

TRADE AND INVESTMENT NOTE

HOW DEPENDENT ARE AUSTRALIAN EXPORTS ON CHINA?

FEBRUARY 2015

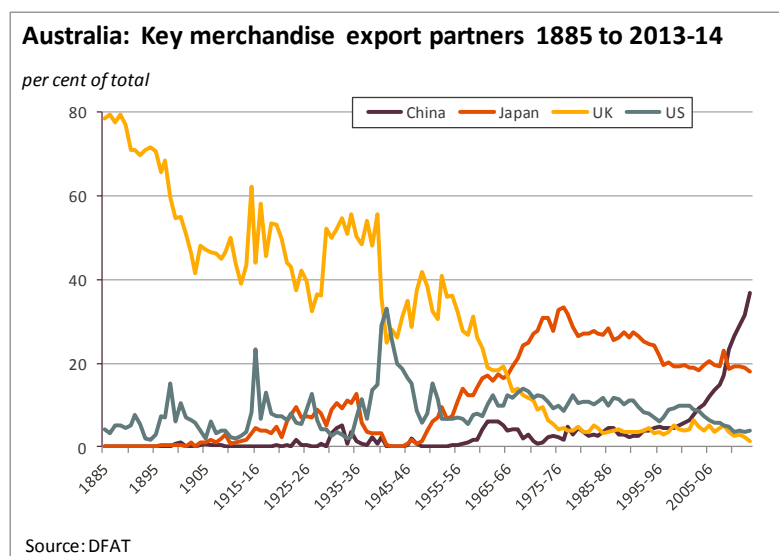


Australian Government
Australian Trade Commission



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HOW DEPENDENT ARE AUSTRALIAN EXPORTS ON CHINA?



Key points

- China has been Australia's most important export market since 2009. In 2013-14, Australia sold China goods and services worth A\$107.5 billion, which accounted for roughly one in every three export dollars earned over the financial year.
- The last time that a single export market was this important to Australia was more than half a century ago, in 1952-53, when the UK accounted for almost 40 per cent of Australian merchandise exports.
- In terms of the growth in exports, China's role was even more critical: increases in sales to China alone accounted for almost 80 per cent of all Australian export growth in value terms in 2013-14.
- Australia is in the global top 20 of countries ranked by their export exposure to China. And while Australia's export exposure to China is much lower than the kind of export exposure that (for example) Canada or Mexico have to the United States, it is still at the high end for developed and high income emerging market economies.
- Australia's export concentration index has increased in recent years, reflecting both the overall rise in exports to China plus the dominant role played in those same exports by resources in general and iron ore in particular. On this measure, Australia has a greater level of export concentration than do most other developed and high income emerging market economies, but a lower level of export concentration than many major resource exporters.
- Measured as a share of GDP, Australia's overall exposure to China 'export risk' is modified by a relatively low overall share of exports in output. So, for example, countries like South Korea, Malaysia, Thailand and Chile, all of which have a lower export share to China than Australia, all have a higher exposure when those exports are measured as a share of their GDP.
- Looking ahead, the changing pace of Chinese growth, shifts in its composition, and the implementation of the China-Australia Free Trade Agreement (ChAFTA) all have the potential to influence the bilateral trade profile. In particular, greater diversification of Australia's trade with China seems to be one potentially important outcome of the new FTA, which should help reduce export concentration.

Mark Thirlwell

Chief Economist

Where to find the data:

Key source: Detailed information on Australia's exports to China is available from the Trade and Economic Statistics section of the Department of Foreign Affairs and Trade (DFAT) web site. General information on trade flows is available from the Australian Bureau of Statistics (ABS).

Publication date: The data here mostly refer to the 2013-14 financial year.

More information: The concentration index data used in the text is available from the UNCTAD web site. The data on trade in value added are available from both the OECD and WTO web sites. Other sources are cited in the text.

ANALYSIS

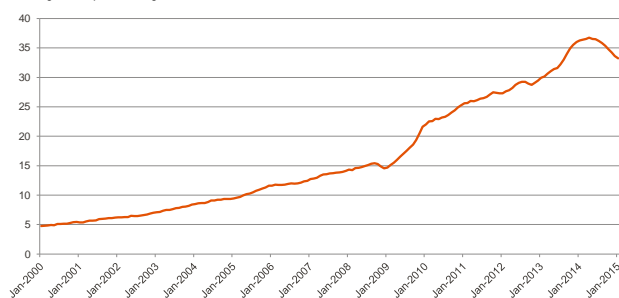
China is Australia's most important export market

China is currently Australia's most important export market and has been since 2009-10.¹ In 2013-14, the Northeast Asian giant was our largest export market for both goods and services, with a total value of goods and services exports sold of A\$107.5 billion.² Sales to China accounted for 32.5 per cent of all Australian exports of goods and services that year: that is, roughly one in every three export dollars earned over the past financial year came from sales to our largest trading partner. Tracking the Australian Bureau of Statistics (ABS) monthly data on merchandise exports shows that, on a rolling annual basis, Australian exports to China reached roughly 37 per cent of the total in April 2014, although they had fallen back to about 33 per cent by January 2015 (reflecting in part the drop in the price of key resource exports, including especially that of iron ore).³

Exports to China: At their peak?

Merchandise exports to China, Jan 2000 - Jan 2015

Percent of total goods exports, rolling annual total



Source: ABS. Note excludes confidential items.

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In terms of the growth in exports, China's role was even more critical than its contribution to the overall totals. Australia's total exports of goods and services increased by 9.5 per cent over 2013-14 to be up by A\$28.7 billion; exports to China alone grew by 27 per cent, or A\$22.8 billion. That is, China accounted for almost 80 per cent of all Australian export growth in value terms 2013-14. The scale of China's contribution to overall export growth dwarfed that of every other major trading partner: it was roughly ten times the size of that from Japan or the United States, for example.

¹ Since 2009 on a calendar year basis.

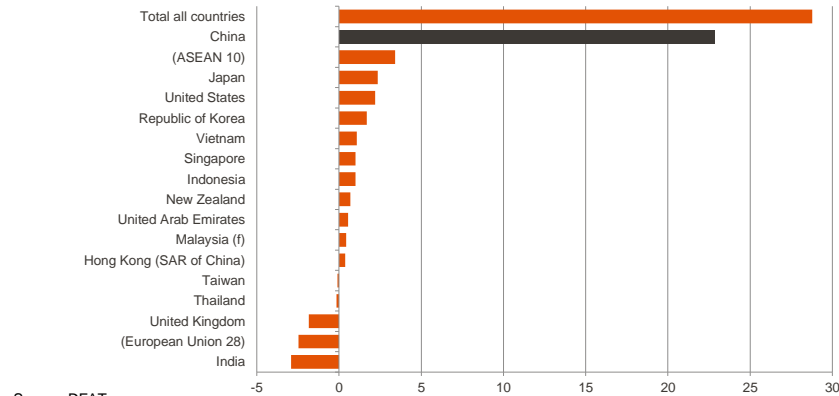
² This total is based on DFAT estimates, which are based on unpublished ABS data.

³ Note that the monthly ABS totals do not include exports of confidential items to China. That means they exclude a range of commodities including Alumina, Nickel alloys, Nickel mattes, mineral sands, natural gas and uranium ores. See Neil Batty and Frank Bingham, *Australia's exports to China 2001 to 2011*. DFAT. December 2012.

Growth in exports 2013-14: All about China

Australia: Growth in exports to top 15 markets plus EU-28 and ASEAN-10, 2013-14

A\$ billion



Source: DFAT

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Resource exports, led by iron ore, dominate goods exports

China's share of merchandise (that is, goods) exports was even larger than its share of combined goods and services exports. At A\$100 billion, sales to China accounted for almost 37 per cent of total goods exports and about 85 per cent of the increase in dollar values in 2013-14. More than 5,600 Australian exporters are currently involved in selling goods to China.⁴

Exports of resources in general, and of iron ore in particular, have of course been central to the story of the China export relationship, just as they have been to Australia's overall trading outcomes in recent years. Iron ore was Australia's leading overall export in 2013-14, accounting for about 23 per cent of total exports of goods and services and about 27 per cent of goods exports. Exports of iron ore to China alone accounted for about 76 per cent of all iron ore exports in the same year, or roughly 17 per cent of all of Australia's export earnings. China has been Australia's largest export market for iron ore since 2004.

⁴ The estimate for the number of goods exporters is for 2012-13. The ABS doesn't publish a breakdown by numbers for exporters of services.

The China – Iron ore story

Australia: China and iron ore



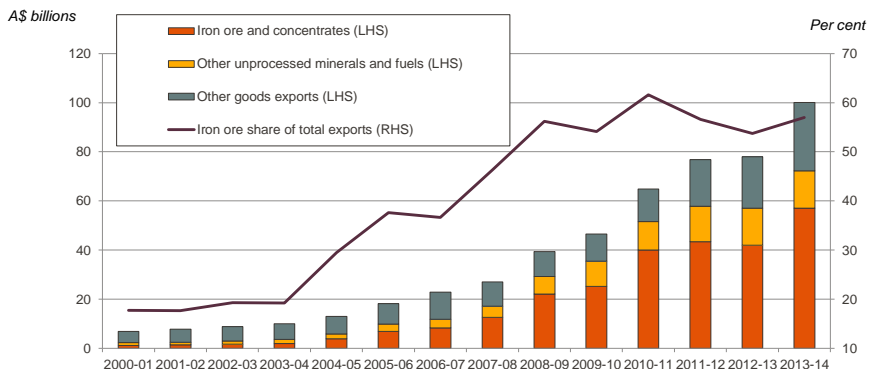
Source: DFAT

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Back at the start of the century (in 2000-01), total Australian goods exports to China were worth just A\$6.8 billion, and of that total, exports of iron ore and concentrates accounted for some A\$1.2 billion, or about 18 per cent of all merchandise exports to China. By 2013-14, the value of total goods exports had risen to A\$100 billion and that of exports of iron ore to A\$57 billion, or 57 per cent of the total. That was their second highest share since 2000-01, although it was down from the peak reached in 2010-11 when iron ore and concentrates accounted for about 62 per cent of merchandise exports to China.

Goods exports: The role of iron ore

Australia: merchandise exports to China, 2000-01 to 2013-14



Source: DFAT

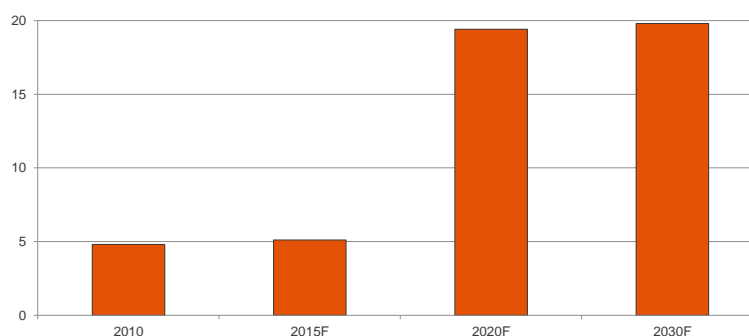
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Australia's second most important export overall in 2013-14 was coal, which accounted for about 12 per cent of total exports of goods and services and 15 per cent of goods exports. It was also the second most important Australian export to China in the same year, with exports worth some A\$9.3 billion or about nine per cent of total merchandise exports to China, and more than 23 per cent of all Australian coal exports.

Goods exports: The coming LNG surge

Exports: Australian LNG exports to China

Billions of cubic metres



Source: BP Statistical Review of World Energy and BREE

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Australia's third largest export in 2013-14 was natural gas, which accounted for five per cent of total exports of goods and services and six per cent of goods exports. Unfortunately, ABS confidentiality restrictions mean that we do not have a country breakdown for LNG exports. However, according to the 2014 BP Statistical Review of World Energy, as of 2013 China was Australia's second largest export market for LNG, taking about 16 per cent of total Australian exports of 30.3 billion cubic metres (bcm) of LNG that year (far behind Japan, which accounted for 81 per cent).⁵ According to forecasts by the Bureau of Resource Economics, Australian LNG exports to China could grow from about 5bcm in 2015 to 19.4bcm by 2020 and 19.8bcm by 2030, taking Australia's share from about 23 per cent of Chinese LNG imports in 2015 to more than 50 per cent by 2030.⁶

China is not just a resource export story

While resources dominate Australia's current bilateral export profile, and while the forecast growth in LNG exports will help ensure that resource trade flows remain substantial in the future, China has also become an increasingly important market for other, non-resource exports.

For example, in 2013-14, China accounted for almost 39 per cent of all exports of primary products by Australia, including 15 per cent of Australia's total exports of unprocessed food and 11 per cent of exports of processed food (with the latter including about 14 per cent of total exports of meat and meat preparations, and about 15 per cent of all exports of processed dairy products).⁷

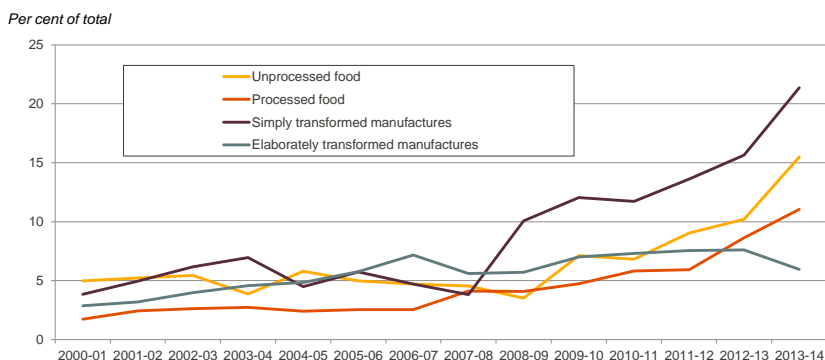
⁵ Data are from *BP Statistical Review of World Energy 2014*.

⁶ Forecasts are taken from Bureau of Resource Economics. *Gas Market Report*. November 2014. Table 3.7.

⁷ Based on the TRIEC classifications.

Goods exports: Beyond resources

Australia: China and selected goods exports



Source: DFAT

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In 2013-14, China was also the destination for about 11 per cent of Australian exports of manufactures, including 21 per cent of exports of simply transformed manufactures. The share of exports of elaborately transformed manufactures was much lower, at only six per cent, but China was relatively more important for some key sub-sectors here including pharmaceutical products (more than 11 per cent of total Australian exports in this category), plastics (about 13 per cent), other chemicals (more than 12 per cent) and other engineering products (almost eight per cent).

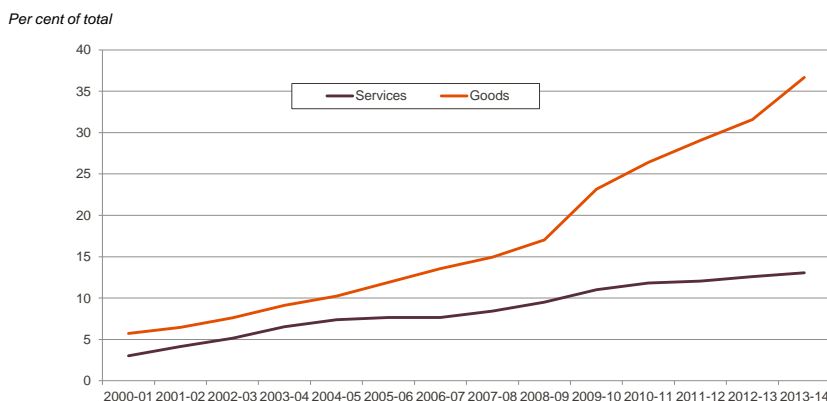
China is also our largest export market for services

Although the degree of China's dominance as a destination for goods exports is not replicated for exports of services, nevertheless, China is still Australia's single most important services export market. Total exports of services to China in 2013-14 were worth A\$7.5 billion or about 13 per cent of all services exports.⁸

⁸ Note that the numbers for exports of services will *underestimate* Australia's total sales of services since they do not include the sale of services through foreign affiliates. For more on the role of Foreign Affiliates Trade in Services (FATS), see a previous trade and investment note, *The facts about FATS*.

Services exports: A relatively more modest role

Australia: Goods and services exports to China

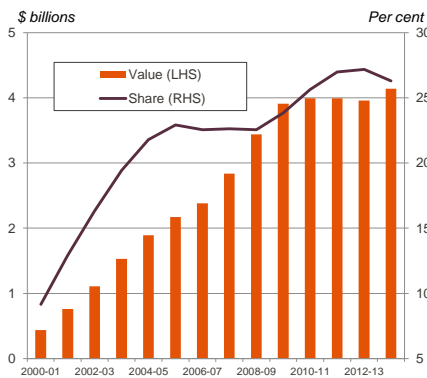


Source: ABS

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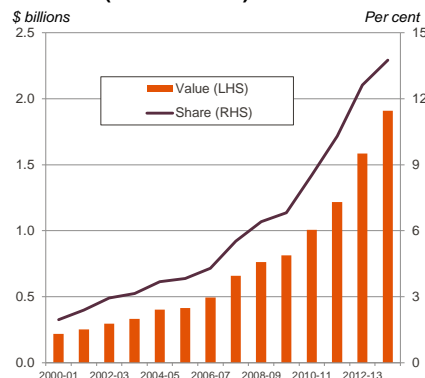
Services exports: Education and tourism

Australia: Exports of education travel services to China



Source: ABS

Australia: Exports of personal travel services (ex education) to China



Source: ABS

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In 2013-14, Australia's leading services exports were education-related travel services (the fourth most important export overall), at A\$15.7 billion,⁹ and personal travel (excluding education services) at A\$13.9 billion (ranked #5).¹⁰

⁹ Note that the figure cited here is less than the total figure for exports of education-related services of A\$16.3 billion which also includes other education services (such as correspondence courses, consultancy services and services through educational institutions) and royalties. These other categories only account for about 3.6 per cent of the total. See Department of Education, *Export income to Australia from international education activity in 2013-14*. Research Snapshot. November 2014.

¹⁰ Note that personal travel services excluding education are not the same thing as tourism exports, which are reported separately. Overall tourism exports for 2013-14 are estimated at A\$27.2 billion, according to the ABS Tourism Satellite Account.

China is a critical market for both sectors. In 2013-14, for example, China accounted for about A\$4 billion, or more than 26 per cent, of Australia's exports of education-related travel services. Likewise, it was by far the largest source of international students, with an estimated 119,237 students present in Australia in 2013, or about 29 per cent of the total number of overseas students. That was well ahead of the second largest source of foreign students (India, with 36,208 students or 8.8 per cent).¹¹

In terms of exports of personal travel services, China accounted for A\$1.9 billion of exports in 2013-14, or about 14 per cent of the total. Short-term visitor arrivals from China have been averaging more than 70,000 per month, or more than 13 per cent of overall short-term arrivals. According to estimates from Tourism Research Australia, for the year ending September 2014, China was Australia's most valuable international tourism market with Chinese visitors contributing some A\$5.4 billion of spending, or almost 18 per cent of total tourism expenditure (and about 30 per cent of total growth in that expenditure).¹²

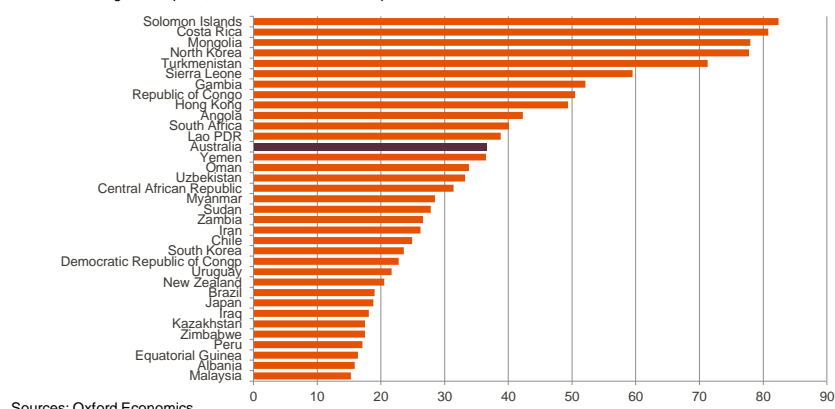
Putting Australia's exports to China in perspective

While China is now a central player in global trade and a key trading partner for many of the world's economies, Australia is in the global top 20 of countries when ranked by their export exposure to China.

Exports: Dependence on China by country

Selected economies: Share of merchandise exports to China (top 35)

Per cent of total goods exports, 2013 for all economies except Australia, where share is for 2013/14



Sources: Oxford Economics

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The almost 37 per cent of goods exports recorded in 2013-14 is much lower than the kind of export dependency on China demonstrated by likes of the Solomon Islands, Mongolia, or Hong Kong.¹³ But it's significantly higher than that of other regional economies like Japan, Korea and Malaysia, and ahead of other major resource exporters like Brazil and Chile, as well as neighbouring New Zealand (although it's lower than that of South Africa).

¹¹ Department of Education. *International student numbers 2013*. Research Snapshot. April 2014.

¹² See Tourism Research Australia. *Tourism Update: Updated results to State of the industry 2014. September Quarter 2014*. December 2014.

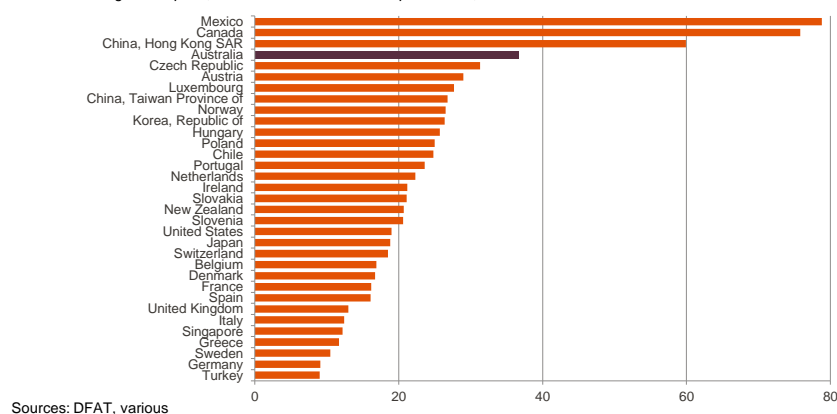
¹³ Hong Kong's trade data reflect a very high share of re-exports.

A slightly different way to think about the same broad issue is to compare our current export share with China to the export share of other economies with *their* leading trading partners, China or otherwise. The simplest measure of this kind is the share of a country's total exports going to its number one export market.

Exports: Dependence on largest market

Selected economies: Share of merchandise exports to largest export market

Per cent of total goods exports, 2013 for all economies except Australia, where 2013/14



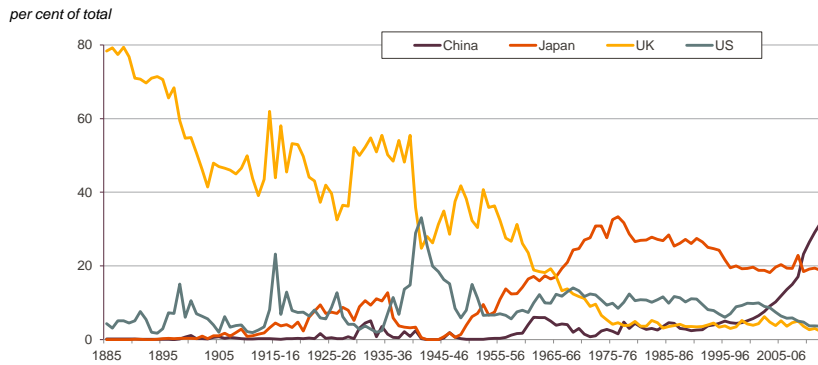
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The numbers here show that Australia's China exposure is significantly lower than the very high level of export dependence that Mexico and Canada have on the United States, for example. And as already noted, it's also much lower than the export reliance of Hong Kong on China. But those countries aside, Australia's export exposure to China is at the high end of what we might call 'leading market export exposure' for the country sample of developed and emerging economies reported here.

Another way to benchmark Australia's current export ties with China is to take the long view, and compare today's position with our past dependency on leading trading partners. Seen in an historical context, the current reliance on Chinese demand is striking, but not unique. Still, the last time that a single export market was this important to Australia was more than half a century ago, in 1952-53, when the UK was the destination for almost 40 per cent of Australian merchandise exports. More recently, exports to Japan reached about 33 per cent of total goods exports in the mid-1970s, although Japan's share never quite reached the current China share.

Exports to China in historical perspective

Australia: Key merchandise export partners 1885 to 2013-14



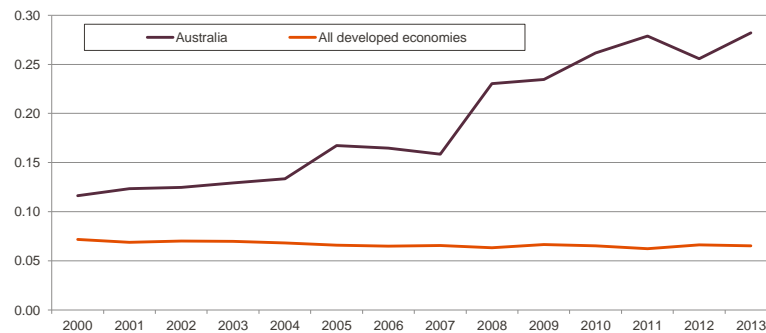
Source: DFAT

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Exports: Becoming more concentrated

Australia: export concentration index 2000-2013

Index ranges from 0 to 1, with 1 being most concentrated



Source: UNCTAD

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A more sophisticated indicator of export dependence combines data on the *direction* of trade with information on the *composition* of trade: that is, it takes into account both the geographic distribution of Australia's export markets and the product composition of those exports. One such measure is UNCTAD's concentration index.¹⁴ The UNCTAD index is normalized to be between 0 and 1: in the case of exports, an index value of one reflects the extreme case of a country exporting just one product to one market, or 'complete concentration risk', while at the other end of the scale, values closer to 0 reflect a more equal distribution of market shares among export markets and products. Unsurprisingly, tracking UNCTAD's export concentration index over time for Australia confirms that the combined

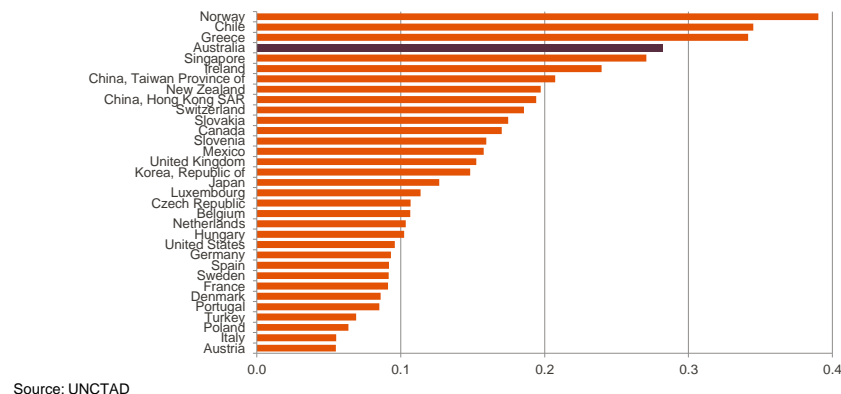
¹⁴ Technically, it is known as a Herfindahl-Hirschmann index.

resource-China boom has resulted in a period of increased concentration in Australia's export profile: from a value close to 0.1 in 2000, the index had increased to a value of 0.28 by 2013. That's a trend which also stands in marked contrast to the experience of other developed economies as a group, where the level of export concentration has been largely unchanged over the same period.

Exports: Relative concentration (1)

Selected economies: export concentration index 2013

Index ranges from 0 to 1, with 1 being most concentrated



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How 'high' is a value of 0.28? Well, by the standards of other developed and high income emerging economies, it looks pretty high. For developed economies as a group, the ratio was less than 0.07 in 2013, for example. And from a sample of developed and high income emerging economies, only Norway, Chile and Greece had higher concentration ratios than Australia in 2013 (although Singapore wasn't too far behind).

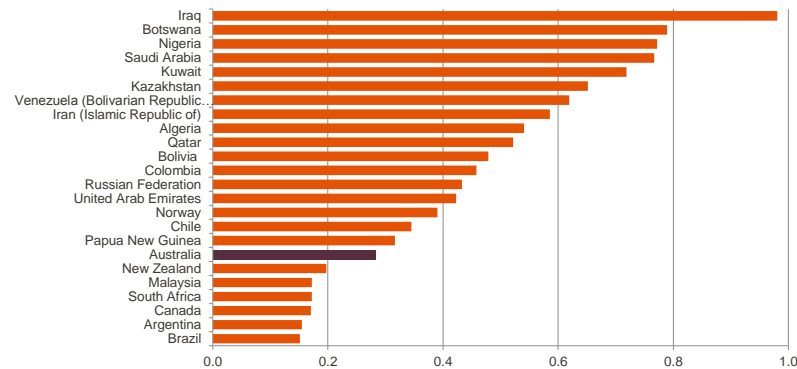
On the other hand, if the relevant comparison is instead with other major resource exporting economies, then the index value puts Australia towards the lower end of the scale. The major oil exporters in particular demonstrate a far greater level of concentration in their export mix, although Australia still ranks above Malaysia, Canada and Brazil, among others.¹⁵

¹⁵ New Zealand is included as an 'honorary' resource exporter in the chart below, purely for purposes of comparison.

Exports: Relative concentration (2)

Resource exporters: export concentration index 2013

Index ranges from 0 to 1, with 1 being most concentrated



Source: UNCTAD

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Some complicating factors

While an analysis of gross trade flows shows China accounting for about one third of all Australian exports and well over a third of Australian merchandise exports, more recent approaches to measuring trade flows suggest such measures can give a misleading picture of the underlying economic reality. In particular, the 'modern' view is that traditional bilateral trade statistics such as those reported above are flawed because they do not take into account the implications of global value chains (GVCs). The idea here is that, since gross trade flows report the destination country for exports solely on the basis of the country to which the exported goods (or services) are directly sold, they miss an important part of the story. That's because it's often the case that those same exports will be then processed by the importing country before being exported again to another market, either as a further input into a GVC or for final consumption in that third market. In these cases, although it is ultimately demand in the final market that determines demand for the original export, traditional export numbers will not reflect this.

To see how this works, take the following simple example.¹⁶ Suppose an Australia business exports A\$100 of steel to a Chinese firm. That Chinese firm then processes the steel, adding value of A\$10, to create a refrigerator which is subsequently exported to the United States, where it is sold as a finished good for A\$110. In this case, the traditional bilateral measure of trade would record Australian exports to China of A\$100, Chinese exports to the United States of A\$110, and Australian exports to the United States of zero. Total export trade would be reported as A\$210.

If, instead, the trade flows were measured in value-added terms, A\$100 of the A\$110 sale to the United States would now be allocated to Australia. So on a Trade in value-added (TiVA) basis, Australian exports to the United States would be \$100, Chinese exports to the United States would be A\$10 and total export trade would be A\$110. This approach both allocates exports to the appropriate source of final demand and avoids the double counting involved in the traditional approach.

The OECD and WTO have together produced a comprehensive database that allows us to examine TiVA, where the focus is on the value that is added in producing a product for export at each stage of the production process.

¹⁶ This summarises an example presented in Gerard Kelly and Gianni La Cava (2013), *Value-added Trade and the Australian Economy*. RBA Bulletin. March Quarter 2013. Pp. 29-37. They also include a helpful explanatory diagram on page 31.

Their measure ‘domestic value-added in foreign final demand’ is broadly equivalent to ‘exports of value-added’ and captures how a country’s total exports to a given market can combine both direct final exports and indirect exports of intermediates or inputs through other countries.

A qualification: Trade in value added

Australia: Gross and value added exports to China



Source: OECD-WTO TiVA database

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Unfortunately, one drawback with using TiVA statistics is that the data are only available with a lag, and the most recent OECD-WTO numbers are for 2009. Still, the OECD-WTO TiVA data show that back in 2009, although China accounted for more than 23 per cent of gross exports, its share of value added exports was appreciably lower, at closer to 18 per cent. So while China was still Australia’s largest export market on either measure, the TiVA numbers also suggest that only looking at gross flows does exaggerate China’s relative importance somewhat.

One metric used to compare the two different export flows is the ratio of value-added exports to gross exports, which can also be taken as an approximate measure of the domestic value-added content of exports. This is known as the VAX ratio.¹⁷ A VAX ratio that is less than one indicates that Australia’s value-added exports to China were less than its gross exports, while a ratio that exceeds one would indicate that value-added exports to China were larger than gross exports. We would expect the former to be the case when Australia’s exports are themselves inputs into a product which is sold on into a third market.¹⁸ Conversely, a VAX ratio greater than one would indicate that not only was Australia selling exports directly to China, but that in addition, exports to other economies were also used as inputs into products that were then subsequently sold to and consumed in China.

¹⁷ See Robert Johnson and Guillermo Noguera, *The value-added content of trade*. VoxEU. 7 June 2011.

¹⁸ An alternative explanation would be that our exports to China included a large share of imported inputs. Given the make-up of our exports, however, this is unlikely to be a major part of the story.

Australia's trade in value added with China

	Share of gross exports (per cent)	Share of value-added exports (per cent)	VAX ratio
2000	6.38	6.56	1.03
2005	13.95	10.68	0.77
2008	19.14	14.42	0.75
2009	23.51	18.33	0.78

Source: OECD-WTO TiVA database. Numbers are rounded to one decimal place.

Not surprisingly, since the mid-2000s, Australia's bilateral VAX ratio with China has been less than one.¹⁹ Again, the message is that TiVA data indicate that looking only at gross exports may over-estimate Australia's reliance on China as a source of export demand.

On the other hand, there are several factors that are likely to work in the opposite direction and suggest that looking at gross bilateral export flows will involve *underestimating* the relative importance of China to Australian exporters. For example, the impact of China on Australia's export performance is felt not just through the export flows themselves, but also through the impact on export prices and hence Australia's terms of trade (and exchange rate). Furthermore, since China is such an important contributor to regional economic developments, there are likely to be significant spillover effects from Chinese growth and trade to Australia's other regional trading partners. And of course, there is the impact of China as a key driver of global demand, and hence of overall international trade conditions.

In addition, while the focus of this paper is narrowly on exports, it's clear that China's economic influence on Australia is much broader than that. China is becoming an increasingly important source of capital, for example. It's also the case that the close connections between the two economies mean that developments in China can have a significant impact on Australia's exchange rate and other asset prices (for example, via the share market impact of changes in mining stocks) as well as more generally on business and consumer sentiment.

How exposed is Australia to a China 'export shock'?

There's no doubt that the economic rise of China has been a good news story for Australia's economy. China's rapid industrialisation and urbanisation helped to trigger a global resource boom that boosted the terms of trade, lifted government revenues and encouraged a surge in local resource investment. Chinese demand also provided an important source of growth during the dark days of the global financial crisis. And, as the previous analysis demonstrates, China is currently a critical driver of Australia's overall export performance. But is it possible to have too much of a good thing? In particular, is the current export dependence on China 'excessive' in any way?

Viewed from one perspective, this might seem like a strange question. After all, much of international trade theory is about the benefits of specialisation according to comparative advantage, and Australia's resource-led exports to China are pretty much a textbook example of that phenomenon and of the benefits it delivers. However, there's also a literature (admittedly, mainly applied to developing and emerging economies rather than a developed

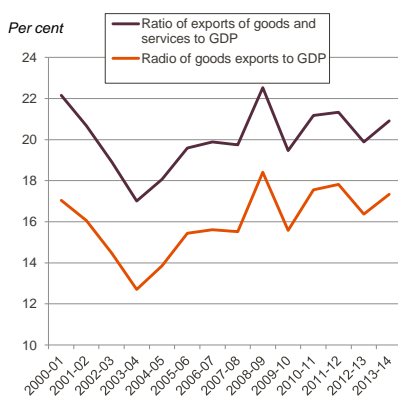
¹⁹ In contrast, Australia's bilateral VAX ratio with the United States is greater than one.

economy like Australia) which notes that there can be costs involved in having a high level of export concentration in the form of a risk of increased volatility in exports and overall economic growth. Perhaps the easiest way to think of this kind of ‘concentration’ risk is in terms of portfolio theory and the benefits of diversification. Or to put it even more simply, it’s the risk that is involved in ‘putting all of your eggs in one basket.’

So, how important is that risk? Australia’s ‘export risk’ to China is a combination of overall exposure to changes in exports (measured by the ratio of total exports to GDP) which captures exposure to a general export shock, plus measures of export concentration such as those set out above, which capture exposure to a specific country shock. A summary statistic that captures this information is the ratio of exports to China to GDP. Not surprisingly given the preceding discussion, this ratio has increased significantly over recent years, rising from a little bit more than one per cent in 2000-01 to almost seven per cent by 2013-14.

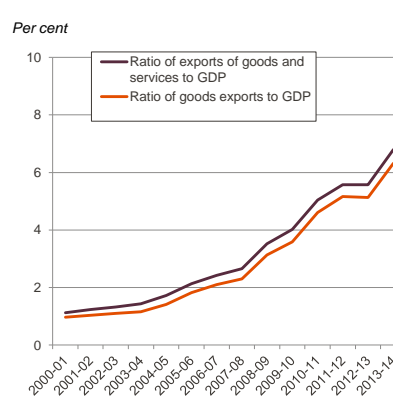
Exposure to export shocks

Australia: exports as share of GDP



Source: ABS

Australia: exports to China as share of GDP



Source: ABS

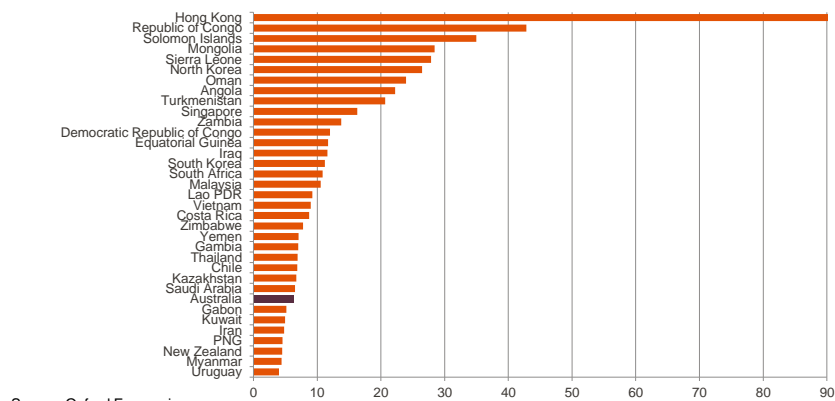
However, since Australia’s overall ratio of trade to GDP is relatively low²⁰, the economy’s total exposure to China ‘export risk’ turns out to be lower than that of countries with a higher ratio of trade to GDP but a lower level of export concentration with China. So, for example, South Korea, Malaysia, Thailand and Chile, all of which have a lower share of exports to China than Australia, nevertheless also all have a higher exposure when those exports are measured as a share of their GDP.

²⁰ Australia’s export to GDP ratio (and likewise its overall trade to GDP ratio) is relatively low by developed economy standards. That’s mainly a product of its remoteness from large economies (potential trading partners) and the size of its landmass. See Simon Guttman and Anthony Richards, *Australia’s trade openness*. RBA Bulletin. March 2005. Pp 1-4.

Exposure to China export shock: By country

Selected economies: Merchandise exports to China as share of GDP (top 35)

Per cent of GDP, 2013 for all economies except Australia, where ratio is for 2013/14



Source: Oxford Economics

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The outlook for Australia's export ties China

At least three factors seem likely to influence the future pace of Australian export growth to China and hence the level of our export exposure:²¹

- The future trajectory of Chinese growth;
- The composition of that growth; and
- The impact of the China-Australia Free Trade Agreement (ChAFTA).²²

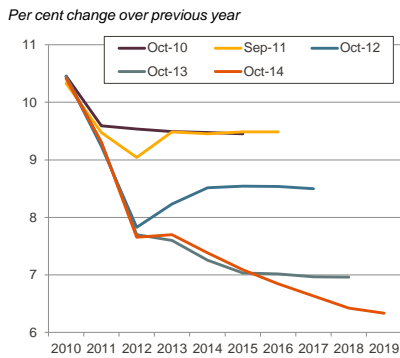
Starting with the first of these, one striking feature of the recent rise in Australia's export exposure to China is that it has occurred against a backdrop of a series of growth downgrades for the Chinese economy, along with a marked drop in the overall pace of Chinese trade growth. For example, as recently as October 2010, in its World Economic Outlook the IMF was still estimating Chinese medium-term growth at above a nine per cent rate. But by the time of the October 2014 WEO, actual growth had dipped close to seven per cent and medium-term growth forecasts had been scaled down to be closer to six per cent. At the same time, after growing at double digit rates in 2010 and 2011, growth in the volume of imports of goods and services has slowed significantly in recent years and export growth has fallen even more sharply.

²¹ Of course, a range of other factors beyond those listed here will also be important, including the drivers of demand for Australian goods and services in other markets, the performance of other Chinese trading partners, relative exchange rate movements, and variables influencing Australia's own supply response. Then there is the impact of increased LNG exports discussed earlier.

²² Negotiations on ChAFTA were concluded on 17 November 2014.

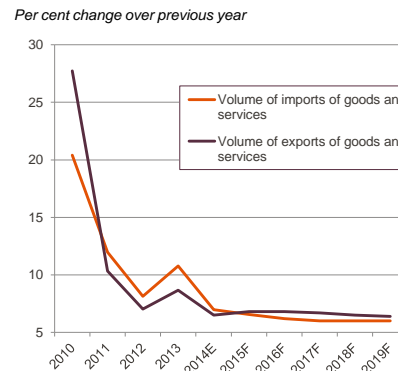
China slows: growth and trade

China: IMF forecasts of real GDP



Source: IMF World Economic Outlook database, selected years

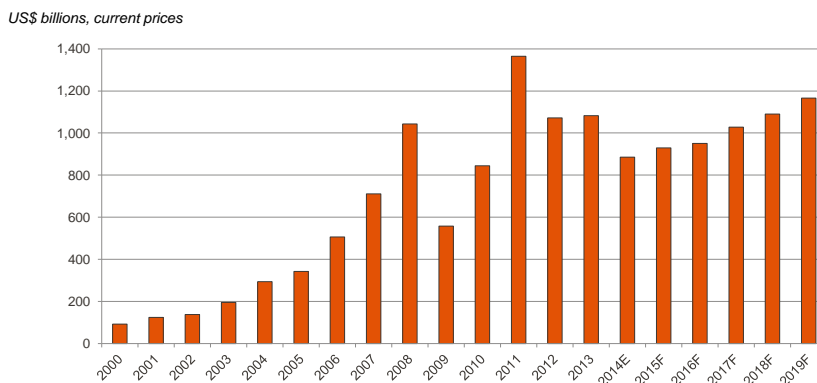
China: Growth in international trade



Source: IMF World Economic Outlook database, October 2014

Chinese growth: An alternative perspective

China: Annual growth in absolute US dollar value of GDP



Source: IMF World Economic Outlook database, October 2014

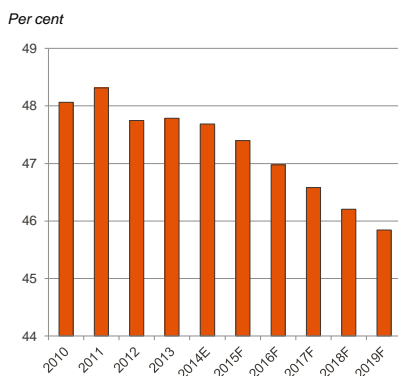
Still, while it's true that growth rates (both of overall GDP and of trade) have declined markedly in recent years, this is only part of the story. That's because it's also the case that those growth rates have been operating on a much larger base than was the case for the higher growth rates that China was achieving a decade ago. As a result, when measured in terms of the absolute dollar increase in GDP, China's GDP growth profile looks rather different. In particular, the dollar gains experienced in recent years are far above those experienced for most of the previous

decade.²³ And while it's true that 2014 result was down from the 2011-2013 period, it still looks pretty respectable. (Moreover, despite the cuts to its medium-term forecast of real GDP growth, the IMF still forecasts the size of absolute dollar GDP growth to increase over the next few years.)

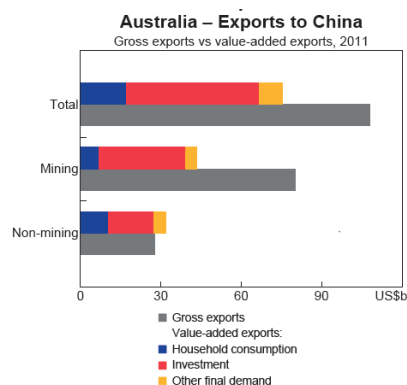
What about changes in the composition of Chinese growth? The slowdown in the pace of GDP growth described above is widely expected to be accompanied by a shift in growth drivers away from an investment-reliant growth model to one that gives a greater role to consumption. Since, as noted above, Australia's current exports to China are dominated by resources which might be expected to be geared towards China's current investment-driven growth model, the impact of this shift could be significant. Indeed, the impact of both this shift and the more general moderation of Chinese growth is arguably already showing up in the export accounts via the fall in the price of iron ore and other key resources (although much of this has really been a story about increased supply).

China: A new growth model?

China: Investment as a share of GDP



Source: IMF World Economic Outlook database, October 2014



Source: Gerard Kelly, Chinese rebalancing and Australian exports, RBA Bulletin December Quarter 2014

A recent article by Gerard Kelly in the RBA's Bulletin takes a look at this issue using value-added data.²⁴ As already noted, Australian exports to China are dominated by exports of iron ore and coal. The majority of these exports are used by China's metals manufacturing sector, and especially by steel producers. According to Kelly, investment accounts for more than half of the demand for Chinese metals manufacturing production, and the construction sector alone accounts for about two-thirds of this demand. In addition, almost one-third of the output of Chinese metals manufacturing is a product of foreign demand for Chinese output (usually in the form of exports from other sectors that use manufactured metals products as inputs).

Kelly notes that as of 2011, Chinese investment accounted for the largest share of Australian exports measured in value-added terms, both because it was the largest share of Chinese final demand and because it was weighted towards those Chinese industries like construction which tend to demand Australian resources. Further, Kelly calculates that each dollar of Chinese investment involved more than double the demand for overall Australian value-added output generated by a dollar of Chinese household consumption, and almost four times the demand for the Australian mining sector's value-added output. All else equal, Kelly reckons this implies that a shift of one dollar

²³ The appreciation of the RMB against the US dollar over some of this period also played a role in boosting the US dollar value of Chinese GDP.

²⁴ See Gerard Kelly, *Chinese rebalancing and Australian exports*. RBA Bulletin. December Quarter 2014. Pp.23-29. Kelly uses data from the World Input-Output Database (WIOD), an alternative source of data on value added trade to the OECD-WTO database cited earlier.

from Chinese investment to consumption would reduce demand for Australian value-added output by about 0.8 cents, of which 0.7 cents would be from the Australian mining industry.

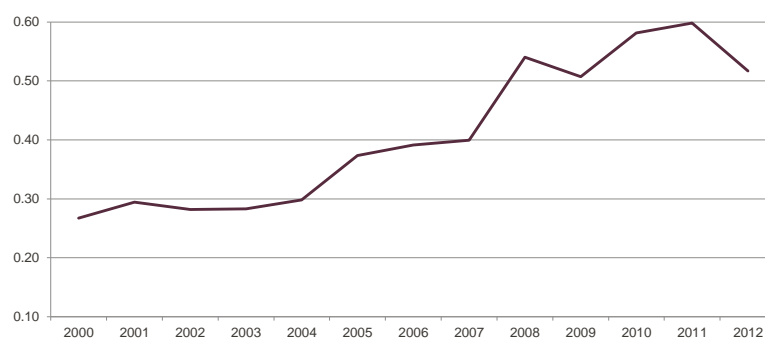
At the same time, however, it seems likely that an increase in the consumption share in Chinese GDP would increase demand for a range of items including food, beverages education and tourism, which could contribute to diversifying Australia's exports to the China market.

Finally, the future implementation of ChAFTA could prove to be another potentially important source of export diversification along product lines given the improved market access it will deliver to a wide range of Australian exports including in the agribusiness and services sectors.

Exports: Diversifying our China trade?

Australia: Bilateral export concentration index (China) 2000-2012

Index ranges from 0 to 1, with 1 being most concentrated



Source: UNCTAD

Australia Unlimited

In this context, remember that while part of the increase in the export concentration index discussed earlier reflects the growing share of Australian exports going to China overall, the other part reflects developments in the composition of our exports to China. Australia's bilateral concentration index with China provides some insight into how this has changed over time (the bilateral concentration index measures the extent to which exports to a given market are concentrated on several products or are distributed more evenly across a range of products.) This bilateral concentration index shows that the product concentration of Australian exports to China had been increasing since 2003, although it fell in 2012. The combination of changes in the composition of Chinese growth and the implementation and take-up of ChAFTA could see this decline further in the years ahead.