the pandemic at over 90 per cent but has averaged around three-quarters for the year to November. South Africa's share increased significantly to nearly 12 per cent (compared to about seven per cent for the whole of 2019), and New Zealand's share languished at around six per cent (compared to over seven per cent for 2019). There is no evidence that the Agreement has made much difference to US performance in the Chinese market: the US share remained well under one per cent.

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40. Parts of HS4401 were subject to Australian Bureau of Statistics (ABS) confidentiality restrictions in 2019. Figures on exports should be interpreted with caution.

41. In November 2020, China suspended imports of Victorian logs because of possible dark beetle contamination. This followed suspension of imports from Queensland the previous month because of possible live insect contamination (Sullivan 2020).

The closeness of the Australia-China wool relationship raises obvious questions about over-dependence on the Chinese market, while the worsening bilateral relationship raises questions about the potential for future rough treatment. How this plays out basically comes down to a single proposition: both countries need each other because neither has readily available alternatives. China cannot disrupt wool trade with Australia without undermining domestic and international supply chains – for instance the interconnectedness of Australia-China-European and US operations - that are critical for its wool textile industry. And Australia cannot diversify too far away from China in the short to medium terms or perhaps beyond because there is no other country with the infrastructure, skills and growth potential as a production centre and market for fine wool, fashion and other wool-related services.

Iron ore and concentrates: Australia's trade in iron ores and concentrates is a standout example of a vital Australian trade that will not be impacted by the Phase One Agreement or, more to the point, by problems in Australia-China relations at least over the next five, maybe ten, years. Apart from not being included in the Agreement, China needs iron ore for steel production that is being revved up as part of a traditional response to slowing economic growth. Domestic supplies of high quality iron ore are limited and production has been falling for the last couple of years. Australia supplied over one billion tons in 2019 valued at US$61 billion, taking around three-fifths of China's import market – a proportion that has been remarkably constant over the period since 2015.

Recent data suggest that China continued to increase imports from Australia in 2020, with the US dollar value of imports over January to November up by around 13 per cent on the value for the corresponding period in 2019. Australia's share of China's import market in 2020 slipped, but by under two percentage points.

Brazil is our major competitor with 22 per cent of the Chinese market in 2019. South Africa accounts for four per cent of imports and India for two per cent. Imports from India are rising dramatically from a low base, as are imports from countries like Peru, Mongolia and Kazakhstan, but this has not greatly affected the overall mix of Chinese iron ore imports: China needs high quality iron ore and looks primarily to Australia to supply it. The United States does not compete with Australia.

Over the medium term, this supply picture will no doubt change somewhat. Brazilian exports grew at roughly twice the rate of Australia's in the five years to 2019. And China will continue to diversify its sources of iron ore through investments, for example, in the Simandou mine in Guinea, as well as in the Congo and Cameroon. But such investments cannot be a quick fix to China's ambitions to diversify supply. There is certainly a great deal of potential

in central Africa - output could be in the order of 300Mt per year over time[42] - but unlocking it requires massive investments in physical and skill-related infrastructure and managing risks from commodity cycles to disputes over mining rights to political stability and governance. For several years to come at least, China needs Australia just as much as Australia needs China.

Other metal ores and concentrates: These assessments for iron ore and concentrates also apply to varying extents to Australia's trade in other metal ores and concentrates such as manganese, copper, nickel, aluminium, lead, and zinc. The common themes are:

- Australia is a major supplier, sometimes with a substantial market share. For example, over the first 11 months of 2020, our shares of aluminium, manganese and zinc ores and concentrates were 31 per cent, 21 per cent and 35 per cent respectively. We held an even higher share of zirconium and other ores and concentrates (around 40 per cent). Australia captured lower shares of the market for ores and concentrates of copper (somewhat over four per cent, precious metals (around seven per cent), nickel (about 10 per cent) and lead (somewhat under eight per cent).
- Australia's share of China's import markets has generally declined since 2015, though often not by much. An exception is lead ores and concentrates, where Australia's share has fluctuated, and in the first 11 months of 2020 was running at little more than half the share for the corresponding period of 2019.
- China sources imports from many countries. Imports from some African countries in particular are rising very rapidly. Aluminium ores and concentrates from Guinea are a spectacular example, rising from very low levels in 2015 to 44.4Mt in 2019, taking roughly half the import market.
- The US dollar value of China's imports varies from year-to-year but generally showed strong (and in some cases spectacular) growth over 2015 to 2019. For example, the value of imports of copper ores and concentrates grew by almost 76 per cent, and manganese ores and concentrates by 220 per cent.
- China's import demand has, in some cases, held up well in the more difficult environment of 2020. But this was not always the case. In January-November 2020, the US dollar value of imports of ores and concentrates of manganese, lead and nickel fell by 24 per cent, 14 per cent and 28 per cent on levels for the corresponding period of 2019.
- The United States is not a competitor with the exception of lead ores and concentrates, where its trade was in decline before sharp falls in 2018 and 2019. From time to time there were very small trades in copper and aluminium ores and concentrates.

China is using infrastructure investment to stimulate a weakened economy, which is increasing demand for metal ores and concentrates across-the-board. In these circumstances, and at least during the timeframe covered by the Agreement and probably far beyond, this critical element of Australia's resources trade is not expected to be disrupted, though outcomes will depend over time on China's easy access to alternative sources of supply and maybe on Australia-China relations.

Gold: Australia's gold trade will not be impacted by the Phase One Agreement. First and most obviously, this is because the metal is not covered by the Agreement even though the United States had a six per cent share of the Chinese gold import market as recently as 2018. And second, even if, hypothetically, China were to agree to purchase all gold imports from the United States, Australia would have the option of diverting gold previously intended for sale to China to, say, London or Singapore or Switzerland, which in turn would reduce their gold purchases from the United States. Reshuffling market flows might result in different (higher or lower) transaction costs, but it would not constrain Australia's total gold exports.

At a more practical level, Australian gold sales in China will be determined, on the supply side, by gold production in China – the world's largest gold producer. Production has fallen appreciably as a result of the pandemic, but demand, particularly for gold jewellery – China is the world's largest consumer of gold jewellery – also slumped. China's reported imports of gold went from almost US$37 billion over January to November of 2019 to US$10.8 billion over the same period in 2020. Imports from Australia fell at a somewhat faster rate going from US$5.9 billion to US$1.1 billion. Australia's share of the import market went from about 16 to 10 per cent.

China's expected strong recovery from the pandemic, along with gold as a safe haven asset and its increasing use in industrial, medical and dental applications, should result in strong growth in demand through the early 2020s (Department of Industry, Science, Resources and Energy 2020, pp. 97-104). This should benefit Australia. Gold is a most unlikely metal to get caught up in bilateral tangles.

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42. To have an impact on Australia, it may not be necessary for Chinese investment to ramp up iron ore production dramatically in central Africa. Just the threat of it might be enough for miners in Australia and Brazil to increase production. If this leads to lower iron ore prices over time, Chinese steel mills would still gain a considerable benefit (Evans 2021).

Copper: China stands at the centre of world production and trade in copper. Driven by fiscal stimulus and demand for copper in new generation technologies and urbanisation initiatives, Chinese copper smelting bounced back from the pandemic to average levels by mid-2020 as measured by the China subset of the Savant Global Copper Smelting Index (Hume 2020). This rebound was reflected in increased Chinese imports of unwrought metal (HS7403) – the main element of the trade and of strong interest to Australia.

Chinese Customs data show that China's imports of this type of copper in the first 11 months of 2020 totalled US$28.0 billion, up from US$20.2 billion in the corresponding period of 2019. This appears to have reflected mainly increased volumes rather than higher prices - the average London Metal Exchange (LME) cash price for copper over January-September was down on that in the first nine months of 2019, though prices did pick up in the September quarter of 2020. Australia shared in the increased imports: China's imports from Australia rose from US$810 million in the first 11 months of 2019 to over US$1.2 billion in the same period of 2020. Our market share rose slightly and the United States continued to be a very small player in the market.

In the next few years, there is a strong likelihood that China will continue to import large, and perhaps increasing, volumes of unwrought copper metal depending on its rate of economic growth. There is little or no likelihood of the Phase One Agreement having any significant impact on how Australia performs in this key market: our competitors, in descending order, are Chile, Peru, Mexico, India, and, a long way back, the United States. And, should strains in the Australia-China relationship carry over to trade in unwrought copper, buoyant regional and world markets for this very versatile metal would ensure that any trade lost with China would be made up quickly elsewhere: this fact alone should temper possible Chinese economic coercion.

It is a different story for copper waste and scrap (HS7404), where Australia and the United States are competitors. The United States was the largest source in 2015 (supplying almost 700kt) and the second largest in 2016-18, before slumping to fifth (supplying 90kt) in 2019. Throughout the early part of this period, Australia was the third largest supplier to China (400-500kt) before trade slumped in 2018 and 2019.

China's imports of scrap copper declined sharply in 2020 as a result of import restrictions that were part of a broader attempt by China to limit imports of metal and other waste. Imports from Australia fell, despite a slight increase in our market share, as did imports from the United States, notwithstanding an approximately 5.5 percentage point increase in its share of the import market. The US share of the copper scrap market is now more than three and a half times that of Australia.

The future of scrap metal trade with China is uncertain. Chinese import restrictions were eased in October 2020 against the background of surging Chinese demand, but it seems likely that only high grade copper scrap will be permitted to enter from 2021.[43]

43. For background on China's scrap metals policy, see Home (2019), Tan (2020) and Cole (2020).

PART 3: POLICY IMPLICATIONS FOR AUSTRALIA

8. Policy for engaging with the United States

These days there are few things that unite Republicans and Democrats in the United States but trade policy, and especially taking a strong line on China, is one of them. Trade policy has domestic and international components. The domestic components of the Biden Administration's trade policy, like building up key industries, 'Buy American', 'Made in all of America', 'Invest in all of America' and so on, echo the 'America First' agenda of the Trump Administration. Their primary purpose is job creation on a massive scale such that 'everyone can share in the success of the country'. Like with Trump's policies, national security is used to justify trade protectionism, focusing on the imperative of 'not falling behind China or anyone else when it comes to clean energy, quantum computing, artificial intelligence, 5G, high-speed rail, or the race to end cancer ...' (Biden 2020b)

There is little expectation that domestic trade and industry policies will depart much from the Trump template and become more liberalising over time. The narrowness of Biden's win in rustbelt states, the need to maintain the backing of trade unions and the progressive wing of the Democratic Party and continuing national security concerns all suggest that the new Administration will not deviate much from positions set out in the Presidential campaign.

The situation is more nuanced on the international dimensions of trade policy. Like the Trump Administration, the Biden Administration is frustrated by the ineffectiveness of the World Trade Organization in addressing 21st century trade barriers, but differs in its general support for multilateral institutions and willingness to participate in the WTO's renewal. And like Trump, the incoming Administration will not rush in to negotiate new trade agreements – there are more pressing domestic priorities – and will continue to take a tough line on China.

The Biden policy approach on China appears to have strong elements of both continuity and discontinuity with Trump's approach. Continuity is based on a bipartisan consensus that four decades of US partnership with China and of China's opening up policies have not resulted in a more democratic China. Instead, they have led to China becoming the US's most formidable economic, technological, and military rival regionally and globally. Biden, like the rest of the US establishment, has become more hawkish on China over recent years - a shift that is likely to be the key legacy of the Trump years in US foreign and trade policy (Kynge & Luce 2020). Intensified US pressure to curb Chinese industrial subsidies, end forced technology transfers to Chinese companies and open up Chinese digital services markets to US companies could be one outcome of this shift. Using Trump's additional tariffs on Chinese products as bargaining chips in eventual negotiations to improve US access to Chinese goods and services markets could be another (Friedman 2020). Keeping the tariffs for as long as possible also may be attractive politically given their perceived popularity in rustbelt states.

In some respects, the discontinuities with the Trump approach on China are more interesting, especially from the perspective of countries like Australia. These discontinuities are likely to show up in greater emphasis on labour and environmental issues and human rights, as well as in tone – removing for example the stark ideological language that marked recent speeches by former Vice President Pence and former Secretary of State Pompeo[44] - and more emphasis on old fashioned diplomacy and, above all, approaching China through engaging allies.

The notion that the door to the US President is ajar on China is welcome news for all of America's friends but what it precisely means is difficult to discern at this point. Reaching a common position with allies on China appears to be a major priority for the early part of the Biden Administration insofar as it could increase US leverage in discussions with China: the United States has allies, China does not — at least in the formal sense that countries like the United and Australia have (Friedman 2020). But this still leaves a lot of unanswered questions:

- How will a common position be achieved? Is the expectation that the United States leads and others more or less fall into line? Or is there an understanding that different countries have their own interests and priorities, and that these have probably strengthened since the United States withdrew its signature from the Trans Pacific Partnership Agreement in January 2017? If so, the process of hammering out a common position, if at all possible, must involve working with partners and accepting that reaching agreement could be difficult and time consuming.
- And what is the purpose of developing a common position beyond giving the United States some additional leverage with China? Is the intention to create some kind of grouping, or groups, of democracies in ideological opposition to Chinese authoritarianism? (Biden 2020b).[45] If so, the term 'allies' belongs to the world of national

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44. For example Pence (2018) and Pompeo (2020).

45. More detail is provided in Biden's briefing remarks to National Security Agency Review Teams (Biden 2020a): he referred to delivering 'smart and effective American leadership' by working with democratic partners around the world on a wide range of issues in the US-China relationship from 'a trade and economic agenda that protects American workers, our intellectual property, and the environment – to ensuring security and prosperity in the Indo-Pacific region, to championing human rights….'

security and cuts across the widespread cooperation needed within regions and globally to address trade problems effectively. Much the same could be said about the cooperation needed to address other challenges like macroeconomic imbalances, climate and pandemics (Churche 2020).

So what should Australia be arguing for on trade policy in early engagement with the Biden Administration? And, a much harder question, what influence can Australia bring to bear on the United States? Many countries will be seeking early engagement with an apparently more open Administration and it would be easy for our voice to get lost amid the cacophony.

Australia could usefully make four, possibly five, points. First, Australia welcomes the prospect of a US-China relationship that is more structured, less personal and less noisy than during the Trump Administration. It offers the best medium-term prospect of developing a new working relationship between the two countries, which in turn could help, even indirectly, to improve third country relationships with China.

Second, Australia is being subjected to coordinated economic coercion by China. While Australia has borne the brunt of this recently, China has a history of using economic pressure to achieve political ends going back at least a decade (Hufbauer & Jung 2020). Australian and US interests line up on addressing China-related problems on protecting intellectual property and forced technology transfers. Ideally, they also should line up on the misuse of trade to achieve political ends, though achieving this alignment would be challenging: the assertive integration of US trade, economic, foreign policy and strategic considerations pre-dates the Trump Administration (Blackwill & Harris 2016).

Third, Australia should be frank about keeping alliances and national security out of the engagement on the open trading system, and upfront about not joining any US-led coalition against China on trade or other matters that does not go to our core national interests. Overtures that seek to 'contain' China or fortify an 'American-led world order' resonate with some groups in Australia. But joining coalitions that have such objectives would not be in Australia's interests:

- 'In a world in which power is more evenly distributed, a rules-based order and a US-led world are not the same thing' (Rachman 2020) because countries from China and India to Brazil and Indonesia are looking to a rules-based order that reflects their interests and not just those of a small group of Western countries. The limitations of this small group setting and implementing the global agenda were revealed dramatically during the Global Financial Crisis – hence the rationale for meetings of G20 leaders - and were revealed yet again in responding to the pandemic.
- Joining such coalitions would potentially put us at odds with Indonesia and other regional partners who, in all probability, would oppose them. We have a firm interest in pursuing good relations with both the United States and countries in our immediate region, including China. We also have a firm interest in working with China on an issue-by-issue basis as a member of broad-based groups that hopefully include the United States and China

Fourth, the Biden Administration has signalled that it will not limit options on the Phase One Agreement by taking early decisions but instead will conduct a full review and consult with allies in order to 'develop a coherent strategy' (Friedman 2020). Both should be encouraged. Reviews and consultations provide a good opportunity for Australia to outline our major concerns about the minimum import commitments in the Agreement for 2021 and the possibility that they might be extended (as provided for in the current Agreement). Ideally the commitments should be scrapped immediately because they distort trade, particularly in agricultural commodities, and weaken the rules-based system of international trade. It also is unclear how policies that lead to more managed US-China trade could deliver more liberalising outcomes over time:

- One set of US policies is promoting greater self-sufficiency and reducing overall engagement with China, particularly across technology transfers, investment and people-to-people movement. On trade, however, the logical end point of the Agreement is much higher levels of trade enmeshment.
- The United States wants a more market oriented Chinese economy to develop over the medium-to-long term. By entrenching a managed trade approach, the Agreement is taking China in precisely the wrong direction by strengthening central planners over those wanting to open up more to market forces.

But the bottom line is that the minimum import provisions should not be allowed to distort trade beyond the end of 2021. Anything earlier than that should be regarded as a bonus.

Australia also needs clarification on if, and under what circumstances, the Biden Administration might consider negotiating a Phase Two Agreement and what, if at all, it sees relevant in the EU-China Comprehensive Agreement on Investment (CAI) concluded in principle at the end of 2020.[46] Depending on how it was framed, Australia, along with other countries, could benefit from steps over time leading to improved access for Chinese goods and services

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46. The CAI includes some elements that would be supported by the United States such as provisions on forced technology transfers and sectoral improvements in access to foreign investment in China. But it also presents challenges to the Biden strategy of close coordination among allies on policy towards China and raises questions on issues from enforcement mechanisms to labour and human rights (Brunsden, Kahn & Peel 2020; European Commission 2020).

to the US market in return for broad-based Chinese reforms in areas like industrial subsidies, state enterprises and protecting intellectual property. But we would not stand to benefit from a bargain that prolonged and increased China's minimum import commitments to purchase US goods.

And fifth, and at a much lower level of importance, the quicker the United States and China remove their additional tariffs the better. At one level, this is an innocuous point. The tariff war has done little to reduce the US trade deficit with China,[47] which was its original justification. Additional tariffs have distorted international trade for a range of countries, including Australia, though their impact has been reduced by agreed exemptions and partial exemptions. Taking early action on tariffs might improve prospects for allies and other trading partners working together on common strategies on China. But at another level, pressing hard for removing additional tariffs would quickly run into powerful headwinds because of different views between moderates and progressives within the Democratic Party over industry policy and on how best the United States should approach future trade negotiations with China. It may well be that the point is worth mentioning in passing but not with any particular emphasis.

This immediately raises the issue of Australia's influence on US trade and foreign policy because some of the above messages – particularly in relation to joining US-led coalitions - are not likely to be welcomed by the United States. There is no straight forward answer to this conundrum but the answer may well lie in not rushing to engage with the United States before actively coordinating with our regional partners and presenting common positions to the extent possible. And being a firm and unambiguous friend of the United States, many in the new Administration will be looking for seasoned people to talk to about policy towards China. We will have an early, but transient, opportunity to engage them, for which we must rely on the professional acumen of our diplomats in Washington and early contact with our ministers.

9. Policy for engaging with China

The immediate imperative for Australian trade and foreign policy is to stop the selective targeting of some Australian energy and agricultural commodities by China. That must involve stabilising and then improving relations. Allowing relations to continue to deteriorate would seriously damage our economy: economic growth would be slower and unemployment higher even if the shock from deteriorating relations was offset to some extent by a depreciating exchange rate and an accommodating monetary policy (Guttmann et al. 2019).[48] Deteriorating relations also would damage China's economy but the magnitude of the economic shock could be expected to be many times greater for Australia given that our economy is more exposed to China (particularly via trade and commodity market linkages) than China's is to our economy. In one recent set of simulations, the medium-term impact of (an admittedly unrealistic) scenario in which 95 per cent of Australia-China trade was shut down led to Australian gross domestic product and real disposable income falling by an estimated six per cent and 14 per cent respectively, compared with 0.5 per cent and 2.4 per cent for China (Tyres & Zhou 2020).

It may be that Australians are willing to bear the economic costs of a smaller, less vital, relationship with China in which foreign policy, strategic and security concerns are accorded greater weight relative to jobs and living standards. But to date the government has not initiated this conversation. If it were to do so, it would have to be borne in mind that making the most of the economic benefits from that relationship need not necessarily be inconsistent with the pursuit of our other interests. After all, if countries like Japan and Vietnam, with their complex histories with China, can manage their trade, economic and strategic relations with China, and if the European Union can negotiate an ambitious investment agreement with China while branding it as an economic competitor and systemic rival, Australia surely has similar skills and imagination to deal effectively with a difficult and fluid period in bilateral relations.

Dealing effectively will involve everything from resisting bullying and hectoring and building cooperative bilateral approaches to pursuing Australia's evolving national interests with China multilaterally and regionally and dealing with (and having better understanding of) the fallout from great power rivalry like the Phase One Agreement. Addressing risks from the Agreement remains important, but has fallen in priority because of the urgency of halting, and if possible repairing, damage to the Australia-China relationship that is poisoning bilateral trade and investment. Repairing the damage will not be easy or quick and will require at least as much priority and effort as went into ChAFTA. The Biden Administration might help here by restoring some civility and normality to international relations. But making this effort with the clear aim of stabilising the relationship, even if relations never approach the status quo ante, is key to Australian exporters having the same or similar terms of access to the Chinese market as those enjoyed by US exporters, as well as to much else.

47. According to the US Census Bureau, the deficit in goods trade in nominal US dollars fell from US$346.8 billion in 2017 and US$375.2 billion in 2018 to US$345.2 billion in 2019 and US$252.9 billion in January-October 2020.

48. Note: the paper does not deal with a shock from deteriorating Australia-China relations but rather the spill-overs from a shock in China on Australia.

For Australia as a mid-sized economy, advancing many of our national trade interests must depend on working effectively with partners bilaterally, regionally and globally who may or may not share our values but who share similar challenges:

- How to build their trade and investment relations with a growing and stronger China without undermining their sovereignty
- How to persuade China to keep to the rules and, where new rules and new trade or other architecture is needed, to develop them in ways that reflect countries' national interests and contemporary regional economic and political realities (Raby 2020, Ch. 6)
- How to keep international trade open and growing. Australia is a trading nation as are many of the countries in our region.

Australia has never grown quickly during periods when international trade has been sluggish or depressed because the main traditional generators of wealth - resources and agriculture - rely vastly more on international markets than on domestic ones (McLean 2013). In pursuing open and growing international trade, Australia's continuing prosperity is linked fundamentally to keeping the multilateral rules-based system as strong as possible. Over recent times this has involved working with China and others on improving the WTO Appellate Body's functionality and re-writing rules on fisheries subsidies and electronic commerce, inter alia. In the future, it could involve working on issues like making the WTO more reflective of the changing roles of emerging and developing economies in the global trading system (Birmingham 2019) or on the possible merits of multilateralising the EU-China Investment Agreement. In counterpoint, it also could involve Australia and 'like-minded' countries considering potentially available multilateral, co-ordinated policy options if Chinese retaliatory trade actions contravene WTO or other obligations. Diplomacy would have to be at a high level and be quiet, far-sighted and considered.

Australia's continuing prosperity also is linked fundamentally to preventing the Asia-Pacific region from being divided into distinct US- and China-centred zones. The return of nineteenth century concepts of spheres of influence is a plausible outcome if Australia, our regional partners and others complacently assume that this is unlikely and that US-China trade rivalry – even decoupling at the extreme - can be reversed at some point through business logic prevailing over strategic rivalry. This logic may or may not prevail but, either way, Australia and its partners have a fundamental interest in exposing the risk and taking whatever steps they can to ameliorate tensions in the US-China relationship while reinforcing regional institutional architecture.

Australia is not on its own in dealing with the consequences of a rising and far more powerful China.

10. Concluding remarks

Advancing Australia's trade and wider interests regionally and globally ultimately comes down to having the clarity to assess Australia's national interest amid the uncertainties of the multipolar world. The challenge is to be clever enough to turn serious ideas into good, explainable evidence-based policy at a time when key government departments face tight budgets and many competing demands.

Harnessing good policy ideas on substance and on the processes to transform them into policy proved to be possible in supporting the reforms of the 1980s, 1990s and early 2000s. It has mostly lapsed with the 24 hour news cycle and the changing balance within policy departments between briefing and careful policy development as more powerful ministerial offices demand ever more 'urgent' briefing. For a country like Australia that has global and regional interests that can only be achieved in cooperation with others, rebuilding the capacity to develop serious ideas and turn them into cutting edge policies remains as vital as ever in responding effectively to the opportunities and challenges of a fast-changing world. And after a lot of smart thinking, the ideas and energy of our public service and universities are national assets that must not be squandered.

GLOSSARY

ABS
Australian Bureau of Statistics

APEC
Asia-Pacific Economic Cooperation

ASEAN
Association of Southeast Asian Nations

BRI
China's Belt and Road Initiative

BSE
bovine spongiform encephalopathy

ChAFTA
China-Australia Free Trade Agreement

Chinese Customs
General Administration of Customs of the People's Republic of China

CNOOC
China National Offshore Oil Corporation

CPTPP
Comprehensive and Progressive Agreement for Trans-Pacific Partnership: trade agreement between Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. CPTPP was signed on 8 March 2018, a little over a year after the United States withdrew its signature to the Trans-Pacific Partnership agreement. It has entered into force for seven countries so far

CAI
EU-China Comprehensive Agreement on Investment

EIF
entry into force

EU
European Union

f.c.f.
fresh, chilled or frozen

FDI
foreign direct investment

FIRB
Foreign Investment Review Board

FTA
free trade agreement

G20
The Group of Twenty is the premier international forum for global economic cooperation. Its members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, United States, and the European Union

GACC
General Administration of Customs of the People's Republic of China

G and S
goods and services

GDP
gross domestic product

GTAP
Global Trade Analysis Project computable general equilibrium model

HELE
high efficiency, low emissions [coal-fired power station]

hl
hectolitres

HS
Harmonized Commodity Description and Coding System developed by the World Customs Organization

IEA
International Energy Agency

ITC
International Trade Centre

kt
thousand tonnes

LME
London Metal Exchange

LNG
liquefied natural gas

LPG
liquefied petroleum gas

mb/d
million barrels per day

MFN
most-favoured-nation

Mt
million tonnes

n.e.s.
not elsewhere specified

NTBs
non-tariff barriers

NTMs
non-tariff measures

PIIE
Peterson Institute for International Economics

Phase One Agreement/Agreement
US-China Economic and Trade Agreement. The Agreement was announced on 13 December 2019. It was signed in Washington on 15 January 2020 and entered-into-force on 14 February that year

ppt
percentage point

RCEP
Regional Comprehensive Economic Partnership. The Agreement was signed on 15 November 2020 between ASEAN members, Australia, China, Japan, New Zealand, and the Republic of Korea

Sinopec
China Petroleum and Chemical Corporation

TPP
Trans-Pacific Partnership Agreement between Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam, and the United States was signed on 4 February 2016. It was not ratified as required and did not enter into force

TRQ
tariff rate quota

USDA
United States Department of Agriculture

USDA ERS
USDA Economic Research Service

USDA FAS
USDA Foreign Agricultural Service

USDA FSIS
USDA Food Safety Inspection Service

US EIA
United States Energy Information Administration

USTR
United States Trade Representative

WTO
World Trade Organization

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