

bankwest



Curtin University



BANKWEST CURTIN ECONOMICS CENTRE

# TIGER, TIGER, BURNING BRIGHT?

Western Australia's trade and economic development with Asia

Focus on Western Australia Report Series, No. 5  
September 2015



# Contents

List of figures	ii
List of tables	iii
Foreword	iv
Executive summary	v
Key Findings	v
Introduction	1
<b>A brief history of WA trade</b>	
From sheep's back to resource boom	4
WA's contribution to Australian trade	6
Dutch disease?	11
<b>WA's international trade profile</b>	
What do we sell?	17
WA trading patterns over time	18
Who do we sell to?	21
<b>Trade and new business opportunities</b>	
A tale of two markets	26
Established and emerging trade sectors	28
A focus on quality	32
WA as a 'knowledge economy' – translating innovation to export	33
Country trade partnerships	34
<b>WA trade and regional development</b>	
WA regions and their diversity	40
WA regions: Workforce and nature of businesses	41
WA regions and international trade	47
Optimising WA regional trade and economic development	49
<b>WA's trading environment – benefits and barriers</b>	
Education services in WA: Education as an attractor to international business and investment	52
Barriers to WA regional trade	54
To market, to market...	55
<b>WA trade strategy and policy</b>	
What do Free Trade Agreements mean for WA?	58
Western Australia Pty – how are we selling the State?	59
<b>Summary and conclusions</b>	62
<b>Glossary</b>	66
<b>References</b>	70

## List of figures

<b>Figure 1</b>	Australian export shares by states/territories: 2006-07 and 2013-14	6
<b>Figure 2</b>	Net exports as a percentage of GSP/GNP, WA and Australia: 1990 to 2014	8
<b>Figure 3</b>	Exports by states and territories, 1990 to 2014: national share and exports per \$1bn of GSP	9
<b>Figure 4</b>	Currency exchange rates and Trade Weighted Index for Australia: 1990 to 2015	12
<b>Figure 5</b>	Share of capital expenditure in Western Australia, by industry category: 1989 to 2015	12
<b>Figure 6</b>	Value of export sales in Western Australia by commodity group: 2006-07 to 2013-14 (\$m exports per \$bn of GSP)	13
<b>Figure 7</b>	Share of goods and services exports from Western Australia by commodity group: 2013-14	16
<b>Figure 8</b>	Net exports from WA and Australia to key country groups: share of GSP/GDP, 1990 to 2014	21
<b>Figure 9</b>	Total net exports from Western Australia by Asian country partner: 1999-2000	23
<b>Figure 10</b>	Total net exports from Western Australia by Asian country partner: 2014-15	24
<b>Figure 11</b>	Real annual GDP growth, advanced and emerging Asian economies: 2008 to 2016	27
<b>Figure 12</b>	Export sales for major commodity groups, by state/territory: value of exports and national share, 2006 to 2014	29
<b>Figure 13</b>	Exports and imports from WA to selected Asian countries: 1990 to 2015	35
<b>Figure 14</b>	The regions of Western Australia and principal industries	40

## List of tables

<b>Table 1</b>	Composition of the West Australian economy, by industry sector: 1990-91 to 2013-14	<b>5</b>
<b>Table 2</b>	Value of Australian merchandise exports by states/territories: 2006-07 to 2013-14	<b>7</b>
<b>Table 3</b>	Value of exports from Western Australia, by commodity/service group: 2006-07 to 2013-14	<b>17</b>
<b>Table 4</b>	Value of imports to Western Australia, by commodity/service group: 2006-07 to 2013-14	<b>19</b>
<b>Table 5</b>	Net exports and total trade in Western Australia, by selected commodity/service group: 2006-07 and 2013-14	<b>20</b>
<b>Table 6</b>	Real GDP growth – key countries and areas: 2008 to 2014 (actual) and 2015-16 (forecast)	<b>26</b>
<b>Table 7</b>	Regional WA workforce by industry: 2011	<b>42</b>
<b>Table 8</b>	Number of Australian businesses by industry in regional WA: 2014	<b>43</b>
<b>Table 9</b>	Number of large Australian businesses by industry in regional WA: 2014	<b>45</b>
<b>Table 10</b>	Number of small Australian businesses by industry in regional WA: 2014	<b>46</b>
<b>Table 11</b>	Value of mining production in regional WA: 2006-14	<b>47</b>
<b>Table 12</b>	Western Australia exports by major regional ports: 2011-12 and 2012-13	<b>48</b>
<b>Table 13</b>	Western Australia trade volume by major regional ports: 2013-14	<b>48</b>
<b>Table 14</b>	International students in WA by sector: 2012-2014	<b>52</b>
<b>Table 15</b>	International student enrolments in higher education by top 10 nationalities: 2012-14	<b>53</b>

## Foreword



There is a general sense of unease with the recent slowdown in China's economic growth. Large businesses and the State's finances have suffered as a result. But is China the 'be all and end all' of the focus on Western Australia trade policies and objectives? What new trading opportunities with other Asian countries exist for WA businesses, and how well positioned are the State's businesses to expand the scale and composition of its trade with Asian partners?

*Tiger, Tiger, Burning Bright? Western Australia's trade and economic development with Asia* is the fifth report in the Bankwest Curtin Economics Centre's Focus on Western Australia series. The report examines a number of key questions relating to the composition and direction of trade by West Australian businesses and consumers. These include issues that affect current trading patterns with Asia, and opportunities for enhanced future trade and strengthened economic relationships with China, Japan and other countries in the Asia-Pacific and Indo-Pacific regions.

International trade has a role to play in strengthening industrial sectors within the WA economy – including, but also extending beyond, the mining and resources sectors. Trade is also a critical factor in supporting a diversification of the strengths in the WA economy.

The report reminds us that as important as China is to the economic fortunes of the state, it is by no means the state's only export destination. To focus solely on China would be myopic. There are new partnerships to forge, emerging industries to support, infrastructure bottlenecks to overcome and the WA 'brand' to promote.

The report also examines the question of trade and economic development from the perspective of WA's regions. It highlights important barriers that regional businesses and residents, together with policymakers, have overcome in their pursuit of efficiency gains and growth. It also seeks to explore what strategies the regions can adopt to further promote their own trade with country partners in the Asia-Pacific region, and develop new economic opportunities to tap into global export markets.

We thank you for your interest in the work of the Bankwest Curtin Economics Centre, and hope you will find this 'Focus on Western Australia' report on WA's trade and economic development with Asia informative and illuminating.

A handwritten signature in dark ink, appearing to read 'Alan Duncan', written in a cursive style.

**Professor Alan Duncan**

Director, Bankwest Curtin Economics Centre  
Curtin Business School, Curtin University

## Executive summary

Australia's location – and WA's location within Australia – highlights the importance of our trading relationships with other countries in the region. Nevertheless, with the industrial landscape in WA undergoing something of a transition as the resources sector moves to production, there is a need to develop a more sophisticated narrative for the future positioning of the WA economy to take advantage of emerging opportunities in Asia.

This Bankwest Curtin Economics Centre (BCEC) *Focus on Western Australia* report examines the issues that affect current trading patterns with Asia, and highlights opportunities for enhanced future trade and strengthened economic relationships with China, Japan and other countries in the Asia-Pacific and Indo-Pacific regions.

- How should we measure the strength of our trading relationships in a period of ever-increasing 'Asianisation'?
- What role does international trade have to play in strengthening industrial sectors within the WA economy – including, but also extending beyond, the resources sectors?
- How can international trade support diversification in the WA economy?
- What specific opportunities exist for trade and the further development of economic relations with Asia? In which industrial/trade sectors, and with which countries?
- To what extent does international trade have a role to play in WA's regional economic development strategies?

## Key findings

### A brief history of WA trade

- WA has a long association with resource-driven growth, beginning with the Kalgoorlie gold rush of the 1890s which drew people from all over Australia and the world.
- Expansion in mineral and petroleum outputs has resulted in WA becoming dramatically more export-orientated and reliant.
- Export shares were only 4% of gross state product (GSP) in 1970, rising to 28.6% in 1990. By 2013-14, the export share had risen to 61.6% of GSP.

### WA's international trade profile

- Mining products make up around three-quarters of all goods and services exported from WA.
- Services exported from the state form a smaller component of the overall value of export products – 4.6%.
- Eight out of the top ten export commodities in 2013-14 stem from the state's natural resources.
- Almost all of the top 20 merchandise exports from Western Australia have grown in value over the last 5 years.
- Iron ore exports have experienced an increase of 17% across the five year period from 2009-10.
- In the most recent period from 2012-13 to 2013-14, the value of iron ore exports from Western Australia has increased by 30%, from \$55.7 billion to \$72.5 billion.
- The value of gold exports from WA has fallen by 15% in the last two periods.

## Key findings (continued)

- The export value of pearls and gems increased by 250% between the last two periods.
- Merchandise and services imported to WA have grown at a faster pace than exports. Overall, merchandise imports increased by 81% across the five year period to 2013-14, and service imports by 21 per cent.
- The value of exports has exceeded the value of imports across the majority of commodities traded between WA and other countries.
- Iron ore remains the highest value traded commodity, with two-way trade valued at \$77.5 billion, increasing by 17 per cent since 2009-10.
- Services traded reveal more mixed results, with export values exceeding import values for the top five services in both 2009-10 and 2013-14. However, the remaining services traded show Western Australia importing a higher value of services than what the state exports.
- Australia has shifted from a net exporter with ASEAN countries before the start of the millennium to a net importer now.
- Net exports from WA to European Union countries have declined as a share of gross state product since the GFC, and particularly since 2013 with a significant fall in gold exports.

### Trade and new business opportunities

- In the short-to-medium term, the value and prospective increases in production volume of WA's main export commodities depend upon the continued health of China and other emerging markets in Asia, but also the ability of WA to remain competitive as a destination for foreign direct investment both in established and new industry sectors.
- Japan's future growth trajectory should provide some support for key WA commodity products such as iron ore and LNG exports.
- China's expansion has become increasingly uncertain due to changes in senior political leadership, currency pressures and rising levels of credit, particularly in housing and infrastructure, two areas which are crucial to China's continued support for the expansion of iron ore and LNG exports. The current IMF assessment indicates that China will see reasonably strong growth over at least the next two years, albeit at reduced levels to that seen in the middle of the last decade.
- WA has a natural advantage in servicing global demand for high quality produce, being well situated in relation to time-zones and proximity to most of the Asian countries.

### Who do we sell to?

- During the mining boom in Western Australia, net exports to APEC countries more than doubled as a percentage of GSP, from 15 per cent in 2004 to around 35 per cent in 2011.
- Western Australia is set to remain a strong net exporter to APEC countries with \$120 million in exports compared with around \$27 million in imports for 2013-14.
- Trade between WA and ASEAN countries is principally on primary goods, mostly resources and wheat.



- The great challenge for Western Australia is to bridge the gap between knowledge and innovation on the one hand, and commercialisation and exports on the other.

### Country trade partnerships

- Asia is strategically important by virtue of its geographical proximity, but the narrative regarding trading patterns and new trading opportunities is changing.
- The traditional notion of the bilateral trader ("we sell, you buy") is giving way to more sophisticated international partnerships between Australian and Asian companies selling into a global market.
- WA is extremely well positioned to capitalise on new trading opportunities both in terms of the scale and composition of its trade with Asian partners.
- The WA economy can gain strength and resilience through trade diversification, not just in the breadth of commodities traded but also the countries with whom we do business.

### WA trade and regional development

- Mining is the largest employer in the Pilbara and Goldfields – Esperance regions.
- The South West is the only region where Manufacturing is still the largest employer, where it is marginally larger than Retail Trade.
- Around 80% of the state's large businesses are in the services sub-sector.

- Port Hedland is the world's largest bulk export terminal – in 2013-14 Port Hedland moved 370 million tonnes of exports.

### Optimising WA regional trade and economic development

- Whilst iron ore fines may not be worth their weight in gold the sheer volume of shipments (measured in hundreds of thousands of tonnes) has transformed Western Australia into an economic powerhouse.
- An important challenge is to broaden the base of regional economies and aim to expose more products and services to overseas markets.

### Education as an attractor to international business and investment

- Over the past several years the sector that has been most successful in terms of enrolments and commencements is the Vocational Education and Training (VET) sector.
- ELICOS (English Language Intensive Courses for Overseas Students) has also been a booming industry.
- The education sector should not be regarded just as a provider of education and innovation, but should also be promoted as a valuable piece of infrastructure through which to attract skilled labour to the state, and to build global business networks.

## WA's trading environment – benefits and barriers

- It is a challenge for smaller or emerging businesses to access infrastructure, especially when the networks are stretched to capacity.
- At a macroeconomic level protectionist policies are barriers that can significantly limit the access of overseas markets for our regional producers.

## WA trade strategy and policy

- The deal struck between China and Australia through the recent Free Trade Agreement offers mixed support to WA industry.
- Some agriculture sub-sectors in WA will benefit from phased tariff reductions, particularly producers of meat, seafood, wine and other boutique foods and horticulture.
- There has been no agreement on lower tariffs for staple crops – wheat, maize, corn, rice or canola – or for wool and cotton.
- Some nervousness exists regarding foreign-financed investment projects in Australia being supported by migrant workers without the requirement for local labour market testing.

# Introduction

There is a general sense of unease with the recent slowdown in China's economic growth. Large businesses and the State's finances have suffered as a result. But is China the 'be all and end all' of the focus on Western Australia trade policies and objectives? What new trading opportunities with other Asian countries exist for WA businesses, and how well positioned are the State's businesses to expand the scale and composition of its trade with Asian partners?

Western Australia is a large state by area but is relatively small by population. Its capital Perth is also one of the world's most geographically isolated city. As such, the importance of our trading relationships with other countries in the region cannot be underestimated. We have been fortunate on two counts – our vast reserves in iron ore and our proximity to Asia. Exports of mining resources have flourished over the past decade at a magnitude not seen in recent history. Indeed, it had well and truly put Western Australia on the world map.

However, while it may well be a genuine stroke of luck that WA is located where it is, year after year of record export in a resource such as iron ore cannot simply be attributed to good fortune alone. In the highly competitive industry it has taken a lot of innovation, R&D, support from stakeholders, mutually-beneficial partnerships, the implementation of novel solutions and perhaps, to a certain extent, gamble, to take the industry to where it is today.

But as China is undergoing a period of transition with lower GDP growth Western Australia must continually look to reinforce the industries that have gotten us to where we are and to also diversify the economy and seek new opportunities to engage in trade with Asia. With the industrial landscape in WA undergoing something of a transition as the resources sector moves to production, there is a need to develop a more sophisticated narrative for the future positioning of the WA economy to take advantage of emerging opportunities in Asia.

This report examines a number of key questions relating to the composition and direction of trade by West Australian businesses and consumers. These include issues that affect current trading patterns with Asia, and opportunities for enhanced future trade and strengthened economic relationships with China, Japan and other countries in the Asia-Pacific and Indo-Pacific regions.

International trade has a role to play in strengthening industrial sectors within the WA economy – including, but also extending beyond, the mining and resources sectors. Trade is also a critical factor in supporting a diversification of the strengths in the WA economy.

The report reminds us that as important as China is to the economic fortunes of the state, it is by no means the state's only export destination. To focus solely on China would be myopic. There are new partnerships to forge, emerging industries to support, infrastructure bottlenecks to overcome and the WA 'brand' to promote.

The report also examines the question of trade and economic development from the perspective of WA's regions. It highlights important barriers that regional businesses and residents, together with policymakers, have overcome in their pursuit of efficiency gains and growth. It also seeks to explore what strategies the regions can adopt to further promote their own trade with country partners in the Asia-Pacific region, and develop new economic opportunities to tap into global export markets.



# A brief history of WA trade

# A brief history of WA trade

## From sheep's back to resource boom

Western Australia (WA) has a long association with resource-driven growth, beginning with the Kalgoorlie gold rush of the 1890s which drew people from all over Australia and the world. That boom underpinned the rapid development of what was still a remote settlement and laid the foundations for the creation of the State. However, given its relative geographical isolation, by the 1950s WA was in danger of becoming in the words of former WA Premier Sir Charles Court, a 'mendicant state', dependent in large part on transfers through the national budget and the Commonwealth Grants Commission.

Australia "rode on the sheep's back" from the mid-nineteenth century, with much of its early prosperity derived from producing and exporting wool. Western Australia became a major grain producer by the start of the twentieth century, with the market garden industry also building in strength up to the 1920s with the aid of Chinese workers and farming methods.

However, since the 1950s WA has witnessed a series of mining booms. The second major boom in WA history was the development of the Pilbara iron ore deposits in the 1960s, coupled with new developments in alumina and nickel and in the latter part of the decade and early 1970s. In the 1980s, the development of a liquefied natural gas (LNG) export industry and petroleum and condensate exports, together with a new boom in gold mining saw the state undergo another economic and population growth spurt. The current expansion (from 2004) represents WA's exposure to the 'super-cycle' in mineral commodities – a global shift in prices and volumes in these markets due to growth in China, and to a lesser extent, countries such as India, Russia and Brazil (the so-called BRICs group).

The development of new resources in WA, commencing with the planning and construction for the iron ore boom in 1962, has resulted in the transformation of WA. In 1967, in the midst of initial exports of iron ore from the Pilbara, WA's production of mineral and petroleum resources was equal to \$134 million. By 1987, following the expansion of gold, nickel and alumina production, total output in minerals and petroleum equalled \$6.3 billion. By 2011-12, following the emergence of the 'super cycle', production reached \$107 billion.

Over 45 years, WA increased its mineral and petroleum production from \$2.6 million a week to over \$2 billion a week. In this time the resources sector has moved from representing a fraction of the WA economy to dominating it. This dramatic transformation have had a profound impact on WA, transforming the second smallest Australian state in terms of population in the 1960s, into a fast growing state over the past twenty-five years in terms of both population and economic growth.

## The Resources Boom

The most recent boom has catalysed arguably the greatest change in the State's economy and society in its history. The expansion in mineral and petroleum output has resulted in WA becoming dramatically more export-orientated, with export shares of only 4% of gross state product (GSP) in 1970 rising to 28.6% in 1990. By 2013-14, the export share had risen to 61.6% of GSP.

The resource booms WA has experienced since 1960 have reflected the rapid industrialisation of East Asia over that period, first led by Japan, and in the past decade, China, with resources supply from Australia fuelling economic growth in that region. This globalisation of the WA economy is largely tied to a number of key commodities, principally iron ore (\$61.1 billion in exports in 2011-12), crude oil and condensate (\$11.6 billion), liquefied natural gas (LNG) (\$10 billion) and gold (\$9.4 billion). Growth in the value of resources has been underpinned by historically healthy prices, but recent decreases in global prices have exposed the state to reductions in production values, lower wages and falling royalties and tax receipts.

Table 1 shows how industry sectors in WA have evolved from 1990 in terms of industry gross value added (IGVA) and as a share of GSP. Mining clearly stands out, more than doubling in value since 2000-01 to just under 30 per cent of GSP by 2013-14 with much of the sector's production channelled towards export markets. Construction in WA has followed the same strong growth path, although the industry is less export-oriented. Manufacturing is now the third strongest sector in WA in IGVA terms, but the rate of increase lags behind other sectors.

In 1970 export shares in WA were 4% of Gross State Product. By 2013-14 this had risen to 61.6%.

**Table 1** Composition of the West Australian economy, by industry sector: 1990-91 to 2013-14

Industry	IGVA (\$m)			Share of GSP (%)		
	1990-91	2000-01	2013-14	1990-91	2000-01	2013-14
Agriculture, Forestry and Fishing	3,593 <sup>7</sup>	3,772 <sup>12</sup>	6,639 <sup>12</sup>	3.7 <sup>12</sup>	3.6 <sup>10</sup>	2.6 <sup>12</sup>
Mining	18,705 <sup>1</sup>	35,739 <sup>1</sup>	73,932 <sup>1</sup>	17.6 <sup>1</sup>	21.6 <sup>1</sup>	29.8 <sup>1</sup>
Manufacturing	5,330 <sup>3</sup>	7,107 <sup>4</sup>	11,989 <sup>3</sup>	8.9 <sup>2</sup>	7.8 <sup>2</sup>	4.8 <sup>4</sup>
Electricity, Gas, Water and Waste Services	2,598 <sup>12</sup>	3,522 <sup>13</sup>	5,655 <sup>14</sup>	3.0 <sup>14</sup>	1.9 <sup>16</sup>	2.1 <sup>14</sup>
Construction	9,323 <sup>2</sup>	11,896 <sup>2</sup>	33,653 <sup>2</sup>	7.4 <sup>3</sup>	7.1 <sup>3</sup>	12.4 <sup>2</sup>
Wholesale Trade	1,523 <sup>15</sup>	2,979 <sup>14</sup>	6,357 <sup>13</sup>	3.8 <sup>8</sup>	3.0 <sup>12</sup>	2.5 <sup>13</sup>
Retail Trade	2,849 <sup>11</sup>	4,845 <sup>8</sup>	8,640 <sup>7</sup>	4.2 <sup>6</sup>	4.1 <sup>9</sup>	3.1 <sup>8</sup>
Accommodation and Food Services	1,159 <sup>17</sup>	2,071 <sup>16</sup>	3,663 <sup>16</sup>	1.6 <sup>17</sup>	1.8 <sup>17</sup>	1.4 <sup>16</sup>
Transport, Postal and Warehousing	4,635 <sup>4</sup>	7,269 <sup>3</sup>	11,904 <sup>4</sup>	5.6 <sup>4</sup>	4.1 <sup>7</sup>	4.8 <sup>5</sup>
Information Media and Telecommunications	836 <sup>18</sup>	1,919 <sup>17</sup>	3,356 <sup>18</sup>	2.6 <sup>15</sup>	2.6 <sup>13</sup>	1.2 <sup>17</sup>
Financial and Insurance Services	3,275 <sup>8</sup>	4,754 <sup>10</sup>	8,358 <sup>8</sup>	3.8 <sup>9</sup>	4.8 <sup>5</sup>	3.6 <sup>7</sup>
Rental, Hiring and Real Estate Services	2,083 <sup>13</sup>	2,461 <sup>15</sup>	5,022 <sup>15</sup>	3.0 <sup>13</sup>	2.6 <sup>14</sup>	1.8 <sup>15</sup>
Professional, Scientific and Technical Services	2,935 <sup>10</sup>	5,430 <sup>7</sup>	11,579 <sup>5</sup>	3.7 <sup>10</sup>	4.8 <sup>6</sup>	4.9 <sup>3</sup>
Administrative and Support Services	1,960 <sup>14</sup>	4,299 <sup>11</sup>	7,682 <sup>9</sup>	1.6 <sup>18</sup>	2.1 <sup>15</sup>	2.9 <sup>10</sup>
Public Administration and Safety	3,256 <sup>9</sup>	4,784 <sup>9</sup>	7,548 <sup>10</sup>	4.1 <sup>7</sup>	4.1 <sup>8</sup>	2.7 <sup>11</sup>
Education and Training	4,323 <sup>5</sup>	5,607 <sup>6</sup>	7,461 <sup>11</sup>	3.7 <sup>11</sup>	3.5 <sup>11</sup>	2.9 <sup>9</sup>
Health Care and Social Assistance	4,176 <sup>6</sup>	6,336 <sup>5</sup>	11,578 <sup>6</sup>	5.5 <sup>5</sup>	5.7 <sup>4</sup>	4.4 <sup>6</sup>
Arts and Recreation Services	421 <sup>19</sup>	535 <sup>19</sup>	1,032 <sup>19</sup>	0.4 <sup>19</sup>	0.7 <sup>19</sup>	0.4 <sup>19</sup>
Other Services	1,196 <sup>16</sup>	1,593 <sup>18</sup>	3,468 <sup>17</sup>	1.6 <sup>16</sup>	1.5 <sup>18</sup>	1.2 <sup>18</sup>
Ownership of dwellings	8,011	11,588	16,916	6.3	5.8	6.8
Taxes less subsidies on production	5,653	7,658	9,798	7.9	6.9	4.0
Statistical discrepancy	2,666	1,769	-42	-0.1	0.0	-0.2
Gross state product	88,169	134,726	256,188	100.0	100.0	100.0

Note: Industries are reported using the standard ANZSIC 2-digit classification. Industry gross value added figures are chain volume measures. Shares are current prices expressed as percentages of Gross State Product (GDP).

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5220.0.

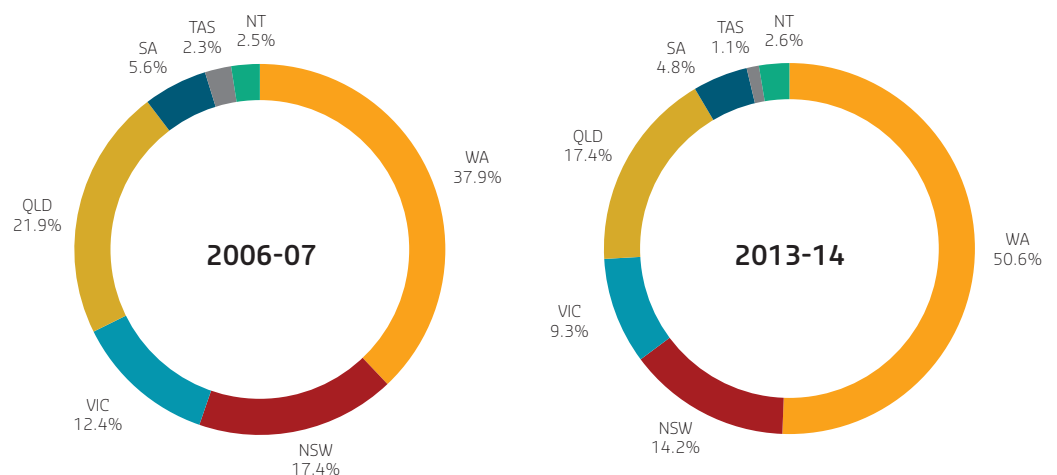
## WA's contribution to Australian trade

In 2006-07, WA accounted for 37.9% of Australia's value of exports – by 2013-14 this had grown to more than 50%.

The rapid growth of the Western Australian economy has coincided with rising demand – especially in Asia – and not just for resources but increasingly for consumption goods and specialist produce. Much of the rising demand derives from the unprecedented growth of China as an economy, and the sheer scale of the Chinese market. Japan has been a traditional market for Australian goods and services, and continues to feature as a strong trading partner for WA, but the State's businesses are also seeing opportunities for expansion into other emerging markets in Asia.

Western Australia has played a significant role in Australia's export trade over the last decade, largely driven by the resource boom and the location of key ports with respect to South-East Asia and other key trading partners providing WA businesses with the opportunity to tap into global export markets. In 2006-07, Western Australia accounted for 37.9 per cent of Australia's value of export goods – by 2013-14 this had grown to more than 50 per cent (Figure 1). Queensland accounts for the second highest share of Australian export goods (17.4%) followed by NSW (14.2%) and Victoria (9.3%).

**Figure 1** Australian export shares by states/territories: 2006-07 and 2013-14



**Note:** See Glossary for explanation of State of origin of exports.

**Source:** BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0.55.006 - Characteristics of Australian Exporters, 2013-14.



**Table 2** Value of Australian merchandise exports by states/territories: 2006-07 to 2013-14

State/ territory	2006-07 \$m	2007-08 \$m	2008-09 \$m	2009-10 \$m	2010-11 \$m	2011-12 \$m	2012-13 \$m	2013-14 \$m
WA	61,291	69,729	87,665	83,765	112,172	120,534	115,589	130,427
NSW	28,062	30,091	38,777	31,205	36,368	40,540	37,043	36,599
VIC	20,049	20,474	20,375	18,427	19,646	21,596	21,710	23,963
QLD	35,467	35,318	56,553	43,294	49,353	52,868	44,433	44,812
SA	9,016	10,338	9,527	8,134	11,194	11,410	10,712	12,352
TAS	3,713	3,635	3,511	3,004	3,185	3,170	3,026	2,753
NT	4,013	4,552	6,305	5,046	5,296	5,278	5,959	6,804
<b>Total goods exported</b>	<b>168,099</b>	<b>180,857</b>	<b>230,829</b>	<b>200,720</b>	<b>245,724</b>	<b>264,017</b>	<b>246,978</b>	<b>272,921</b>

Note: See Glossary for explanation of State of origin of exports and Total goods exported.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0.55.006 - Characteristics of Australian Exporters, 2013-14.

The strength of WA's export recovery by 2010 was far in excess of that achieved by any other state or territory in Australia – rising 34 per cent to \$112 billion in a year.

The value of Australian goods exported by state and territory is shown Table 2. Total goods exported from Australia in 2013-14 were valued at \$273 billion, with Western Australia responsible for \$130 billion. This value (in current dollars) has increased substantially over the last eight years, more than doubling from \$61 billion in 2006-07 to \$130 billion.

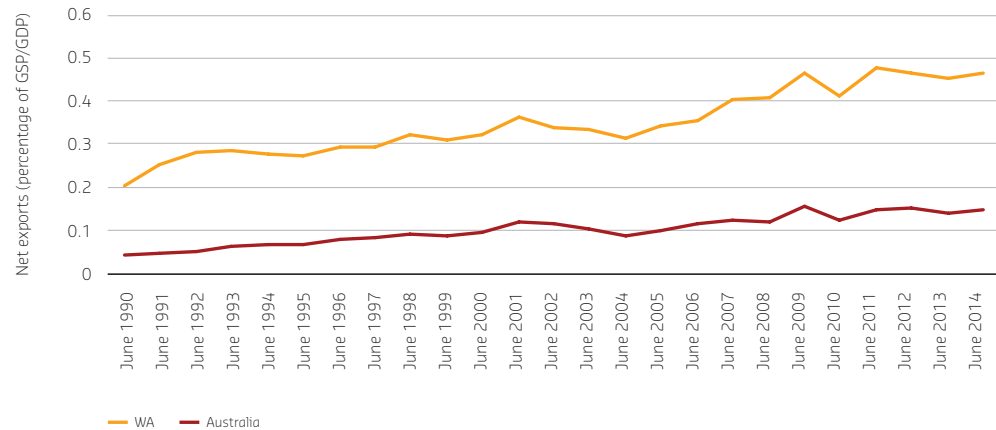
While other states and territories have seen the value of exports increase, none comes near to the rate of export growth observed in the West. Queensland increased its exports by 27 per cent to \$44.8 billion over the same period, with New South Wales' exports rising 31 per cent to \$36.6 billion. Export growth in WA was interrupted by the Global Financial Crisis in 2009, dropping by \$3.9 billion to \$83.8 billion. However, the strength of WA's export recovery by 2010 was far in excess of that achieved by any other state or territory in Australia – rising 34 per cent to \$112 billion in a year.

The balance of trade in Western Australia can be examined by looking at net exports – which represents the value of exports minus imports. The steep trajectory of Western Australian net exports relative to national trends is shown in Figure 2. Net exports as a percentage of Gross state or national product have been increasing in WA at a much faster rate than nationally. Net exports were 20 per cent of WA GSP 25 years ago – today it is valued at around 50 per cent of state product. This compares starkly with national trends, where net exports are valued at just over 15 per cent of Gross National Product.

Yet there are some important patterns that sit underneath these headline figures. The concentration of exports from the WA resources sector conceals some significant changes in the contributions of other industry sectors to Australian trade.

WA net exports are currently valued at around 50% of total state product.

**Figure 2** Net exports as a percentage of GSP/GNP, WA and Australia: 1990 to 2014



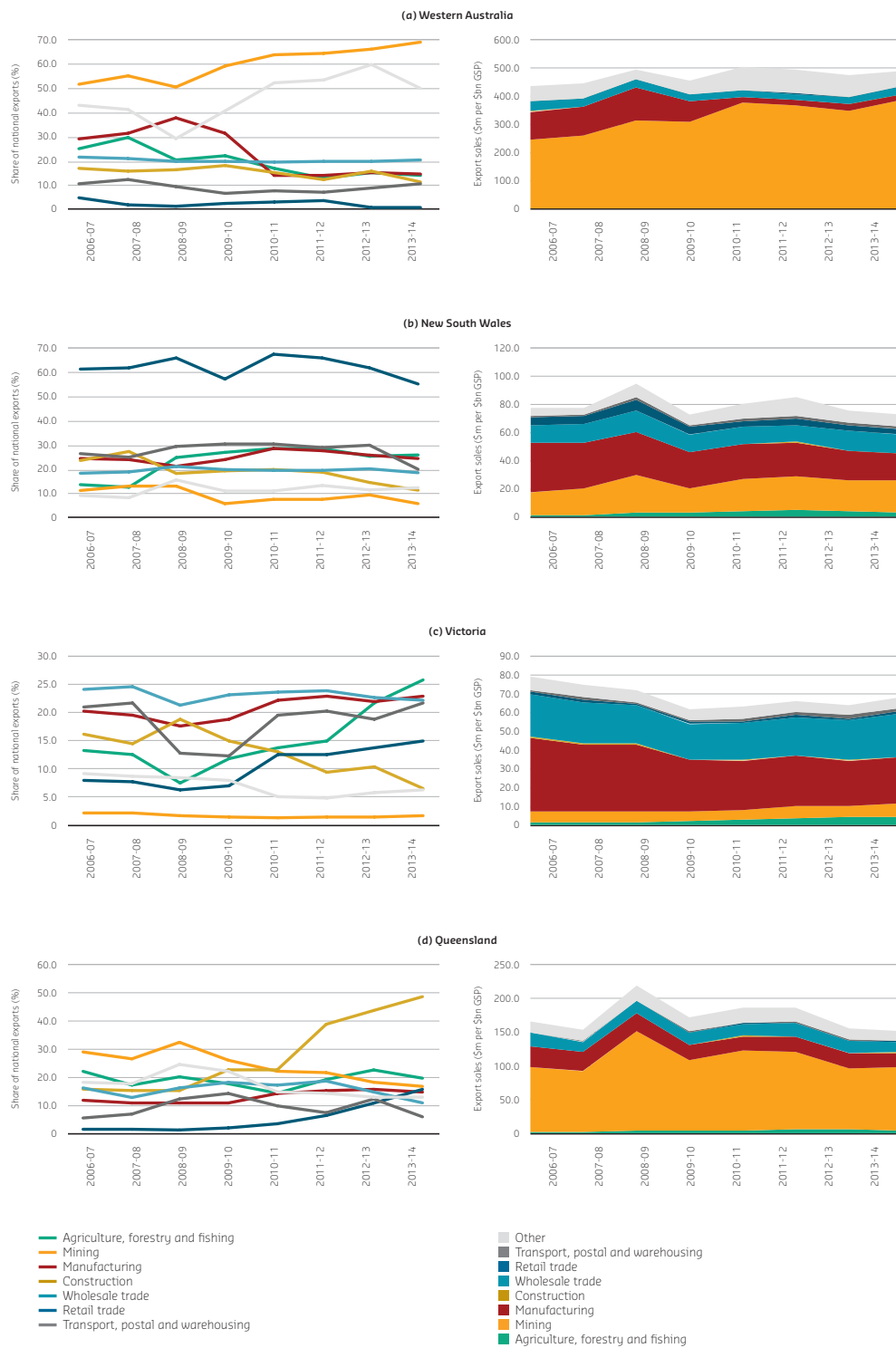
Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0.55.006 - Characteristics of Australian Exporters, 2013-14.

Figure 3 compares the national export shares and export intensity of WA exporters operating in different industry sectors with those in other states and territories. Export values are presented as a share of gross state product, as an indicative measure of export intensity. The particular ABS source for this analysis is restricted to businesses with an ABN number, but nevertheless indicate some fascinating and contrasting patterns of export intensity across sectors since the middle of the last decade.

The contribution of WA mining businesses to national exports has risen from around half the share of Australian export businesses in 2006-07 to 67 per cent by 2013-14 (Figure 3(a), left panel). In contrast, the share of national manufacturing exports from WA manufacturing businesses (those reporting an ABN) fell from a peak of 36 per cent in 2008-09 to only 14 per cent on latest figures.

The overall value of exports in WA amounted to around \$500 million per \$1 billion in gross state product by 2013-14, rising from around \$420 million per \$1 billion GSP in 2006-07. The squeeze in WA manufacturing exports is especially evident when looking at the value of exports per \$1 billion of gross state product (Figure 3(a), right panel). Manufacturing exports have declined as a share of GSP in the two largest Australian states of New South Wales and Victoria (Figure 3(b) and (c)) but from a higher share of national exports. Certainly, the extent of the decline in WA is more noticeable.

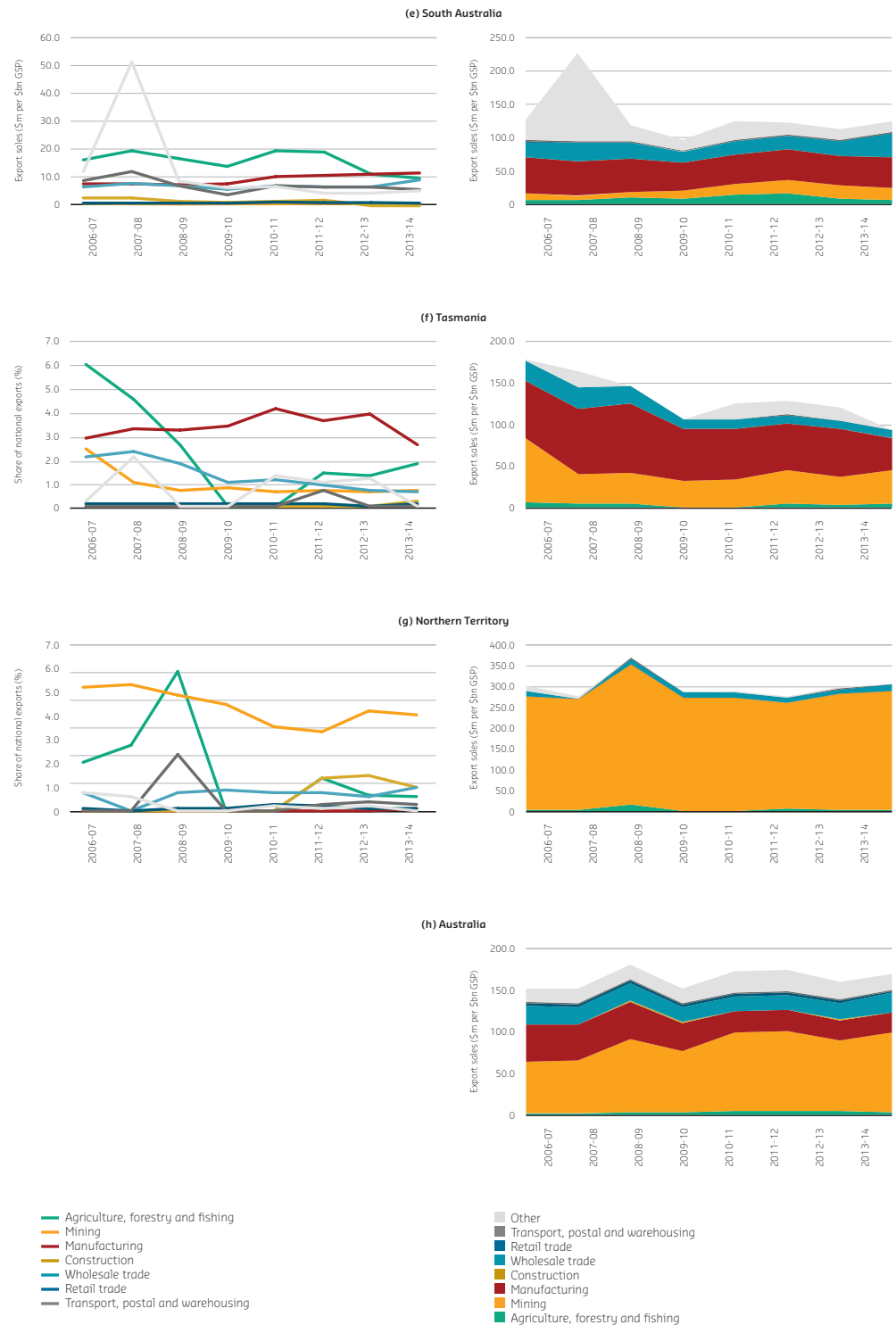
Later in this report we examine WA's trade with Asia and the rest of the world in much greater detail, with a focus not just on what WA businesses sell but also to which international markets we trade. However, the next section focusses on how the manufacturing sector has fared in Western Australia over the course of the State's resources boom compared with other states and territories.

**Figure 3 Exports by states and territories, 1990 to 2014: national share and exports per \$1bn of GSP**

**Note:** Exports data are presented for companies reporting an ABN.

**Source:** BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0.55.006 - Characteristics of Australian Exporters, 2013-14.

**Figure 3 (cont) Exports by states and territories, 1990 to 2014: national share and exports per \$1bn of GSP**



**Note:** Exports data are presented for companies reporting an ABN.

**Source:** BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0.55.006 - Characteristics of Australian Exporters, 2013-14.

## Dutch disease?

The relative decline in the strength of manufacturing as an industry in Western Australia reflects a nationwide pattern, but the rate at which manufacturing exports have diminished over the last decade from WA to overseas markets clearly exceeds the decline in other states and territories. This raises the question as to why this is the case, and particularly, whether this represents an example of the phenomenon of Dutch Disease.

***Dutch Disease** is the term commonly applied to a situation where a currency appreciation from rapid growth in a country's capital intensive resources sector leads to a loss of competitiveness in labour intensive industries. The term was coined after the resource-driven boom in Holland following the natural gas discovery in 1959 caused a significant appreciation of the Dutch currency and decimated Holland's manufacturing industry.*

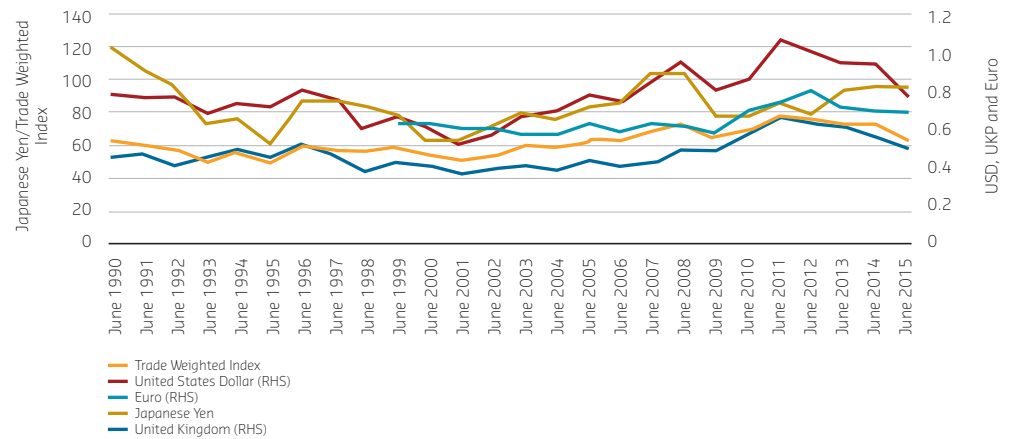
One causal factor for the incidence of Dutch Disease is a currency appreciation driven by rapid economic growth following a resource-led boom. Figure 4 shows the pattern of currency movements since 1990 between the Australian dollar and major competitor currencies – the US dollar, Euro, Japanese Yen – and a trade weighted index of currencies.

A general appreciation of the Australian dollar is evident against all currencies during the real heat of the resources boom from around 2003 to the point at which the GFC hit global markets in 2009. The rise in commodity prices over this period, and the consequent terms of trade effects (doubling over the first decade of the new millennium) have been the principal causes of the exchange rate rises during the 2000s. This impacted on Australian businesses as well as households, in two ways.

Firstly, higher commodity prices caused an increase in resource sector investment. This enabled mining and resources firms to expand their capacity to take advantage of the increased returns to production. The trend towards investment in mining, and the commensurate falls in manufacturing investment, are both clearly apparent in Figure 5.

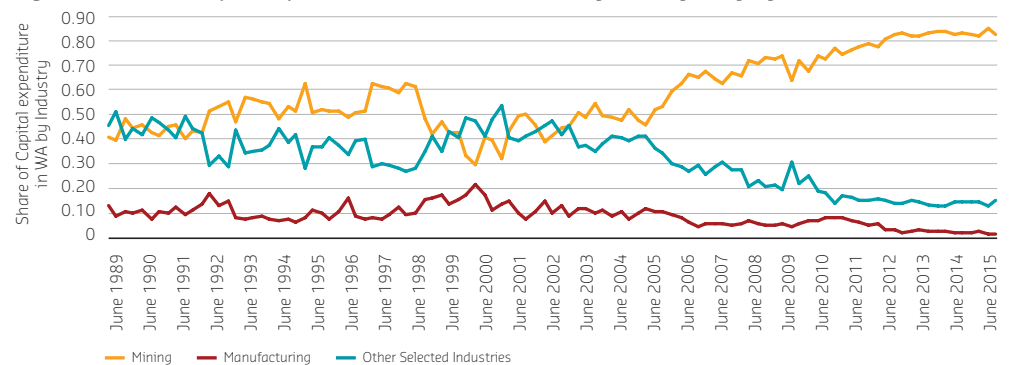
Higher household disposable incomes over the same period led to increased consumption spending on mainly domestic goods, which in turn caused both labour and capital to be diverted reducing returns in other exporting industry sectors.

**Figure 4** Currency exchange rates and Trade Weighted Index for Australia: 1990 to 2015



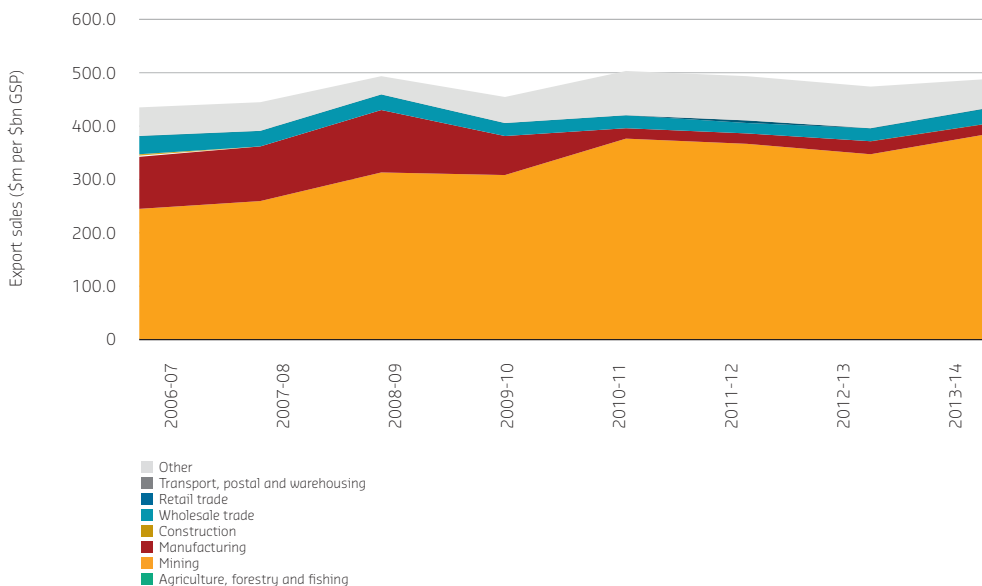
Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0 – International Trade in Goods and Services, Australia, July 2015.

**Figure 5** Share of capital expenditure in Western Australia, by industry category: 1989 to 2015



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5625.0 – Private New Capital Expenditure and Expected Expenditure, Australia, June 2015.

**Figure 6** Value of export sales in Western Australia by commodity group: 2006-07 to 2013-14 (\$m exports per \$bn of GSP)



Rebuilding the competitive advantage of WA manufacturing in global markets will require renewed investment in manufacturing capacity.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0.55.006 - Characteristics of Australian Exporters, 2013-14.

So are there signs of Dutch disease in West Australian manufacturing? And are we seeing falls in manufacturing that are more pronounced in WA compared with the rest of Australia, or with other resource-rich jurisdictions around the world?

The value of exports from the Western Australian manufacturing sector has dropped significantly as a share of the State's exports, and by a greater margin than in other states and territories in Australia (Figure 6). At a national level, the decline of the Australian automotive industry has been responsible for some of the loss in production and export shares from manufacturing, but this doesn't account for the pattern observed in Western Australia.

High exchange rate have had an impact on the international competitiveness of WA businesses in manufacturing, agriculture, education and tourism. In that regard, the recent falls in the Australian dollar provides an opportunity to reinvigorate export activities in these sectors. However, the decline in capital expenditure in manufacturing does raise a cause for concern, particularly given that high technology manufacturing is the margin on which Australian businesses are more likely to compete on the international stage. Rebuilding the competitive advantage of WA manufacturing in global markets will require renewed investment in manufacturing capacity, and the creation of an environment in which the State's research and industry sectors can work together to develop new innovations and productive efficiencies.





# WA'S

international trade profile

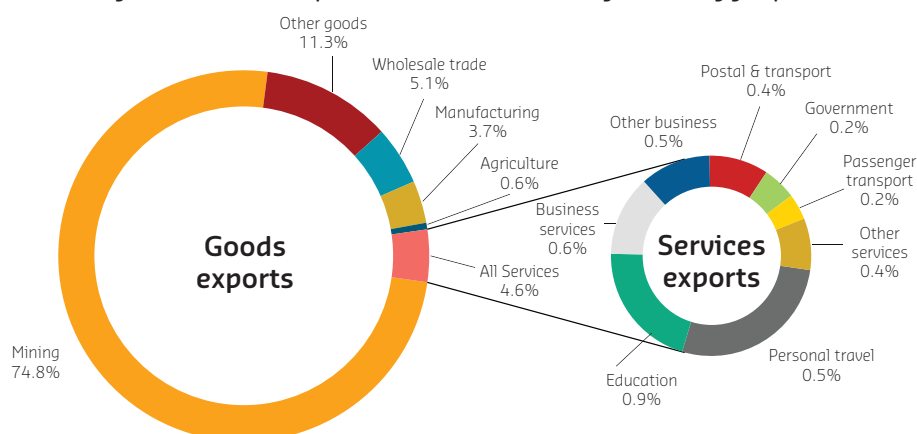
Mining products make up around three-quarters of all goods and services exported from WA.

Unsurprisingly, mining exports play a major role in Western Australia's international export trade profile, dominating the share of goods and services exported from the state in 2013-14 (Figure 7). The export of goods rather than services is more dominant in WA overall, constituting around 96 per cent (\$130 billion) of the value of all export products. Mining products makes up around three-quarters of all goods and services exported from WA, followed by other goods (11.3%), goods produced within the wholesale trade sector (5.1%) and manufacturing (3.7%). Export goods that stem from the Agriculture sector make-up a much smaller proportion of all export products – around 0.6 per cent.

Mining products makes up around three-quarters of all goods and services exported from WA.

Services exported from the state form a smaller component of the overall value of export products - 4.6 per cent or (\$6.2 billion). In terms of services exported from WA, personal, business and education travel comprise the largest proportion, but are still relatively minor export products overall (Figure 7).

**Figure 7** Share of goods and services exports from Western Australia by commodity group: 2013-14



**Note:** Other in the Goods category includes Other goods; Transport, postal and warehousing, Construction and Retail goods. Other in the Services category includes Telecommunications, computer and information services, Freight transport, Finance, insurance and recreation services, Construction, Charges for the use of intellectual property, and Maintenance and repair services.

**Source:** BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No.5368.0.55.006 – Characteristics of Australian Exporters, 2013-14.

## What do we sell?

Since the 1960s the mining industry has been an industrial feature of Western Australia and it is no surprise to see that eight out of the top ten export commodities in 2013-14 stem from the state's natural resources (Table 3). Iron ore and concentrates top the export commodity list, valued at \$72.4 billion. This is followed by natural gas and gold, which attracted \$13 billion and \$12.7 billion in export value for Western Australia in 2013-14. Crude petroleum, Copper ores and concentrates, Precious metal ores, Gold coin and Legal tender coin and Nickel ores and concentrates are also among the mining outputs that make the top ten export commodities. Two agricultural commodities – wheat, oil-seeds and oleaginous fruits also feature among the top ten export commodities for WA in 2013-14.

Eight out of the top ten export commodities in 2013-14 stem from the state's natural resources.

Eight out of the top ten export commodities in 2013-14 stem from the state's natural resources.

**Table 3** Value of exports from Western Australia, by commodity/service group: 2006-07 to 2013-14

Export group	Exports (\$m)					Growth (%)	
	2009-10	2010-11	2011-12	2012-13	2013-14	2012-13 to 2013-14	5 Year trend
<b>Merchandise exports</b>							
Iron ores & concentrates	62,098 <sup>1</sup>	57,177 <sup>1</sup>	61,217 <sup>1</sup>	55,665 <sup>1</sup>	72,469 <sup>1</sup>	+30%	+17%
Natural gas	11,430 <sup>3</sup>	8,014 <sup>4</sup>	9,301 <sup>4</sup>	11,165 <sup>3</sup>	13,087 <sup>2</sup>	+17%	+14%
Gold	13,055 <sup>2</sup>	13,398 <sup>2</sup>	15,603 <sup>2</sup>	14,908 <sup>2</sup>	12,689 <sup>3</sup>	-15%	-3%
Crude petroleum	9,022 <sup>4</sup>	11,056 <sup>3</sup>	11,073 <sup>3</sup>	9,309 <sup>4</sup>	9,284 <sup>4</sup>	-0%	+3%
Wheat	2,692 <sup>5</sup>	1,837 <sup>5</sup>	1,881 <sup>5</sup>	2,740 <sup>5</sup>	2,819 <sup>5</sup>	+3%	+5%
Copper ores & concentrates	1,603 <sup>6</sup>	1,597 <sup>6</sup>	1,555 <sup>6</sup>	1,723 <sup>6</sup>	1,731 <sup>6</sup>	+0%	+8%
Oil-seeds & oleaginous fruits, soft	878 <sup>7</sup>	418 <sup>16</sup>	587 <sup>12</sup>	757 <sup>10</sup>	1,018 <sup>7</sup>	+34%	+16%
Precious metal ores & conc (excl gold)	559 <sup>13</sup>	828 <sup>8</sup>	1,113 <sup>8</sup>	1,162 <sup>8</sup>	923 <sup>8</sup>	-21%	+65%
Gold coin & legal tender coin	757 <sup>8</sup>	642 <sup>12</sup>	817 <sup>9</sup>	923 <sup>9</sup>	842 <sup>9</sup>	-9%	+11%
Nickel ores & concentrates	731 <sup>9</sup>	860 <sup>7</sup>	1,130 <sup>7</sup>	1,169 <sup>7</sup>	760 <sup>10</sup>	-35%	+4%
Nickel	692 <sup>10</sup>	714 <sup>10</sup>	474 <sup>14</sup>	678 <sup>12</sup>	702 <sup>11</sup>	+4%	+1%
Other ores & concentrates (c)	678 <sup>11</sup>	670 <sup>11</sup>	627 <sup>11</sup>	614 <sup>13</sup>	698 <sup>12</sup>	+14%	+3%
Liquefied propane & butane	628 <sup>12</sup>	777 <sup>9</sup>	744 <sup>10</sup>	694 <sup>11</sup>	614 <sup>13</sup>	-12%	-2%
Inorganic chemical elements	507 <sup>14</sup>	303 <sup>17</sup>	390 <sup>17</sup>	515 <sup>14</sup>	591 <sup>14</sup>	+15%	+17%
Pearls & gems	441 <sup>16</sup>	na	128 <sup>20</sup>	151 <sup>20</sup>	532 <sup>15</sup>	+252%	+21%
Pigments, paints & varnishes	497 <sup>15</sup>	529 <sup>13</sup>	568 <sup>13</sup>	377 <sup>16</sup>	509 <sup>16</sup>	+35%	+2%
Wool & other animal hair (incl tops)	405 <sup>18</sup>	493 <sup>15</sup>	415 <sup>16</sup>	408 <sup>15</sup>	425 <sup>17</sup>	+4%	+5%
Live animals (excl seafood)	434 <sup>17</sup>	516 <sup>14</sup>	419 <sup>15</sup>	327 <sup>17</sup>	409 <sup>18</sup>	+25%	-6%
Crustaceans, f.c.f.	371 <sup>20</sup>	237 <sup>18</sup>	244 <sup>18</sup>	302 <sup>18</sup>	390 <sup>19</sup>	+29%	+5%
Meat (excl beef), f.c.f.	372 <sup>19</sup>	np	206 <sup>19</sup>	251 <sup>19</sup>	378 <sup>20</sup>	+51%	+2%
<b>Total merchandise exports</b>	<b>119,434</b>	<b>120,535</b>	<b>112,172</b>	<b>115,590</b>	<b>130,423</b>	<b>+13%</b>	<b>+9%</b>
<b>Services exports</b>							
Personal travel (not education related)	1,394 <sup>1</sup>	1,389 <sup>1</sup>	1,453 <sup>1</sup>	1,598 <sup>1</sup>	1,704 <sup>1</sup>	+7%	+22%
Education-related travel	1,201 <sup>2</sup>	1,225 <sup>2</sup>	1,172 <sup>2</sup>	1,166 <sup>2</sup>	1,284 <sup>2</sup>	+10%	+7%
Business travel	521 <sup>4</sup>	605 <sup>4</sup>	841 <sup>3</sup>	874 <sup>3</sup>	809 <sup>3</sup>	-7%	+55%
Other business services	785 <sup>3</sup>	723 <sup>3</sup>	645 <sup>4</sup>	694 <sup>4</sup>	711 <sup>4</sup>	+2%	-9%
Postal, courier and other transport services	475 <sup>5</sup>	453 <sup>5</sup>	537 <sup>5</sup>	529 <sup>5</sup>	595 <sup>5</sup>	+12%	+25%
Government goods and services n.i.e	306 <sup>6</sup>	315 <sup>6</sup>	323 <sup>6</sup>	330 <sup>6</sup>	339 <sup>6</sup>	+3%	+11%
Passenger transport	279 <sup>7</sup>	287 <sup>7</sup>	270 <sup>7</sup>	254 <sup>7</sup>	261 <sup>7</sup>	+3%	-6%
Telecommunications, computer and information services	90 <sup>9</sup>	113 <sup>9</sup>	110 <sup>9</sup>	100 <sup>10</sup>	159 <sup>8</sup>	na	+77%
Freight transport	197 <sup>8</sup>	195 <sup>8</sup>	186 <sup>8</sup>	177 <sup>8</sup>	157 <sup>9</sup>	-11%	-20%
Finance, Insurance and Pension services	67 <sup>10</sup>	85 <sup>10</sup>	99 <sup>10</sup>	102 <sup>9</sup>	115 <sup>10</sup>	+13%	+72%
Personal, cultural, and recreation services	63 <sup>11</sup>	40 <sup>11</sup>	46 <sup>11</sup>	na	51 <sup>11</sup>	na	-19%
Construction	31 <sup>12</sup>	10 <sup>13</sup>	7 <sup>13</sup>	na	18 <sup>12</sup>	na	-42%
Charges for the use of intellectual property n.i.e	26 <sup>13</sup>	13 <sup>12</sup>	15 <sup>12</sup>	18 <sup>11</sup>	16 <sup>13</sup>	-11%	-38%
Maintenance and repair services n.i.e.	1 <sup>14</sup>	3 <sup>14</sup>	1 <sup>14</sup>	1 <sup>12</sup>	2 <sup>14</sup>	+100%	+100%
<b>Total services exports</b>	<b>5,436</b>	<b>5,456</b>	<b>5,705</b>	<b>5,915</b>	<b>6,221</b>	<b>+5%</b>	<b>+14%</b>
<b>TOTAL GOODS AND SERVICES EXPORTS</b>	<b>124,870</b>	<b>125,991</b>	<b>117,877</b>	<b>121,505</b>	<b>136,644</b>	<b>+12%</b>	<b>+9%</b>

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5368.0.

## WA trading patterns over time

The value of gold exports from WA has fallen by 15% in the last two periods.

Table 3 shows that almost all of the top 20 merchandise exports from Western Australia have grown in value over the last 5 years (+9%), as well as more recently between 2012-13 and 2013-14 (+15%).

Growth in some of the state's biggest value exports – iron ore, gas, copper and other precious metals – has been positive over a five year period and between the latest two periods. Iron ore and concentrates exports have experienced an increase of 17 per cent across the five year period from 2009-10. In the most recent period from 2012-13 to 2013-14, the value of iron ore exports from Western Australia has increased by 30 per cent, from 55.7 billion to \$72.5 billion. Natural gas has also seen a similar trend, with export values increasing by 14 per cent in the five year period to 2013-14, and by 14 per cent between the last two periods. Gold, on the other hand, has shown a significant reversal recently, falling by some 15 per cent between 2012-13 and 2013-14.

Some recent export sale increases in smaller value merchandise categories are particularly noticeable – pearls and gems increased by 250 per cent between the last two periods. A number of agricultural export products have also increased in value recently – meats (up 50%), live animals (up 25%) and crustaceans (up 29%) .

The majority of Western Australian service exports have increased in value over the most recent period, with Finance, insurance and pension services; Postal, courier and other transport services increasing by 13 and 12 per cent respectively between 2012-13 and 2013-14.

The value of exports of goods and services in Western Australia (\$137bn in 2013-14) far exceeds the value of imports (around \$47bn, from Table 4). However, it is also the case that merchandise and services imported to Western Australia have grown at a significantly faster pace than exports. Overall, merchandise imports have increased by 81 per cent across the five year period to 2013-14, and service imports by 21 per cent. Wheat, oil seeds and fruits, other ores and concentrates, telecommunications, computer and information and maintenance and repair services are among those items which have shown significant short term growth in important values.

Combining exports and imports, Table 5 shows both the net export value and total trade in Western Australia between 2009-10 and 2013-14. Net exports are calculated as exports minus imports, whereas total trade measure combines the value of exports and imports within a commodity/service group to reveal the overall activity.

**Table 4** Value of imports to Western Australia, by commodity/service group: 2006-07 to 2013-14

Import group	Imports (\$m)					Growth (%)	
	2009-10	2010-11	2011-12	2012-13	2013-14	2012-13 to 2013-14	5 Year trend
<b>Merchandise imports</b>							
Iron ores & concentrates	4,230 <sup>2</sup>	2,465 <sup>3</sup>	3,520 <sup>3</sup>	3,915 <sup>2</sup>	4,979 <sup>1</sup>	+27%	+18%
Natural gas	4,086 <sup>3</sup>	3,857 <sup>2</sup>	4,158 <sup>2</sup>	4,075 <sup>1</sup>	4,450 <sup>2</sup>	+9%	+9%
Gold	4,692 <sup>1</sup>	3,946 <sup>1</sup>	4,922 <sup>1</sup>	3,871 <sup>3</sup>	4,021 <sup>3</sup>	+4%	-14%
Crude petroleum	1,712 <sup>4</sup>	1,515 <sup>4</sup>	1,703 <sup>5</sup>	1,908 <sup>4</sup>	1,857 <sup>4</sup>	-3%	+8%
Wheat	1,253 <sup>5</sup>	283 <sup>15</sup>	223 <sup>20</sup>	581 <sup>10</sup>	1,130 <sup>5</sup>	+94%	-10%
Copper ores & concentrates	952 <sup>6</sup>	368 <sup>10</sup>	564 <sup>12</sup>	725 <sup>8</sup>	1,062 <sup>6</sup>	+46%	+12%
Oil-seeds & oleaginous fruits, soft	798 <sup>8</sup>	208 <sup>16</sup>	327 <sup>15</sup>	545 <sup>14</sup>	1,031 <sup>7</sup>	+89%	+29%
Precious metal ores & conc (excl gold)	677 <sup>9</sup>	322 <sup>12</sup>	705 <sup>7</sup>	1,124 <sup>7</sup>	985 <sup>8</sup>	-12%	+45%
Gold coin & legal tender coin	826 <sup>7</sup>	902 <sup>5</sup>	1,544 <sup>6</sup>	1,697 <sup>5</sup>	896 <sup>9</sup>	-47%	+8%
Nickel ores & concentrates	650 <sup>10</sup>	891 <sup>6</sup>	2,824 <sup>4</sup>	1,562 <sup>6</sup>	680 <sup>10</sup>	-56%	+5%
Nickel	623 <sup>11</sup>	602 <sup>7</sup>	605 <sup>9</sup>	566 <sup>11</sup>	644 <sup>11</sup>	+14%	+3%
Other ores & concentrates (c)	535 <sup>12</sup>	na	580 <sup>11</sup>	103 <sup>20</sup>	616 <sup>12</sup>	+498%	+15%
Liquefied propane & butane	504 <sup>14</sup>	316 <sup>13</sup>	411 <sup>14</sup>	559 <sup>12</sup>	604 <sup>13</sup>	+8%	+20%
Inorganic chemical elements	490 <sup>15</sup>	435 <sup>8</sup>	621 <sup>8</sup>	717 <sup>9</sup>	560 <sup>14</sup>	-22%	+14%
Pearls & gems	483 <sup>16</sup>	175 <sup>18</sup>	236 <sup>19</sup>	427 <sup>17</sup>	538 <sup>15</sup>	+26%	+11%
Pigments, paints & varnishes	506 <sup>13</sup>	351 <sup>11</sup>	491 <sup>13</sup>	449 <sup>16</sup>	494 <sup>16</sup>	+10%	-2%
Wool & other animal hair (incl tops)	428 <sup>18</sup>	407 <sup>9</sup>	602 <sup>10</sup>	546 <sup>13</sup>	465 <sup>17</sup>	-15%	+9%
Live animals (excl seafood)	446 <sup>17</sup>	293 <sup>14</sup>	282 <sup>17</sup>	366 <sup>18</sup>	461 <sup>18</sup>	+26%	+3%
Crustaceans, f.c.f.	413 <sup>19</sup>	192 <sup>17</sup>	269 <sup>18</sup>	463 <sup>15</sup>	460 <sup>19</sup>	-1%	+11%
Meat (excl beef), f.c.f.	360 <sup>20</sup>	na	304 <sup>16</sup>	314 <sup>19</sup>	381 <sup>20</sup>	+21%	+6%
<b>Total merchandise imports</b>	<b>20,049</b>	<b>25,954</b>	<b>34,934</b>	<b>33,687</b>	<b>36,289</b>	<b>+8%</b>	<b>+81%</b>
<b>Services imports</b>							
Personal travel (not education related)	3,041 <sup>1</sup>	3,348 <sup>1</sup>	3,501 <sup>1</sup>	3,721 <sup>1</sup>	4,141 <sup>1</sup>	+11%	+36%
Other business services	2,885 <sup>2</sup>	2,709 <sup>2</sup>	2,851 <sup>2</sup>	3,125 <sup>2</sup>	2,916 <sup>2</sup>	-7%	+1%
Freight transport	1,215 <sup>3</sup>	1,096 <sup>3</sup>	1,458 <sup>3</sup>	1,461 <sup>3</sup>	1,539 <sup>3</sup>	+5%	+27%
Passenger transport	703 <sup>4</sup>	851 <sup>4</sup>	941 <sup>4</sup>	1,012 <sup>4</sup>	926 <sup>4</sup>	-8%	+32%
Business travel	345 <sup>5</sup>	343 <sup>5</sup>	379 <sup>5</sup>	415 <sup>5</sup>	414 <sup>5</sup>	-0%	+20%
Telecommunications, computer and information services	161 <sup>7</sup>	171 <sup>6</sup>	122 <sup>6</sup>	122 <sup>6</sup>	183 <sup>6</sup>	+50%	+14%
Finance, Insurance and Pension services	82 <sup>9</sup>	106 <sup>8</sup>	114 <sup>7</sup>	121 <sup>7</sup>	131 <sup>7</sup>	+8%	+60%
Education-related travel	105 <sup>8</sup>	101 <sup>9</sup>	99 <sup>8</sup>	116 <sup>8</sup>	123 <sup>8</sup>	+6%	+17%
Maintenance and repair services n.i.e.	66 <sup>10</sup>	16 <sup>11</sup>	29 <sup>11</sup>	74 <sup>11</sup>	115 <sup>9</sup>	+55%	+74%
Charges for the use of intellectual property n.i.e.	171 <sup>6</sup>	126 <sup>7</sup>	94 <sup>9</sup>	105 <sup>9</sup>	105 <sup>10</sup>	+0%	-39%
Postal, courier and other transport services	59 <sup>11</sup>	50 <sup>10</sup>	58 <sup>10</sup>	77 <sup>10</sup>	82 <sup>11</sup>	+6%	+39%
Personal, cultural, and recreation services	2 <sup>13</sup>	8 <sup>13</sup>	11 <sup>12</sup>	42 <sup>12</sup>	17 <sup>12</sup>	-60%	+750%
Government goods and services n.i.e.	8 <sup>12</sup>	9 <sup>12</sup>	10 <sup>13</sup>	13 <sup>13</sup>	13 <sup>13</sup>	+0%	+63%
<b>Total services imports</b>	<b>8,844</b>	<b>8,934</b>	<b>9,667</b>	<b>10,404</b>	<b>10,705</b>	<b>+3%</b>	<b>+21%</b>
<b>TOTAL GOODS AND SERVICES IMPORTS</b>	<b>28,893</b>	<b>34,888</b>	<b>44,601</b>	<b>44,091</b>	<b>46,994</b>	<b>+7%</b>	<b>+63%</b>

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5368.0.

**Table 5** Net exports and total trade in Western Australia, by selected commodity/service group: 2006-07 and 2013-14

Trade group	Net exports (\$m)		Total trade (two-way, \$m)		Two-way trade growth (%)
	2009-10	2013-14	2009-10	2013-14	2013-14
<b>Merchandise trade</b>					
Iron ores & concentrates	+57,868	+67,490	66,328	77,448	+17%
Gold	+8,363	+8,668	17,747	16,710	-6%
Natural gas	+7,344	+8,637	15,516	17,537	+13%
Crude petroleum	+7,310	+7,427	10,734	11,141	+4%
Wheat	+1,439	+1,689	3,945	3,949	+0%
Copper ores & concentrates	+651	+669	2,555	2,793	+9%
Other ores & concentrates (c)	+143	+82	1,213	1,314	+8%
Nickel ores & concentrates	+81	+80	1,381	1,440	+4%
Nickel	+69	+58	1,315	1,346	+2%
Inorganic chemical elements	+17	+31	997	1,151	+15%
Pigments, paints & varnishes	-9	+15	1,003	1,003	+0%
Liquefied propane & butane	+124	+10	1,132	1,218	+8%
Meat (excl beef), f.c.f.	+12	-3	732	759	+4%
Pearls & gems	-42	-6	924	1,070	+16%
Oil-seeds & oleaginous fruits, soft	+80	-13	1,676	2,049	+22%
Wool & other animal hair (incl tops)	-23	-40	833	890	+7%
Live animals (excl seafood)	-12	-52	880	870	-1%
Gold coin & legal tender coin	-69	-54	1,583	1,738	+10%
Precious metal ores & conc (excl gold)	-118	-62	1,236	1,908	+54%
Crustaceans, f.c.f.	-42	-70	784	850	+8%
<b>Total merchandise trade</b>	<b>+99,385</b>	<b>+94,134</b>	<b>139,483</b>	<b>166,712</b>	<b>+20%</b>
<b>Services Imports</b>					
Education-related travel	+1,096	+1,161	1,306	1,407	+8%
Postal, courier and other transport services	+416	+513	534	677	+27%
Business travel	+176	+395	866	1,223	+41%
Government goods and services n.i.e	+298	+326	314	352	+12%
Personal, cultural, and recreation services	+61	+34	65	68	+5%
Finance, Insurance and Pension services	-15	-16	149	246	+65%
Telecommunications, computer and information services	-71	-24	251	342	+36%
Charges for the use of intellectual property n.i.e	-145	-89	197	121	-39%
Maintenance and repair services n.i.e.	-65	-113	67	117	+75%
Passenger transport	-424	-665	982	1,187	+21%
Freight transport	-1,018	-1,382	1,412	1,696	+20%
Other business services	-2,100	-2,205	3,670	3,627	-1%
Personal travel (not education related)	-1,647	-2,437	4,435	5,845	+32%
<b>Total services trade</b>	<b>-3,408</b>	<b>-4,484</b>	<b>14,280</b>	<b>16,926</b>	<b>+19%</b>
<b>TOTAL GOODS AND SERVICES TRADE</b>	<b>+95,977</b>	<b>+89,650</b>	<b>153,763</b>	<b>183,638</b>	<b>+19%</b>

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5368.0.

Turning first to net exports, the majority of merchandise traded is positive across the commodity groupings, with the export value exceeding the import value of these goods. The import value of some smaller commodity items (including crustaceans, live animals, wool and gold coin) has exceeded the export value of these goods in the most recent period – 2013-14. This pattern is also observed five years ago in 2009-10.

Two-way trade growth figures demonstrate the dominance of minerals in the overall value of trade between Western Australia and the rest of the world. Iron ore remains the highest value traded commodity, with two-way trade valued at \$77,448 million, increasing by 17 per cent since 2009-10.

Services traded reveal more mixed results, with export values exceeding import values for the top five services in both 2009-10 and 2013-14. However, the remaining services traded show Western Australia importing a higher value of services than what the state exports. Two-way trade in services has shown considerable growth over the last five years across almost all service groups, demonstrating the high demand for what is likely to be lower cost services available from trading partners outside the state.

## Who do we sell to?

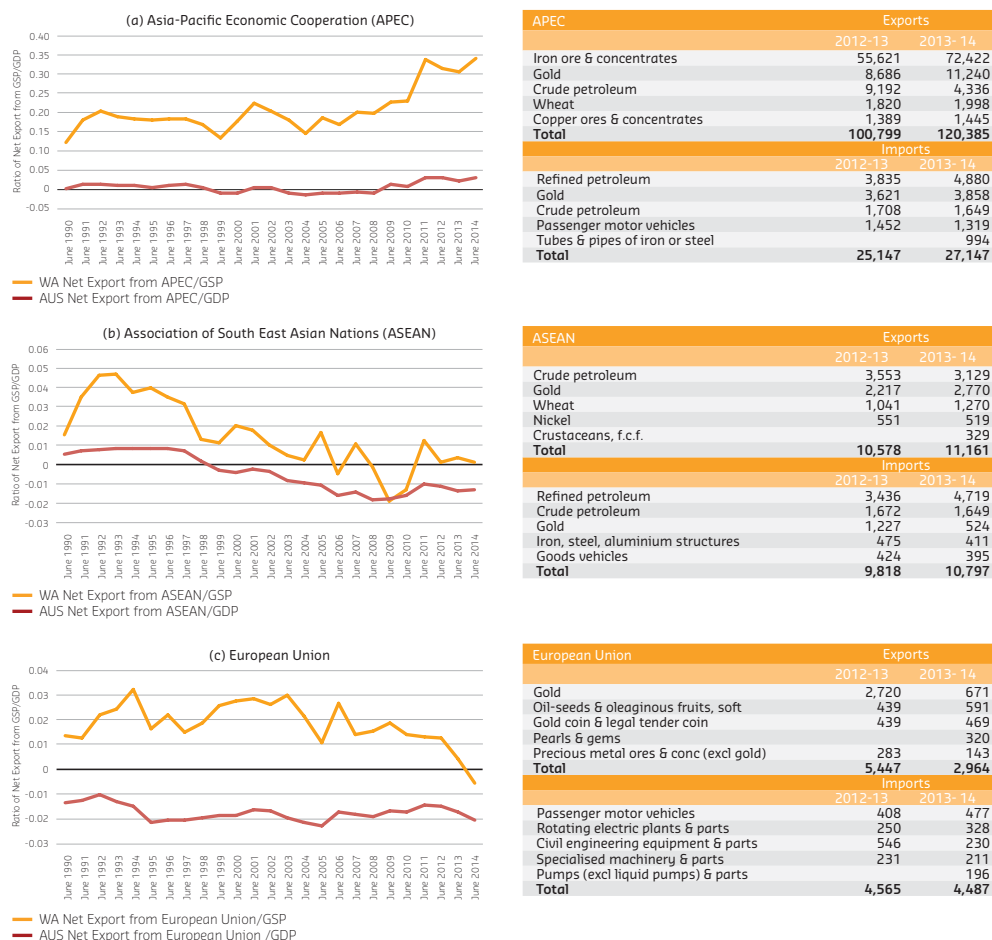
WA has clearly benefitted from the rapid industrialisation of East Asia since the 1970s, first led by Japan, and in the past decade, China, with resources supply from Australia fuelling economic growth in that region. The globalisation of the WA economy has been largely tied to a number of key commodities, principally iron ore, crude oil and condensate, liquefied natural gas (LNG) and gold. Although iron ore production has been underpinned by historically healthy prices, recent price falls show the potential for lower global demand to affect the WA economy through lower wages and royalties receipts, and over the medium-term in reduced investment in resources projects.

Figure 8 shows the State's trade position with major partner country groupings – APEC, ASEAN and the Euro Area. Net export trends for Western Australia are compared with national figures – alongside specific data on the five largest export and import commodity items between WA and each country group.

The Asia Pacific Economic Cooperation (APEC) area includes some of the biggest economies in the world – countries such as Japan, China and the United States of America, and represents by far the largest block of trading partners with Western Australia. While Australia as a nation has maintained its trade balance with APEC countries, Western Australia has been a significant net exporter.

During the mining boom in Western Australia, net exports to APEC countries have more than doubled as a percentage of GSP, from 15 per cent in 2004 to around 35 per cent in 2011.

**Figure 8** Net exports from WA and Australia to key country groups: share of GSP/GDP, 1990 to 2014



**Note:** See Glossary for a list of countries in each key group.

**Source:** BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations from ABS Cat No 6105.0, July 2014, and Department of Foreign Affairs and Trade – Australia's Trade by State and Territory, 2012-13 and 2013-14.



Western Australia is set to remain a strong net exporter to APEC countries with \$120 million in exports overall compared with around \$27 million imports in 2013-14.

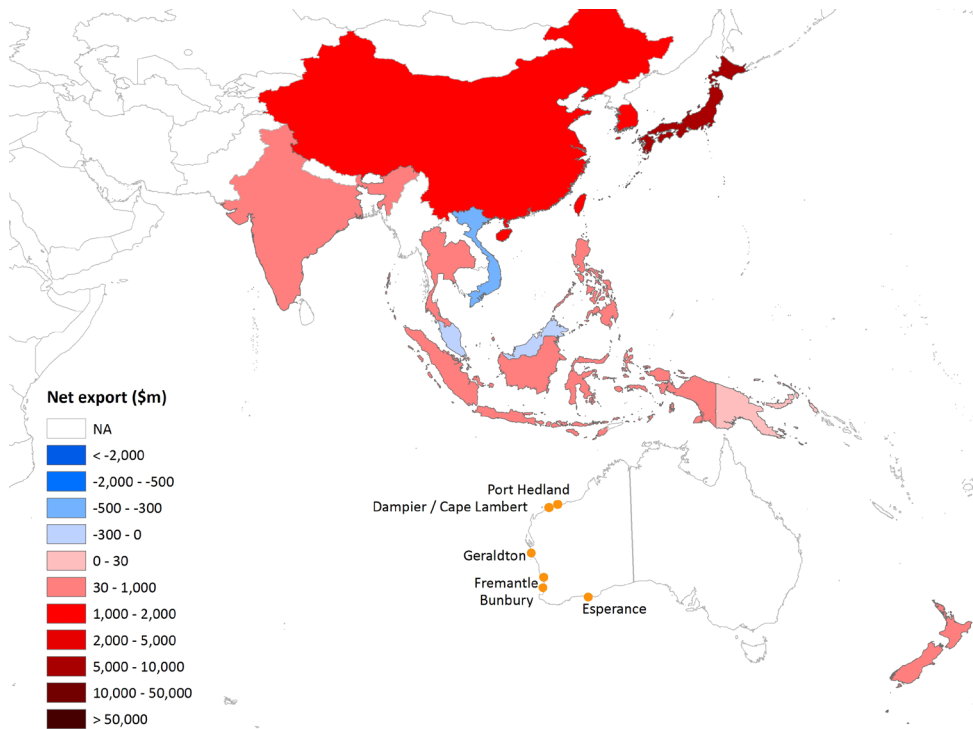
By far the largest share of exports to APEC countries come from the sale of iron ore and concentrates – principally to China. Gold and crude petroleum feature both as import items as well as exports according to the data presented alongside Figure 8(a), but WA remains a strong net exporter in these commodities. In value terms, passenger and motor vehicle imports (at around \$1.4 billion) broadly match exports of copper ores and concentrates (\$1.3 billion). Overall, Western Australia is set to remain a strong net exporter to APEC countries with \$120 million in exports overall compared with around \$27 million imports in 2013-14.

The Association of South East Asian Nations (ASEAN) – including Brunei, Myanmar, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam – was established principally to maintain political stability in the region. Although the aggregate value of trade with ASEAN countries is significantly smaller than APEC, the ASEAN group of countries nevertheless represents a key developing market for Western Australian trade.

Figure 8(b) shows a declining trend in net exports from WA to ASEAN countries when expressed as a share of gross state product (GSP). Nevertheless, net exports for WA have remained consistently above national trends (when the latter is as a share of gross domestic product). Imports and exports between WA and ASEAN countries consist mostly of petroleum, with overall trade returning to balance after a period of negative net exports around the time of the GFC. Beyond petroleum, trade between Western Australia and ASEAN countries is principally on primary goods, mostly resources and wheat. In contrast, Australia has shifted from a net exporter with ASEAN countries before the start of the millennium to a net importer now.

Figure 8(c) shows that net exports from WA to European Union countries have declined as a share of gross state product since the GFC, and particularly since 2013 with a significant fall in gold exports. Australian Bureau of Statistics data show that WA became a net importer from European Union countries in 2014. Imports from the European Union have mostly been vehicles and manufactured plant and machinery. Notwithstanding the State's declining trade balance, WA has remained consistently above Australian total net exports measured as a share of gross domestic product.



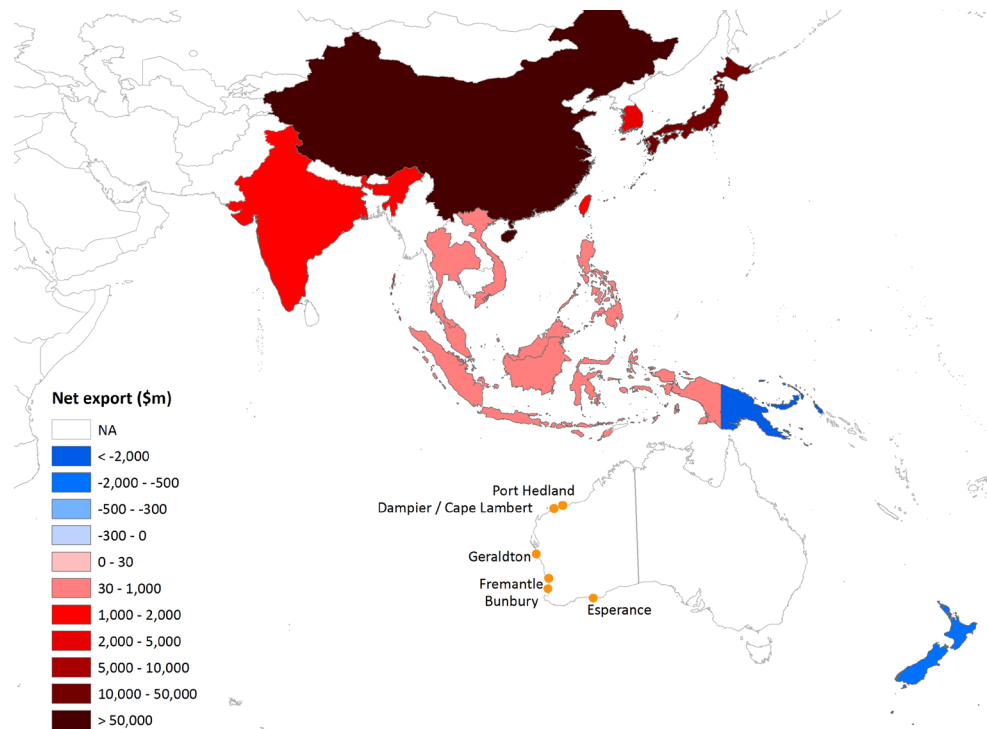
**Figure 9** Total net exports from Western Australia by Asian country partner: 1999-2000

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0 – International Trade in Goods and Services, Australia, July 2015.

Net exports from WA to European Union countries have declined as a share of gross state product since the GFC.

The value of net exports between Western Australia and Asian trade partners in 1999-2000 is mapped in Figure 9. Japan features as a key trading partner, with exports to Japan almost seven times greater in value than imports stemming from Japan into WA. In that period, total trade with Japan – that is the sum of exports and imports – amounted to \$7.6 billion, which was the highest among all countries including China. After Japan, South Korea was WA's second largest trading partner, with total export values of \$2.3 billion and imports of \$859 million. In 1999-2000, prior to the acceleration in China's construction-led growth, Singapore was a more important trading partner with WA with respect to total trade. WA's net export with China was \$2.1 billion, with exports of \$1.9 billion and imports of \$269 million. Among the Asian trading partners, as indicated with shades of blue in Figure 9, WA was a net exporter to all except for Vietnam (net exports of -\$365 million) and Malaysia (net exports of -\$9 million).

**Figure 10** Total net exports from Western Australia by Asian country partner: 2014-15



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0 – International Trade in Goods and Services, Australia, July 2015.

Figure 10 presents a contrasting picture of net exports between WA and its Asian trading partners in 2014-15. By this time, China has become unequivocally WA's largest trading partner. Exports to China totalled \$55 billion while imports were almost \$5 billion. Japan, South Korea and Singapore remain importing trade partners to the state. India has also emerged as an important partner, and is likely to continue being so. In 1999-2000 WA's net export to India was a mere \$120 million. Fast forward to 2014-15, net export with the second most populous country in the world is \$1.5 billion. Figure 10 also shows the reversal in trading pattern between WA and partner countries as compared with 1999-00. Vietnam and Malaysia have turned from being WA's net importer to net exporter. WA is currently a net importer from New Zealand and Papua New Guinea when, back in 1999-00 we exported more than we imported from these countries.

As well as emerging as the key import market for WA, China is also developing as an investment partner. A recent study found a total of \$45.1 billion in completed investment deals between September 2006 and June 2012 were funded by Chinese partners in Australia (KPMG 2012). Of this, \$13.9 billion or 30.8% was spent in WA, almost entirely on mining and petroleum projects (99%). The benefits of this investment in mining and petroleum resources has been spread across the broader community in the form of income and consumption impacts from related activities and tax and royalties collections by government. These impacts flow across the community and can be viewed at the aggregate level in terms of per capita Gross State Product (GSP).

# Trade

and new business opportunities

## A tale of two markets

In the short-to-medium term, the value and prospective increases in production volume of WA's main export commodities depend upon the continued health of China and other emerging markets in Asia, but also the ability of WA to remain competitive as a destination for foreign direct investment both in established and new industry sectors.

Central to these prospects is the strength and breadth of the global economic recovery after the carnage of the Global Financial Crisis (GFC). As Table 6 demonstrates, GDP in most of the advanced economies collapsed in the immediate aftermath of the GFC in 2009. In some cases, growth rates are yet to recover to pre-2008 levels. This is especially true of the Euro Area, where the overall economic situation has recovered only slowly from the overhang of the GFC. The negative real GDP growth experienced by the Euro area in 2012 and 2013 gave way to a modest positive growth of 0.9 per cent in 2014, with future growth projected by the International Monetary Fund (IMF) to hit 1.6 per cent by 2016.

The economic growth path for the US is likely to be stronger than most other advanced economies according to IMF forecasts, rising to 3.1 per cent by 2016. This is despite the country's large private debt overhang and ongoing debate about the appropriateness of current fiscal and monetary policy settings.

**Table 6** Real GDP growth – key countries and areas: 2008 to 2014 (actual) and 2015-16 (forecast)

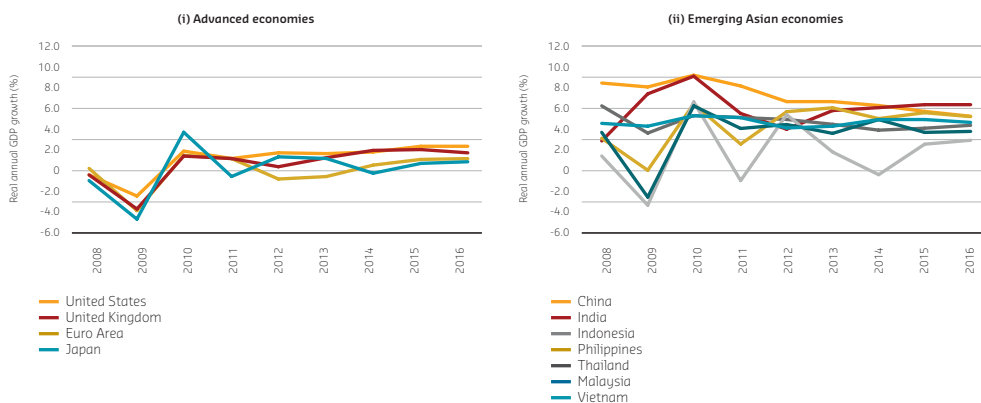
	2014 GDP (scaled) <i>Australia=1</i>	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP growth rates (annual percentage change)									Projection	
World	105.2	3.1	0.0	5.4	4.2	3.4	3.4	3.4	3.5	3.8
<b>Advanced Economies</b>										
United States	16.9	-0.3	-2.8	2.5	1.6	2.3	2.2	2.4	3.1	3.1
Euro Area	12.7	0.5	-4.5	2.0	1.6	-0.8	-0.5	0.9	1.5	1.6
United Kingdom	2.4	-0.3	-4.3	1.9	1.6	0.7	1.7	2.6	2.7	2.3
Canada	1.5	1.2	-2.7	3.4	3.0	1.9	2.0	2.5	2.2	2.0
Japan	4.5	-1.0	-5.5	4.7	-0.5	1.8	1.6	-0.1	1.0	1.2
<b>Emerging and Developing Asia (selected)</b>										
China	17.5	9.6	9.2	10.4	9.3	7.8	7.8	7.4	6.8	6.3
India	7.2	3.9	8.5	10.3	6.6	5.1	6.9	7.2	7.5	7.5
Indonesia	2.6	7.4	4.7	6.4	6.2	6.0	5.6	5.0	5.2	5.5
Papua New Guinea	0.02	6.6	6.1	7.7	10.7	8.1	5.5	5.8	19.3	3.3
Philippines	0.7	4.2	1.1	7.6	3.7	6.8	7.2	6.1	6.7	6.3
Thailand	1.0	2.5	-2.3	7.8	0.1	6.5	2.9	0.7	3.7	4.0
Malaysia	0.7	4.8	-1.5	7.4	5.2	5.6	4.7	6.0	4.8	4.9
Vietnam	0.5	5.7	5.4	6.4	6.2	5.2	5.4	6.0	6.0	5.8

Note: World GDP is weighted using GDP weights at purchasing power parity (PPP).

Source: BANKWEST CURTIN ECONOMICS CENTRE | IMF World Economic Outlook, April 2015, Appendix A1/A4 6 the World Bank World Development Indicators.

The third major developed economy, Japan, has endured a bumpy economic ride since the GFC. However, a recent shift towards expansive monetary and fiscal policy provides the basis for cautious optimism in Japan's future growth trajectory – with growth forecast to hit around 1.2 per cent by 2016. This should provide some support for trade exports in some of WA's principal commodities such as iron ore and LNG.

**Figure 11** Real annual GDP growth, advanced and emerging Asian economies: 2008 to 2016



Source: BANKWEST CURTIN ECONOMICS CENTRE | IMF World Economic Outlook, April 2015, Appendix A1/A4 & the World Bank World Development Indicators.

The story elsewhere in Asia is quite different, especially for WA's key export markets – China and Korea. China's expansion has become increasing uncertain due to changes in the senior political leadership of that country, currency pressures and rising levels of credit, particularly in housing and infrastructure, two areas which are crucial to China's continued support for the expansion of iron ore and LNG exports. The current IMF assessment indicates that China will see reasonably strong growth over at least the next two years, albeit at reduced levels to that seen in the middle of the last decade.

## Established and emerging trade sectors

Figure 12 plots the export value by industry of businesses in Australia's states and territories. In terms of broad trends, it can be observed that the value of Australian exports from businesses in the agriculture, forestry and fishing industry has dropped from its recent peak in 2011-12. Mining and construction have remained healthy while manufacturing has experienced a steady decline from exporters country wide.

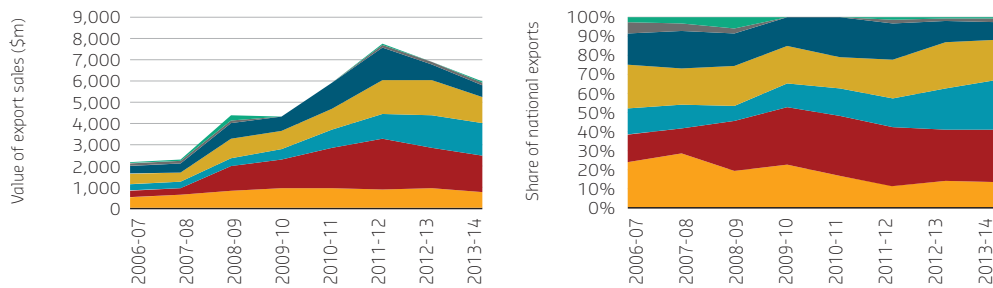
Western Australia's distinct advantage in mining is reflected in the statistics – with 67% of Australia's total goods export value coming from this state. The share has also steadily increased over time. Among the other sectors WA has the second highest, behind Victoria, in the wholesale trade export business.

Can we observe recent history and draw conclusions on the likely future trajectory of international trade in WA? Which emerging sectors can potentially offer opportunities for further export growth and development? On this we believe that iron ore will remain a fixture in WA's export mix. Steel will continue to be largely made from sintered ore in the foreseeable future and WA has a distinct geographic advantage to serve China and other emerging economies in the region. Natural gas will also be another industry that will continue to flourish. The Western Australian Attorney General and Minister of Commerce Michael Mischin reflected at the recent Australasian Oil and Gas (AOG) conference in Perth (March 2015) that the sector was not only the most valuable commodity to the state government last year, but also with a vast resource, specialised technology and a stable investment pipeline there is 'a case for optimism'.

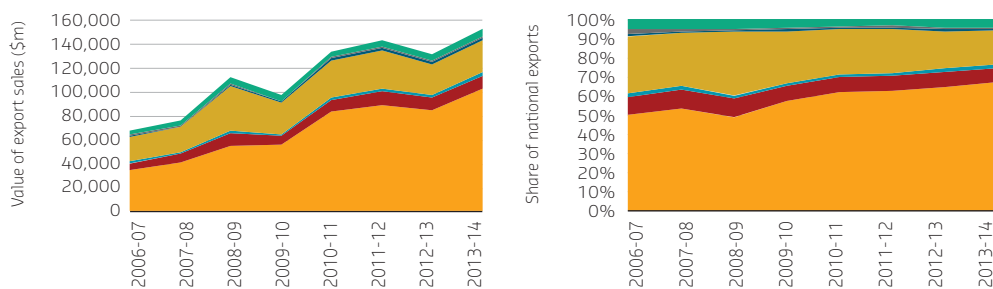
WA still has largely untapped natural attractions for the tourism industry. With a mix between a long coastline, heritage trails and peaceful places with almost zero ambient noise the regions of WA has great potential to be marketed as a unique 'paradise' that our Asian neighbours can reach on a non-stop flight. Furthermore, tourism is an industry that ties very well with our stature as a producer of quality wines and the food services industry.

**Figure 12** Export sales for major commodity groups, by state/territory:  
value of exports and national share, 2006 to 2014

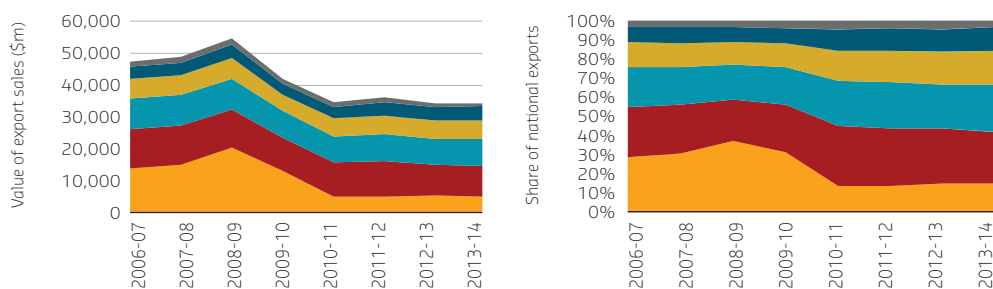
(a) Agriculture, forestry and fishing



(b) Mining



(c) Manufacturing

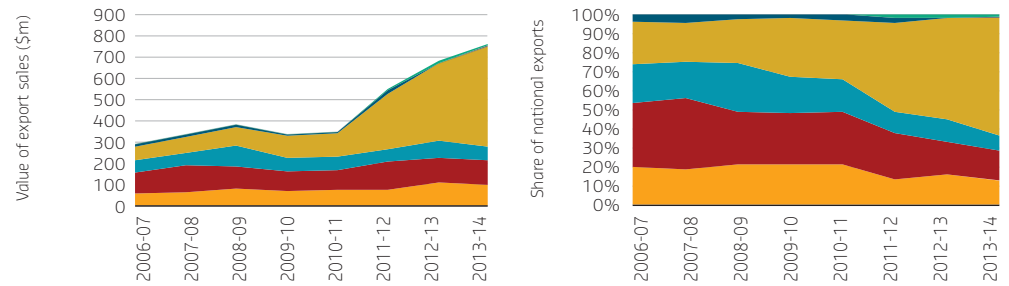


WA NSW VIC QLD SA TAS NT

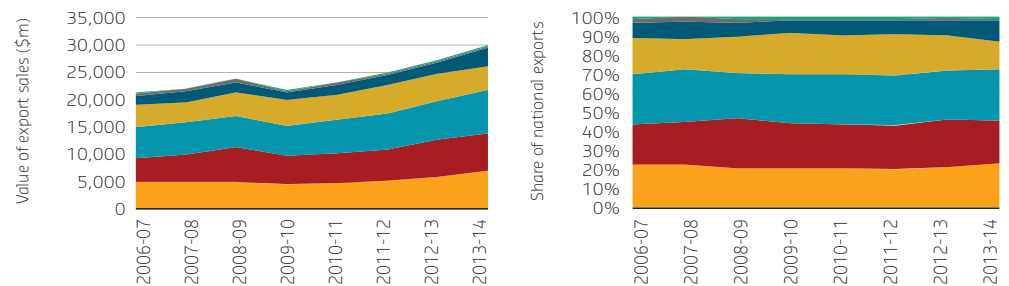
Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5368.0.

**Figure 12 (cont)** Export sales for major commodity groups, by state/territory:  
value of exports and national share, 2006 to 2014

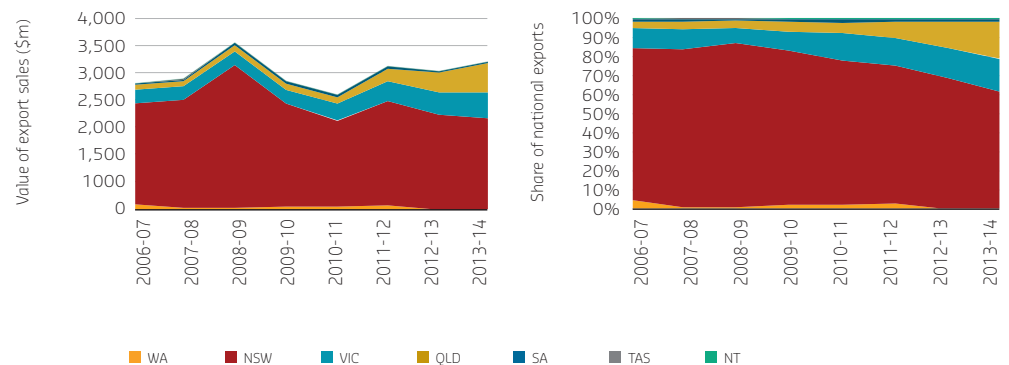
**(d) Construction**



**(e) Wholesale trade**



**(f) Retail trade**



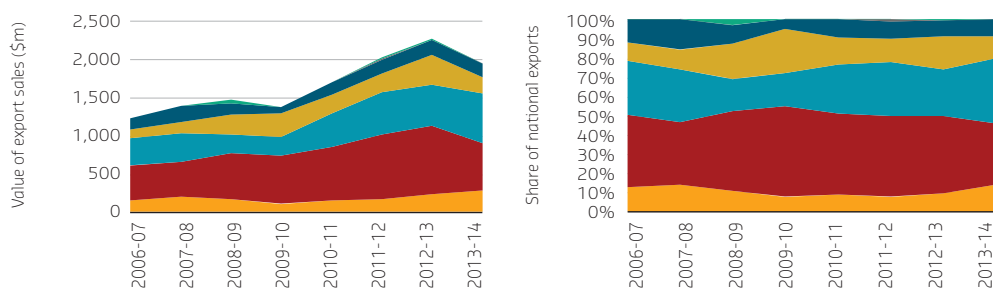
WA NSW VIC QLD SA TAS NT

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5368.0.

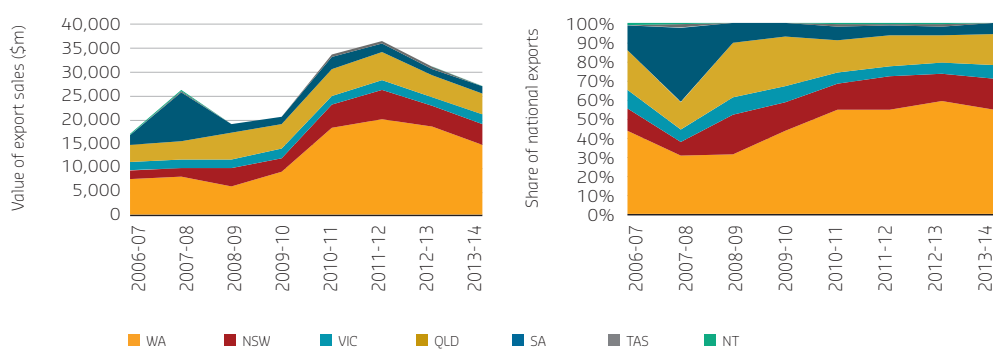


**Figure 12 (cont)** Export sales for major commodity groups, by state/territory:  
value of exports and national share, 2006 to 2014

(g) Transport, postal and warehousing



(h) Other exports



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5368.0.

## A focus on quality

How compelling is the 'focus on quality' narrative in setting the direction of Western Australia's trade and industry strategies? How well positioned is WA to capitalise on new markets for hi-tech or high-end products?

The transformative effect of economic liberalisation on societies across the Asian continent presents WA with important opportunities for further growth and development. Higher discretionary incomes among the much-vaunted rising middle class in Asia's emerging economies is creating a growing demand for premium consumption. This in turn provides WA businesses with new and expanded outlets for trade in high value resources – gold and nickel – as well as prestige and luxury commodities in the agriculture, aquaculture and food sectors. There are greater opportunities also for tourism and education exports.

By virtue of its sheer scale, China naturally offers the greatest opportunity for a further expansion of exports of such high value commodity items. However, such markets are also developing with other Asian trading partners – Indonesia, Malaysia and particularly India. Japan has a more established demand for premium commodities, but remains an important outlet should WA expand production in these 'boutique' areas.

To capitalise on this opportunity requires effective networks to build an awareness of the tastes and preferences of the growing middle class within the Asian region. The challenge in following the 'focus on quality' strategy is to discern which products and services they want, and which of those Western Australia can offer.

WA has a natural advantage in servicing global demand for high quality produce, being well situated in relation to time-zones and proximity to most of the Asian countries. The prospect of developing fully online businesses which can process, receive payment and dispatch product from WA to Asian countries within a tight timeframe is an important opportunity to capitalise on this advantage.

Online ordering of food into countries such as Japan and China are especially welcomed, given the high value placed on the quality of Australian produce. However, the infrastructure and supply chain requirements to service the global demand for quality in fresh or perishable produce present more challenges to regional or small businesses. Most large scale companies are able to invest capital themselves to maintain or build the required infrastructure. However, the same is less likely to be true of niche industries or boutique suppliers. Developing 'common use' infrastructure to help WA's trade with Asia is more difficult if it is to be Government funded, which opens up an opportunity for private partnerships, foreign direct investment and business collaborations in regard to essential infrastructure.

## WA as a 'knowledge economy' – translating innovation to exports

It is the case that, historically, Western Australia has been a net importer of high-tech merchandise and services. It had been the case that we have been better off, in terms of comparative advantage, to simply import 'knowledge' from overseas and focus on exporting items and services that are most profitable. In recent times we have been seeing notable changes. Several sectors in the WA economy are at the forefront of innovation and implementing knowledge management in their businesses. However, there is much more to do.

Given the importance of education to the State, and the excellence of the education and business sectors in research and innovation, WA is increasingly being correctly tagged as a 'knowledge economy'. The key is to translate R&D and innovation into marketable (and exportable) product.

The great challenge for the state, and indeed for Australia, is to bridge the gap between fundamental knowledge and innovation on the one hand, and commercialisation and export on the other. Continued support to small and medium businesses with investment capital would be beneficial to their ability to build business capability in regards to product development and production. So too are there benefits from marketing and promotion, to be able to service potential markets.

## Country trade and partnerships

WA is extremely well positioned to capitalise on new trading opportunities both in terms of the scale and composition of its trade with Asian partners.

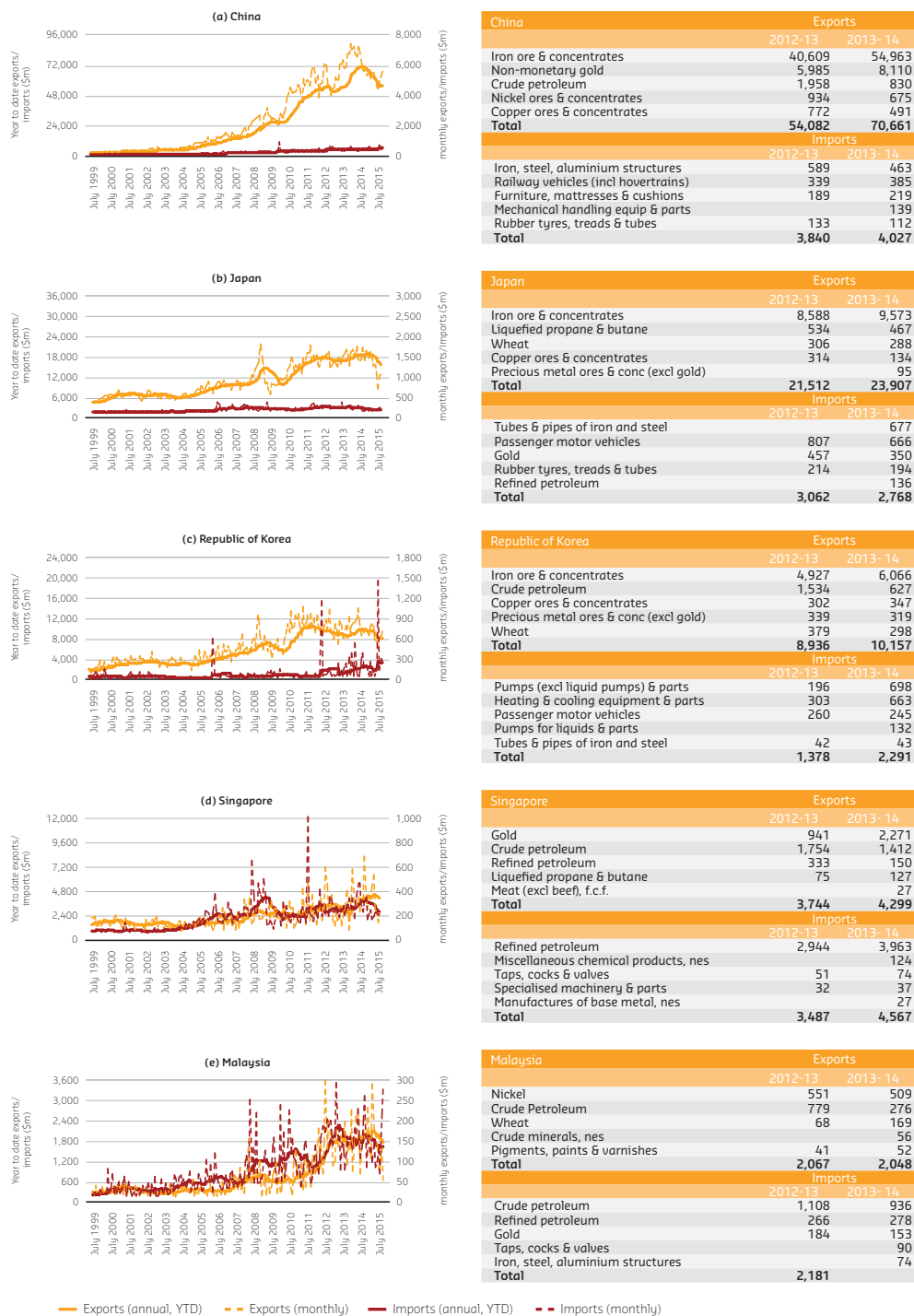
Moving from the country group analysis earlier in this report to an examination of WA's trade with specific Asian country partners provides a more nuanced profile of the State's trade trajectory. The purpose of this section is to gain some further insight into the changing patterns of trade between Western Australia and those Asian emerging economies with which the State has formed significant trading relationships.

Asia is strategically important by virtue of its geographical proximity, of course, but the narrative regarding trading patterns and new trading opportunities is changing. Dr Andrew Crane, CEO of CBH Group, pointed to the changing landscape of trading relationships with emerging economies in Asia. He observed that the traditional notion of the bilateral trader ("we sell, you buy") is giving way to more sophisticated international partnerships between Australian and Asian companies selling into a global market (Crane, 2015).

China remains the State's most significant trading partner, with the unprecedented growth in net exports to China since the start of the millennium creating a dependence in WA's economic growth and prosperity. China displaced Japan some time ago as the State's major international customer for iron ore, and other fuel and metal resources, yet Japan remains a significant and important trading partner. Taken together, the value of WA's exports to China and Japan amounted to some \$95 billion in 2013-14.

Despite recent volatilities in the price of primary commodities, the trade in resources with China will continue to dominate. However, trading opportunities have also developed with other Asian countries over the last five years – and WA is extremely well positioned to capitalise on such opportunities both in terms of the scale and composition of its trade with Asian partners. The WA economy can gain strength and resilience through trade diversification, not just in the breadth of commodities traded but also the countries with whom we do business.

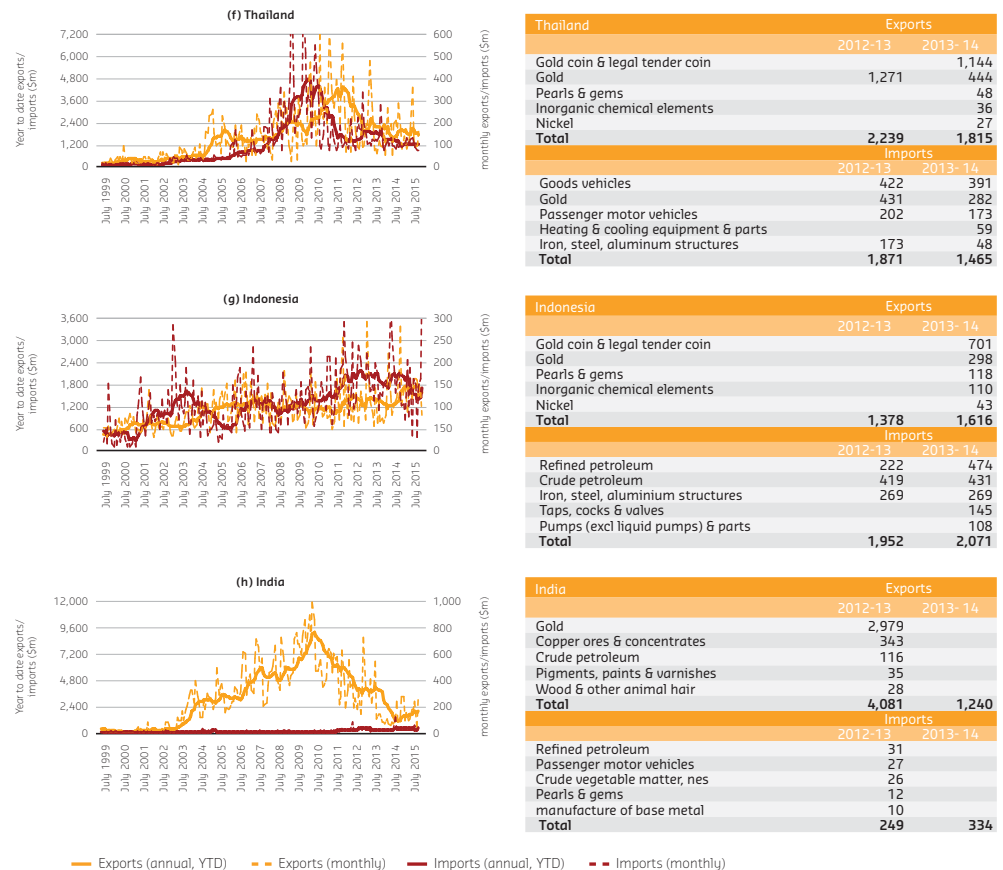
**Figure 13 Western Australia's trade with major country partners, 1999 to 2015: monthly and annual YTD (\$m)**



**Note:** Annual export figures are based on year-to-date (YTD) aggregates of monthly exports and imports data, updated each month. Tables report exports and imports of the highest value for Western Australia's top ten trading partners, where available.

**Source:** BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations from ABS Cat No 5368.036e and No 5368.037e, August 2015; DFAT STARS data as reported in DFAT (2014) and DFAT (2015).

**Figure 13 (cont)** Western Australia's trade with major country partners, 1999 to 2015: monthly and annual YTD (\$m)



**Note:** Annual export figures are based on year-to-date (YTD) aggregates of monthly exports and imports data, updated each month. Tables report exports and imports of the highest value for Western Australia's top ten trading partners, where available.

**Source:** BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations from ABS Cat No 5368.036e and No 5368.037e, August 2015; DFAT STARS data as reported in DFAT (2014) and DFAT (2015).

The left panel of Figure 13 highlights the pattern of trade between Western Australia and its main trading partners in Asia. The solid lines depict annual exports (orange) and imports (red) by WA with the Asian partner countries. These are original monthly-observed data annualised from the year-to-date values. The more variable dotted lines are the original monthly data, which are available until July-2015. The right panel details the items traded between WA and its partner countries, for the 2013 and 2014 financial years.

Iron ore is the dominant export commodity from WA to our top three partners: China, Japan and South Korea. Smaller economies such as Singapore and Malaysia, where construction-driven industrialisation or industries such as ship building and automobiles are not as prevalent as they are for the East Asian countries, import other resources from WA such as gold and nickel. Overall, WA is a net exporter to China, Japan and South Korea. Trade with Singapore and Malaysia are largely balanced, with imports slightly exceeding exports. In the case of the other South East Asian countries, WA is a net exporter with Thailand and a net importer with Indonesia.

The last panel in Figure 13 shows WA's export and import with India. Gold is by far the commodity that India imports most from Western Australia, or anywhere for that matter, for there is little to no gold-mining industry in India and gold is a highly-valued commodity as a storage of wealth and as dowry for the family of brides. India's import of West Australian gold had a trend increase from the start of the last decade until mid-2010 when import duties were hiked significantly. This reversed the trend in a dramatic fashion, as the policy intended. More recent statistics from 2014 show that gold remains India's top merchandise import from Western Australia. However, the values have declined considerably from almost \$3 billion in 2012-13 to around \$700 million in 2014. Copper ores and concentrates and crude petroleum remain important export commodities to India from WA.

Overall, minerals are significant part of Western Australian exports to our partners in Asia. In terms of imports, a sizeable proportion are processed or manufactured goods. As an example, WA's top import item from China are structures made from iron, steel and aluminium. Tubes and pipes made from iron and steel as well as passenger vehicles are the top two imported items from Japan. WA's import from Korea include electrical products such as pumps and parts and heating and cooling equipment.





# WA trade

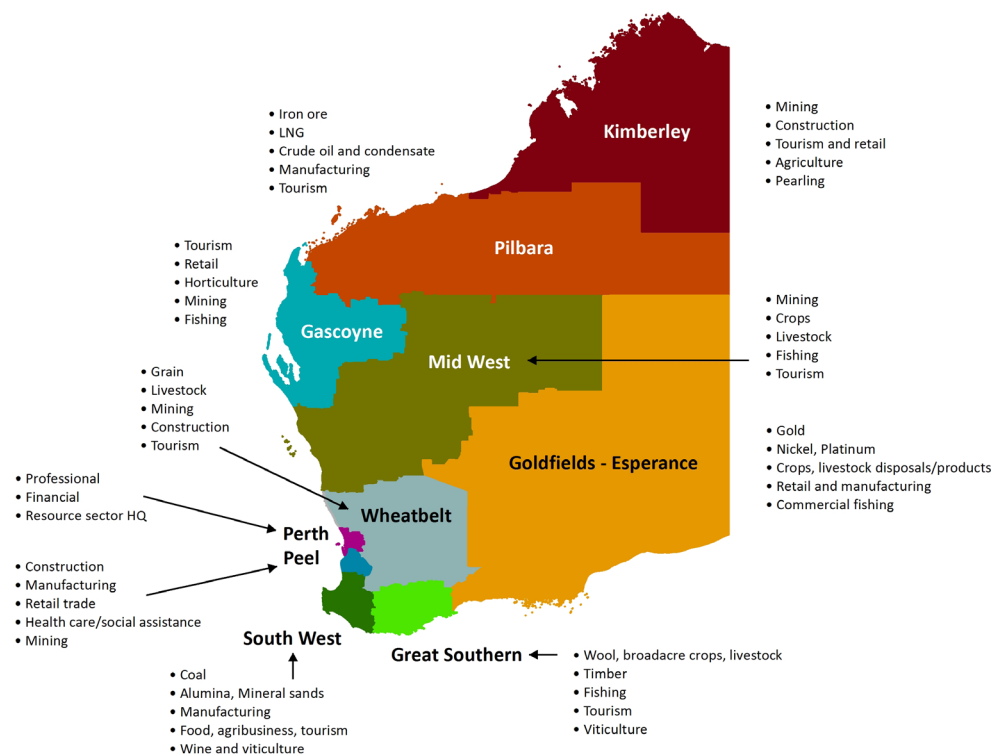
and regional development

## WA regions and their diversity

Western Australia is not only a vast state - in terms of area, it is by far the largest in Australia. It is also diverse in terms of communities, population density, climate and natural endowment. In this section, we examine trade - particularly the export of goods and services - from the perspective of the regions within WA. Doing so allows us to capture inherent nuances in the regions that might not be revealed when looking at the state as a whole.

There are nine regions in Western Australia as delineated by the Regional Development Commissions Act 1993. Figure 14 shows their boundaries and predominant industries. There is a good mix of merchandise production and service-oriented industries within the state. Duncan and Leong (2014) calculated that Pilbara and Goldfields-Esperance have economies (size as captured by Gross Regional Product) that are the most skewed, with Mining generating almost 90% of both regions' income. By contrast, the Great Southern and South West spread their resources over a wider range of products and services - both derive around 20% of their regional product from Construction, with the remainder split relatively evenly between the other industries.

**Figure 14** The regions of Western Australia and principal industries



Note: Principal industry identification from the Regional Development Commissions.  
Source: BANKWEST CURTIN ECONOMICS CENTRE | BCEC, Regional Development Commissions.

## WA regions: Workforce and nature of businesses

The West Australian economy has been characterised by significant structural changes over the past few decades. Alongside the increase in the share of mining, presently at 30%, there has also been an increase in the share of construction and a decrease in manufacturing (Table 1). Reflecting, until recent times, the strong growth in house prices the ownership of dwellings component has also displayed sustained strength.

To obtain a more in-depth look at regional WA exports we begin by examining the nature of the regional labour force in Table 7. Among the 1.1 million strong workforce in 2011, almost 17% belong to the Mining and associated Construction industries. 10.4% are employed in the Health Care and Social Assistance sector. There is also a sizeable workforce in Retail Trade (10.1%).

Mining is the largest employer in the Pilbara and Goldfields-Esperance, with the percentage of their workforce in mining (41% and 27%, respectively) dwarfing their second largest industries, which is Construction for the Pilbara and Retail trade for the Goldfields. Mining is also the Mid West's largest employer, though it does not dominate the workforce as it does in the Pilbara and Goldfields - Esperance. The Great Southern region and the Wheatbelt have the largest workforce in Agriculture, Forestry and Fishing. The South West is the only region where Manufacturing is still the largest employer, where it is marginally bigger than Retail trade.

Whilst the distribution of the workforce is a good indicator of the structure of the regional economies another indicator that can offer additional insight is the physical number of businesses in each industry in each region. On this Table 8 breaks down the 218,610 Australian businesses in the state into region and by industrial sectors. With a population of 59,935 persons in 2014 the Great Southern region has the most number of businesses per capita, with 11 businesses per 100 persons. In contrast, the Pilbara, with a 2014 population of 67,503, has the lowest business count per capita, at 3.6 businesses per 100 persons.

The industrial sector with the highest number of businesses in the Gascoyne, Goldfields - Esperance, Great Southern, Mid West and Wheatbelt is Agriculture, Forestry and Fishing. Mining does not feature among the count of the top 10 businesses in any region, which reflects the concentration of the industry into a small number of (highly profitable) large businesses.

Mining is the largest employer in the Pilbara and Goldfields-Esperance.

The South West is the only region where Manufacturing is still the largest employer, where it is marginally bigger than Retail trade.

Table 7 Regional WA workforce by industry: 2011

Employment by industry (number)	Gascoyne	Goldfields-Esperance	Great Southern	Kimberley	Mid West	Peel	Perth	Pilbara	South West	Wheatbelt	Other	WA
Agriculture, Forestry and Fishing	414 <sup>3</sup>	1,239 <sup>11</sup>	3,396 <sup>1</sup>	647 <sup>10</sup>	1,892 <sup>6</sup>	838 <sup>11</sup>	3,491 <sup>20</sup>	185 <sup>17</sup>	3,684 <sup>7</sup>	7,825 <sup>1</sup>	2,528 <sup>14</sup>	26,139 <sup>15</sup>
Mining	231 <sup>9</sup>	7,939 <sup>1</sup>	56 <sup>20</sup>	1,540 <sup>3</sup>	2,722 <sup>1</sup>	1,838 <sup>7</sup>	24,535 <sup>12</sup>	18,469 <sup>1</sup>	1,508 <sup>13</sup>	1,059 <sup>10</sup>	9,990 <sup>2</sup>	69,887 <sup>7</sup>
Manufacturing	181 <sup>10</sup>	2,065 <sup>3</sup>	1,544 <sup>5</sup>	347 <sup>13</sup>	1,212 <sup>9</sup>	3,858 <sup>2</sup>	63,839 <sup>5</sup>	1,449 <sup>7</sup>	7,476 <sup>1</sup>	1,530 <sup>7</sup>	6,161 <sup>5</sup>	89,662 <sup>4</sup>
Electricity, Gas, Water and Waste Services	65 <sup>15</sup>	238 <sup>18</sup>	248 <sup>16</sup>	170 <sup>18</sup>	210 <sup>18</sup>	243 <sup>19</sup>	8,597 <sup>18</sup>	455 <sup>16</sup>	1,188 <sup>15</sup>	399 <sup>15</sup>	824 <sup>17</sup>	12,637 <sup>19</sup>
Construction	299 <sup>7</sup>	2,012 <sup>4</sup>	1,326 <sup>7</sup>	1,309 <sup>5</sup>	2,033 <sup>4</sup>	2,969 <sup>4</sup>	56,115 <sup>6</sup>	8,370 <sup>2</sup>	6,787 <sup>3</sup>	1,770 <sup>6</sup>	29,684 <sup>1</sup>	112,674 <sup>1</sup>
Wholesale Trade	78 <sup>14</sup>	810 <sup>13</sup>	598 <sup>12</sup>	183 <sup>16</sup>	612 <sup>13</sup>	534 <sup>15</sup>	30,579 <sup>10</sup>	621 <sup>14</sup>	1,487 <sup>14</sup>	943 <sup>11</sup>	2,240 <sup>15</sup>	38,685 <sup>12</sup>
Retail Trade	407 <sup>4</sup>	2,215 <sup>2</sup>	2,642 <sup>2</sup>	1,132 <sup>7</sup>	2,320 <sup>2</sup>	4,009 <sup>1</sup>	79,742 <sup>2</sup>	1,381 <sup>8</sup>	7,425 <sup>2</sup>	2,359 <sup>3</sup>	6,065 <sup>6</sup>	109,697 <sup>3</sup>
Accommodation and Food Services	455 <sup>1</sup>	1,642 <sup>7</sup>	1,301 <sup>8</sup>	1,266 <sup>6</sup>	1,522 <sup>8</sup>	2,315 <sup>6</sup>	42,675 <sup>8</sup>	2,485 <sup>3</sup>	4,577 <sup>6</sup>	1,321 <sup>8</sup>	4,604 <sup>8</sup>	64,163 <sup>9</sup>
Transport, Postal and Warehousing	259 <sup>8</sup>	1,536 <sup>9</sup>	790 <sup>9</sup>	846 <sup>9</sup>	1,180 <sup>10</sup>	810 <sup>12</sup>	31,721 <sup>9</sup>	2,310 <sup>4</sup>	2,101 <sup>11</sup>	1,244 <sup>9</sup>	6,822 <sup>3</sup>	49,619 <sup>10</sup>
Information Media and Telecommunications	20 <sup>20</sup>	155 <sup>20</sup>	147 <sup>19</sup>	161 <sup>19</sup>	135 <sup>19</sup>	216 <sup>20</sup>	9,396 <sup>17</sup>	105 <sup>20</sup>	500 <sup>20</sup>	103 <sup>20</sup>	764 <sup>19</sup>	11,702 <sup>20</sup>
Financial and Insurance Services	22 <sup>19</sup>	308 <sup>16</sup>	350 <sup>14</sup>	106 <sup>20</sup>	327 <sup>16</sup>	406 <sup>17</sup>	23,917 <sup>13</sup>	151 <sup>18</sup>	975 <sup>17</sup>	440 <sup>14</sup>	799 <sup>18</sup>	27,801 <sup>14</sup>
Rental, Hiring and Real Estate Services	59 <sup>16</sup>	432 <sup>15</sup>	306 <sup>15</sup>	214 <sup>14</sup>	364 <sup>15</sup>	602 <sup>14</sup>	14,335 <sup>15</sup>	702 <sup>13</sup>	1,145 <sup>16</sup>	181 <sup>18</sup>	706 <sup>20</sup>	19,046 <sup>16</sup>
Professional, Scientific and Technical Services	115 <sup>13</sup>	870 <sup>12</sup>	784 <sup>10</sup>	372 <sup>12</sup>	747 <sup>12</sup>	1,009 <sup>10</sup>	67,211 <sup>3</sup>	1,358 <sup>10</sup>	2,478 <sup>9</sup>	589 <sup>13</sup>	3,494 <sup>10</sup>	79,027 <sup>6</sup>
Administrative and Support Services	130 <sup>11</sup>	620 <sup>14</sup>	402 <sup>13</sup>	521 <sup>11</sup>	545 <sup>14</sup>	767 <sup>13</sup>	21,559 <sup>14</sup>	1,380 <sup>9</sup>	1,516 <sup>12</sup>	373 <sup>16</sup>	6,260 <sup>4</sup>	34,073 <sup>13</sup>
Public Administration and Safety	448 <sup>2</sup>	1,594 <sup>8</sup>	1,532 <sup>6</sup>	1,401 <sup>4</sup>	1,533 <sup>7</sup>	1,567 <sup>8</sup>	50,929 <sup>7</sup>	1,346 <sup>11</sup>	3,144 <sup>8</sup>	1,845 <sup>5</sup>	3,017 <sup>12</sup>	68,356 <sup>8</sup>
Education and Training	323 <sup>5</sup>	1,890 <sup>6</sup>	2,097 <sup>4</sup>	1,743 <sup>2</sup>	2,033 <sup>4</sup>	2,631 <sup>5</sup>	64,606 <sup>4</sup>	1,529 <sup>5</sup>	5,156 <sup>5</sup>	2,544 <sup>2</sup>	3,127 <sup>11</sup>	87,679 <sup>5</sup>
Health Care and Social Assistance	302 <sup>6</sup>	1,895 <sup>5</sup>	2,474 <sup>3</sup>	1,891 <sup>1</sup>	2,174 <sup>3</sup>	3,191 <sup>3</sup>	85,108 <sup>1</sup>	1,456 <sup>6</sup>	6,133 <sup>4</sup>	2,294 <sup>4</sup>	5,719 <sup>7</sup>	112,637 <sup>2</sup>
Arts and Recreation Services	37 <sup>18</sup>	183 <sup>19</sup>	189 <sup>17</sup>	199 <sup>15</sup>	126 <sup>20</sup>	470 <sup>16</sup>	11,757 <sup>16</sup>	109 <sup>19</sup>	505 <sup>19</sup>	138 <sup>19</sup>	978 <sup>16</sup>	14,691 <sup>17</sup>
Other Services	118 <sup>12</sup>	1,372 <sup>10</sup>	776 <sup>11</sup>	973 <sup>8</sup>	885 <sup>11</sup>	1,170 <sup>9</sup>	29,010 <sup>11</sup>	1,097 <sup>12</sup>	2,385 <sup>10</sup>	937 <sup>12</sup>	3,900 <sup>9</sup>	42,623 <sup>11</sup>
Inadequately described	42 <sup>17</sup>	244 <sup>17</sup>	163 <sup>18</sup>	182 <sup>17</sup>	218 <sup>17</sup>	268 <sup>18</sup>	7,849 <sup>19</sup>	481 <sup>15</sup>	560 <sup>18</sup>	229 <sup>17</sup>	2,719 <sup>13</sup>	12,955 <sup>18</sup>
Not stated/applicable	5 <sup>21</sup>	11 <sup>21</sup>	11 <sup>21</sup>	23 <sup>21</sup>	8 <sup>21</sup>	18 <sup>21</sup>	309 <sup>21</sup>	27 <sup>21</sup>	12 <sup>21</sup>	15 <sup>21</sup>	189 <sup>21</sup>	628 <sup>21</sup>
<b>Total</b>	<b>4,010</b>	<b>29,270</b>	<b>21,132</b>	<b>15,226</b>	<b>22,798</b>	<b>29,729</b>	<b>727,280</b>	<b>45,466</b>	<b>60,742</b>	<b>28,138</b>	<b>100,590</b>	<b>1,084,381</b>

Note: Data are aggregated from the LGA level on a place of work basis. Other includes the categories 'No fixed address' and 'State/Territory undefined'.  
Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Census 2011.

**Table 8** Number of Australian businesses by industry in regional WA: 2014

Counts of businesses (number)	Gascoyne	Goldfields-Esperance	Great Southern	Kimberley	Mid West	Peel	Perth	Pilbara	South West	Wheatbelt	Unknown	WA
Agriculture, Forestry and Fishing	295 <sup>1</sup>	834 <sup>1</sup>	2,484 <sup>1</sup>	229 <sup>3</sup>	1,449 <sup>1</sup>	665 <sup>3</sup>	3,973 <sup>14</sup>	109 <sup>8</sup>	2,896 <sup>2</sup>	4,657 <sup>1</sup>	235 <sup>1</sup>	17,826 <sup>5</sup>
Mining	9 <sup>16</sup>	195 <sup>10</sup>	27 <sup>18</sup>	3 <sup>19</sup>	50 <sup>15</sup>	42 <sup>17</sup>	2,380 <sup>15</sup>	27 <sup>16</sup>	51 <sup>18</sup>	48 <sup>16</sup>	167 <sup>3</sup>	2,999 <sup>15</sup>
Manufacturing	23 <sup>11</sup>	146 <sup>11</sup>	250 <sup>9</sup>	79 <sup>12</sup>	155 <sup>11</sup>	318 <sup>9</sup>	6,831 <sup>9</sup>	90 <sup>11</sup>	660 <sup>8</sup>	277 <sup>9</sup>	127 <sup>6</sup>	8,956 <sup>10</sup>
Electricity, Gas, Water and Waste Services	3 <sup>18</sup>	12 <sup>18</sup>	6 <sup>20</sup>	3 <sup>19</sup>	12 <sup>18</sup>	27 <sup>19</sup>	478 <sup>20</sup>	12 <sup>19</sup>	49 <sup>19</sup>	24 <sup>18</sup>	21 <sup>16</sup>	647 <sup>20</sup>
Construction	146 <sup>2</sup>	674 <sup>2</sup>	900 <sup>2</sup>	521 <sup>1</sup>	810 <sup>2</sup>	1,936 <sup>1</sup>	30,270 <sup>1</sup>	597 <sup>1</sup>	3,069 <sup>1</sup>	993 <sup>2</sup>	174 <sup>2</sup>	40,090 <sup>1</sup>
Wholesale Trade	15 <sup>13</sup>	78 <sup>14</sup>	121 <sup>13</sup>	36 <sup>14</sup>	100 <sup>13</sup>	185 <sup>13</sup>	5,557 <sup>12</sup>	39 <sup>14</sup>	338 <sup>13</sup>	197 <sup>11</sup>	64 <sup>11</sup>	6,730 <sup>13</sup>
Retail Trade	72 <sup>4</sup>	282 <sup>6</sup>	407 <sup>4</sup>	211 <sup>4</sup>	305 <sup>6</sup>	557 <sup>6</sup>	9,480 <sup>6</sup>	138 <sup>7</sup>	1,028 <sup>5</sup>	513 <sup>5</sup>	82 <sup>9</sup>	13,075 <sup>7</sup>
Accommodation and Food Services	59 <sup>6</sup>	204 <sup>9</sup>	263 <sup>8</sup>	135 <sup>7</sup>	195 <sup>9</sup>	240 <sup>12</sup>	5,644 <sup>11</sup>	97 <sup>10</sup>	659 <sup>9</sup>	248 <sup>10</sup>	58 <sup>13</sup>	7,802 <sup>11</sup>
Transport, Postal and Warehousing	88 <sup>3</sup>	322 <sup>4</sup>	294 <sup>6</sup>	159 <sup>5</sup>	328 <sup>5</sup>	589 <sup>5</sup>	10,670 <sup>5</sup>	201 <sup>3</sup>	555 <sup>11</sup>	543 <sup>4</sup>	110 <sup>7</sup>	13,859 <sup>6</sup>
Information Media and Telecommunications	3 <sup>18</sup>	6 <sup>20</sup>	33 <sup>17</sup>	21 <sup>17</sup>	9 <sup>19</sup>	24 <sup>20</sup>	1,185 <sup>18</sup>	6 <sup>20</sup>	75 <sup>17</sup>	12 <sup>19</sup>	10 <sup>19</sup>	1,384 <sup>18</sup>
Financial and Insurance Services	38 <sup>9</sup>	251 <sup>7</sup>	283 <sup>7</sup>	107 <sup>10</sup>	361 <sup>4</sup>	479 <sup>7</sup>	15,572 <sup>4</sup>	105 <sup>9</sup>	928 <sup>6</sup>	346 <sup>7</sup>	90 <sup>8</sup>	18,560 <sup>4</sup>
Rental, Hiring and Real Estate Services	72 <sup>4</sup>	434 <sup>3</sup>	617 <sup>3</sup>	249 <sup>2</sup>	428 <sup>3</sup>	712 <sup>2</sup>	18,149 <sup>3</sup>	286 <sup>2</sup>	1,442 <sup>3</sup>	650 <sup>3</sup>	158 <sup>4</sup>	23,197 <sup>3</sup>
Professional, Scientific and Technical Services	41 <sup>7</sup>	246 <sup>8</sup>	392 <sup>5</sup>	153 <sup>6</sup>	238 <sup>8</sup>	621 <sup>4</sup>	22,285 <sup>2</sup>	160 <sup>5</sup>	1,102 <sup>4</sup>	324 <sup>8</sup>	140 <sup>5</sup>	25,702 <sup>2</sup>
Administrative and Support Services	31 <sup>10</sup>	123 <sup>12</sup>	142 <sup>12</sup>	124 <sup>8</sup>	130 <sup>12</sup>	269 <sup>11</sup>	6,073 <sup>10</sup>	162 <sup>4</sup>	429 <sup>12</sup>	176 <sup>12</sup>	60 <sup>12</sup>	7,719 <sup>12</sup>
Public Administration and Safety	- <sup>20</sup>	7 <sup>19</sup>	13 <sup>19</sup>	12 <sup>18</sup>	9 <sup>19</sup>	30 <sup>18</sup>	558 <sup>19</sup>	21 <sup>18</sup>	18 <sup>20</sup>	- <sup>20</sup>	- <sup>20</sup>	668 <sup>19</sup>
Education and Training	12 <sup>15</sup>	54 <sup>16</sup>	58 <sup>15</sup>	25 <sup>15</sup>	29 <sup>16</sup>	73 <sup>16</sup>	1,912 <sup>16</sup>	30 <sup>15</sup>	115 <sup>16</sup>	51 <sup>15</sup>	20 <sup>17</sup>	2,379 <sup>16</sup>
Health Care and Social Assistance	15 <sup>13</sup>	121 <sup>13</sup>	188 <sup>11</sup>	81 <sup>11</sup>	158 <sup>10</sup>	304 <sup>10</sup>	8,623 <sup>7</sup>	87 <sup>12</sup>	575 <sup>10</sup>	161 <sup>13</sup>	69 <sup>10</sup>	10,382 <sup>8</sup>
Arts and Recreation Services	9 <sup>16</sup>	32 <sup>17</sup>	39 <sup>16</sup>	24 <sup>16</sup>	24 <sup>17</sup>	110 <sup>15</sup>	1,779 <sup>17</sup>	24 <sup>17</sup>	138 <sup>15</sup>	33 <sup>17</sup>	17 <sup>18</sup>	2,229 <sup>17</sup>
Other Services	41 <sup>7</sup>	315 <sup>5</sup>	239 <sup>10</sup>	121 <sup>9</sup>	250 <sup>7</sup>	404 <sup>8</sup>	6,860 <sup>8</sup>	157 <sup>6</sup>	665 <sup>7</sup>	380 <sup>6</sup>	42 <sup>14</sup>	9,474 <sup>9</sup>
Inadequately described	19 <sup>12</sup>	64 <sup>15</sup>	87 <sup>14</sup>	69 <sup>13</sup>	94 <sup>14</sup>	152 <sup>14</sup>	4,025 <sup>13</sup>	80 <sup>13</sup>	216 <sup>14</sup>	92 <sup>14</sup>	34 <sup>15</sup>	4,932 <sup>14</sup>
Not stated/applicable	991	4,400	6,843	2,362	5,134	7,737	162,304	2,428	15,008	9,725	1,678	218,610
<b>Total</b>	<b>4,010</b>	<b>29,270</b>	<b>21,132</b>	<b>15,226</b>	<b>22,798</b>	<b>29,729</b>	<b>727,280</b>	<b>45,466</b>	<b>60,742</b>	<b>28,138</b>	<b>100,590</b>	<b>1,084,381</b>

Note: Data are aggregated from the SA2 level.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics CatNo 8165.0.

Around 80% of the state's large businesses are in the services sub-sector.

Tables 9 and 10 further splits the business counts in the regions into large and small businesses, where the conventional (for tax concessions) turnover value of \$2 million per annum is used to distinguish between the business sizes. Consistent with national level data there are many more small businesses in the state than there are large businesses, to the tune of 201,761 against 16,849.

In the state as a whole, the most number of large businesses (2,842) is in the Construction sector, followed by 2,472 businesses in retail. The Wheatbelt has the largest number of large businesses, at 1.2 per 100 persons, the majority of which is in the Agriculture, Forestry and Fishing sector. Peel has the lowest per capita number of large businesses in the region, at 0.3 businesses per 100 persons. The Pilbara is second lowest, with only 0.4 businesses per 100 persons.

When it comes to small businesses, the most number of businesses is in the Construction sector (37,428), following by Professional, Scientific and Technical services (24,282). The Wheatbelt and Great Southern have the largest number of small businesses per capita, at 11.8 and 10.6 businesses per 100 persons respectively.

In the discussion of industrial sectors there is a curious definition of the 'services sub-sector', which has been said to annoyingly be defined as what it is not rather than what it is. In this definition, the services sub-sector is comprised of sectors that are not Agriculture, Forestry and Fishing, Mining, and Manufacturing. *The Economist* has described the services sector as providing 'things you cannot drop on your foot'.

If we were to adopt this view of the services sub-sector, around 80% of the state's large businesses are in the services sub-sector. With the exception of the Wheatbelt, all regions have a higher proportion of their large businesses in the services sector. As for small businesses, 87% of the state's small businesses are in the services sub-sector. Perth and the Pilbara have the highest proportions of their small businesses in services.

It might be tempting to suggest that the services industries within the state cater more for the domestic residents than for international visitors. Whilst this may be true for sectors such as Professional, Scientific and Technical services, Health Care and Social Assistance (WA is not as yet a destination for health care tourism) and Wholesale Trade, it is easy to see that other services sector have a component which caters for our international visitors which is the highest earner in the state's services exports.

**Table 9** Number of large Australian businesses by industry in regional WA: 2014

Counts of businesses (number) with annual turnover of \$2m and above	Gascoyne		Goldfields-Esperance		Great Southern		Kimberley		Mid West		Peel		Perth		Pilbara		South West		Wheatbelt		Unknown		WA	
Agriculture, Forestry and Fishing	14	2	173	1	200	1	24	3	172	1	22	7	167	14	6	10	93	3	590	1	39	8	1,500	3
Mining	-	12	26	6	-	18	-	17	9	11	3	14	264	13	-	17	-	17	3	13	125	1	430	14
Manufacturing	3	8	18	9	22	4	6	12	14	8	34	3	1,047	5	13	8	70	4	27	4	87	2	1,341	6
Electricity, Gas, Water and Waste Services	3	8	3	16	-	18	-	17	-	16	-	18	63	18	-	17	6	14	-	15	18	14	93	17
Construction	8	4	53	3	40	3	55	1	47	3	102	1	2,218	1	69	1	150	2	26	6	74	3	2,842	1
Wholesale Trade	6	5	22	7	22	4	18	6	26	5	18	9	1,166	4	6	10	50	7	43	3	45	7	1,422	4
Retail Trade	22	1	59	2	84	2	53	2	64	2	98	2	1,713	2	37	2	196	1	100	2	47	6	2,473	2
Accommodation and Food Services	9	3	17	10	16	7	22	4	14	8	31	5	588	7	20	5	54	6	13	8	22	13	806	8
Transport, Postal and Warehousing	6	5	36	4	21	6	19	5	27	4	12	11	459	8	32	3	33	8	27	4	54	5	726	9
Information Media and Telecommunications	-	12	-	18	-	18	-	17	-	16	3	14	69	17	-	17	-	17	-	15	7	18	79	18
Financial and Insurance Services	-	12	6	13	3	13	9	8	9	11	10	12	428	10	6	10	17	12	3	13	33	9	524	11
Rental, Hiring and Real Estate Services	6	5	21	8	13	8	7	11	22	6	32	4	970	6	24	4	56	5	18	7	28	12	1,197	7
Professional, Scientific and Technical Services	3	8	12	11	10	9	6	12	20	7	20	8	1,235	3	10	9	33	8	6	10	65	4	1,420	5
Administrative and Support Services	3	8	4	15	5	12	14	7	5	13	9	13	432	9	18	6	24	10	12	9	33	9	559	10
Public Administration and Safety	-	12	-	18	3	13	3	14	-	16	3	14	46	20	-	17	-	17	-	15	-	20	55	20
Education and Training	-	12	6	13	3	13	3	14	-	16	3	14	139	15	3	14	3	16	-	15	8	16	168	15
Health Care and Social Assistance	-	12	9	12	9	10	8	10	4	14	16	10	394	11	3	14	16	13	6	10	30	11	495	12
Arts and Recreation Services	-	12	-	18	3	13	-	17	-	16	-	18	58	19	6	10	-	17	-	15	8	16	75	19
Other Services	-	12	28	5	3	13	9	8	12	10	24	6	356	12	14	7	22	11	-	15	9	15	477	13
Unknown	-	12	3	16	6	11	3	14	3	15	-	18	134	16	3	14	6	14	6	10	3	19	167	16
<b>Total</b>	<b>83</b>		<b>496</b>		<b>463</b>		<b>259</b>		<b>448</b>		<b>440</b>		<b>11,946</b>		<b>270</b>		<b>829</b>		<b>880</b>		<b>735</b>		<b>16,849</b>	

Note: Data are aggregated from the SA2 level.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 8165.0.

**Table 10 Number of small Australian businesses by industry in regional WA: 2014**

Counts of businesses (number) with annual turnover of less than \$2m	Gascoyne	Goldfields-Esperance	Great Southern	Kimberley	Mid West	Peel	Perth	Pilbara	South West	Wheatbelt	Unknown	WA
Agriculture, Forestry and Fishing	281 <sup>1</sup>	661 <sup>1</sup>	2,284 <sup>1</sup>	205 <sup>3</sup>	1,277 <sup>1</sup>	643 <sup>3</sup>	3,806 <sup>14</sup>	103 <sup>7</sup>	2,803 <sup>2</sup>	4,067 <sup>1</sup>	196 <sup>1</sup>	16,326 <sup>5</sup>
Mining	9 <sup>15</sup>	169 <sup>10</sup>	27 <sup>18</sup>	3 <sup>19</sup>	41 <sup>15</sup>	39 <sup>17</sup>	2,116 <sup>15</sup>	27 <sup>15</sup>	51 <sup>18</sup>	45 <sup>16</sup>	42 <sup>7</sup>	2,569 <sup>15</sup>
Manufacturing	20 <sup>11</sup>	128 <sup>11</sup>	228 <sup>10</sup>	73 <sup>11</sup>	141 <sup>11</sup>	284 <sup>10</sup>	5,784 <sup>9</sup>	77 <sup>11</sup>	590 <sup>9</sup>	250 <sup>9</sup>	40 <sup>8</sup>	7,615 <sup>10</sup>
Electricity, Gas, Water and Waste Services	- <sup>19</sup>	9 <sup>18</sup>	6 <sup>20</sup>	3 <sup>19</sup>	12 <sup>18</sup>	27 <sup>18</sup>	415 <sup>20</sup>	12 <sup>19</sup>	43 <sup>19</sup>	24 <sup>18</sup>	3 <sup>18</sup>	554 <sup>20</sup>
Construction	138 <sup>2</sup>	621 <sup>2</sup>	860 <sup>2</sup>	466 <sup>1</sup>	763 <sup>2</sup>	1,834 <sup>1</sup>	28,052 <sup>1</sup>	528 <sup>1</sup>	2,919 <sup>1</sup>	967 <sup>2</sup>	100 <sup>3</sup>	37,248 <sup>1</sup>
Wholesale Trade	9 <sup>15</sup>	56 <sup>15</sup>	99 <sup>13</sup>	18 <sup>17</sup>	74 <sup>14</sup>	167 <sup>13</sup>	4,391 <sup>12</sup>	33 <sup>14</sup>	288 <sup>13</sup>	154 <sup>13</sup>	19 <sup>15</sup>	5,308 <sup>13</sup>
Retail Trade	50 <sup>5</sup>	223 <sup>8</sup>	323 <sup>5</sup>	158 <sup>4</sup>	241 <sup>6</sup>	459 <sup>7</sup>	7,767 <sup>7</sup>	101 <sup>8</sup>	832 <sup>6</sup>	413 <sup>5</sup>	35 <sup>11</sup>	10,602 <sup>7</sup>
Accommodation and Food Services	50 <sup>5</sup>	187 <sup>9</sup>	247 <sup>8</sup>	113 <sup>7</sup>	181 <sup>9</sup>	209 <sup>12</sup>	5,056 <sup>11</sup>	77 <sup>11</sup>	605 <sup>8</sup>	235 <sup>10</sup>	36 <sup>10</sup>	6,996 <sup>12</sup>
Transport, Postal and Warehousing	82 <sup>3</sup>	286 <sup>5</sup>	273 <sup>7</sup>	140 <sup>6</sup>	301 <sup>5</sup>	577 <sup>5</sup>	10,211 <sup>5</sup>	169 <sup>3</sup>	522 <sup>11</sup>	516 <sup>4</sup>	56 <sup>6</sup>	13,133 <sup>6</sup>
Information Media and Telecommunications	3 <sup>18</sup>	6 <sup>20</sup>	33 <sup>17</sup>	21 <sup>16</sup>	9 <sup>19</sup>	21 <sup>20</sup>	1,116 <sup>18</sup>	6 <sup>20</sup>	75 <sup>17</sup>	12 <sup>19</sup>	3 <sup>18</sup>	1,305 <sup>18</sup>
Financial and Insurance Services	38 <sup>8</sup>	245 <sup>6</sup>	280 <sup>6</sup>	98 <sup>10</sup>	352 <sup>4</sup>	469 <sup>6</sup>	15,144 <sup>4</sup>	99 <sup>9</sup>	911 <sup>5</sup>	343 <sup>7</sup>	57 <sup>5</sup>	18,036 <sup>4</sup>
Rental, Hiring and Real Estate Services	66 <sup>4</sup>	413 <sup>3</sup>	604 <sup>3</sup>	242 <sup>2</sup>	406 <sup>3</sup>	680 <sup>2</sup>	17,179 <sup>3</sup>	262 <sup>2</sup>	1,386 <sup>3</sup>	632 <sup>3</sup>	130 <sup>2</sup>	22,000 <sup>3</sup>
Professional, Scientific and Technical Services	38 <sup>8</sup>	234 <sup>7</sup>	382 <sup>4</sup>	147 <sup>5</sup>	218 <sup>8</sup>	601 <sup>4</sup>	21,050 <sup>2</sup>	150 <sup>4</sup>	1,069 <sup>4</sup>	318 <sup>8</sup>	75 <sup>4</sup>	24,282 <sup>2</sup>
Administrative and Support Services	28 <sup>10</sup>	119 <sup>12</sup>	137 <sup>12</sup>	110 <sup>9</sup>	125 <sup>12</sup>	260 <sup>11</sup>	5,641 <sup>10</sup>	144 <sup>5</sup>	405 <sup>12</sup>	164 <sup>11</sup>	27 <sup>14</sup>	7,160 <sup>11</sup>
Public Administration and Safety	- <sup>19</sup>	7 <sup>19</sup>	10 <sup>19</sup>	9 <sup>18</sup>	9 <sup>19</sup>	27 <sup>18</sup>	512 <sup>19</sup>	21 <sup>17</sup>	18 <sup>20</sup>	- <sup>20</sup>	- <sup>20</sup>	613 <sup>19</sup>
Education and Training	12 <sup>14</sup>	48 <sup>16</sup>	55 <sup>15</sup>	22 <sup>15</sup>	29 <sup>16</sup>	70 <sup>16</sup>	1,773 <sup>16</sup>	27 <sup>15</sup>	112 <sup>16</sup>	51 <sup>15</sup>	12 <sup>16</sup>	2,211 <sup>16</sup>
Health Care and Social Assistance	15 <sup>13</sup>	112 <sup>13</sup>	179 <sup>11</sup>	73 <sup>11</sup>	154 <sup>10</sup>	288 <sup>9</sup>	8,229 <sup>6</sup>	84 <sup>10</sup>	559 <sup>10</sup>	155 <sup>12</sup>	39 <sup>9</sup>	9,887 <sup>8</sup>
Arts and Recreation Services	9 <sup>15</sup>	32 <sup>17</sup>	36 <sup>16</sup>	24 <sup>14</sup>	24 <sup>17</sup>	110 <sup>15</sup>	1,721 <sup>17</sup>	18 <sup>18</sup>	138 <sup>15</sup>	33 <sup>17</sup>	9 <sup>17</sup>	2,154 <sup>17</sup>
Other Services	41 <sup>7</sup>	287 <sup>4</sup>	236 <sup>9</sup>	112 <sup>8</sup>	238 <sup>7</sup>	380 <sup>8</sup>	6,504 <sup>8</sup>	143 <sup>6</sup>	643 <sup>7</sup>	380 <sup>6</sup>	33 <sup>12</sup>	8,997 <sup>9</sup>
Unknown	19 <sup>12</sup>	61 <sup>14</sup>	81 <sup>14</sup>	66 <sup>13</sup>	91 <sup>13</sup>	152 <sup>14</sup>	3,891 <sup>13</sup>	77 <sup>11</sup>	210 <sup>14</sup>	86 <sup>14</sup>	31 <sup>13</sup>	4,765 <sup>14</sup>
<b>Total</b>	<b>908</b>	<b>3,904</b>	<b>6,380</b>	<b>2,103</b>	<b>4,686</b>	<b>7,297</b>	<b>150,358</b>	<b>2,158</b>	<b>14,179</b>	<b>8,845</b>	<b>943</b>	<b>201,761</b>

Note: Data are aggregated from the SA2 level.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics CatNo 8165.0.



## WA regions and international trade

Mining, particularly iron ore and natural gas, is the largest export earner in the state. Table 11 shows the distribution of mining receipts from the regions. In 2014 60% of the state's value in mining production is derived from the Pilbara alone, despite the spot price of iron ore having fallen to near historical low values. Apart from the Pilbara, Goldfields-Esperance is also a significant player in the state, with gold, nickel, platinum and palladium being the main export commodities. The Peel region (comprising Mandurah, Murray, Boddington, Serpentine-Jarrahdale and Waroona) produced \$5 billion worth of minerals in 2014, mainly from Alumina. Perth and the Great Southern have the most diversified economies and, together with their natural endowments, is thus not surprising that they produce the lowest value of mining production in the state. In Table 11 the item offshore petroleum constitute a significant amount of export value. These operations are mainly located off the coast of Pilbara and north of the Kimberley, stretching to the Northern Territory.

**Table 11** Value of mining production in regional WA: 2006-14

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Pilbara	28,505 <sup>1</sup>	32,518 <sup>1</sup>	21,490 <sup>1</sup>	34,099 <sup>1</sup>	34,517 <sup>1</sup>	57,339 <sup>1</sup>	60,722 <sup>1</sup>	55,867 <sup>1</sup>	72,536 <sup>1</sup>
Goldfields - Esperance	5,719 <sup>2</sup>	10,189 <sup>2</sup>	7,836 <sup>2</sup>	6,312 <sup>2</sup>	7,722 <sup>2</sup>	8,617 <sup>2</sup>	9,145 <sup>2</sup>	9,058 <sup>2</sup>	9,132 <sup>2</sup>
Peel	4,111 <sup>3</sup>	4,821 <sup>3</sup>	4,522 <sup>3</sup>	4,564 <sup>3</sup>	4,424 <sup>3</sup>	5,171 <sup>3</sup>	5,229 <sup>3</sup>	5,081 <sup>3</sup>	5,501 <sup>3</sup>
Mid West	2,378 <sup>4</sup>	3,246 <sup>4</sup>	2,250 <sup>4</sup>	2,280 <sup>4</sup>	2,532 <sup>4</sup>	2,679 <sup>4</sup>	2,405 <sup>5</sup>	3,044 <sup>4</sup>	3,461 <sup>4</sup>
Wheatbelt	642 <sup>7</sup>	832 <sup>6</sup>	954 <sup>6</sup>	1,315 <sup>5</sup>	1,441 <sup>5</sup>	2,466 <sup>5</sup>	2,671 <sup>4</sup>	2,511 <sup>5</sup>	2,699 <sup>5</sup>
Kimberley	944 <sup>5</sup>	991 <sup>5</sup>	1,545 <sup>5</sup>	732 <sup>6</sup>	838 <sup>6</sup>	1,022 <sup>6</sup>	1,380 <sup>6</sup>	1,112 <sup>6</sup>	1,183 <sup>6</sup>
South West	753 <sup>6</sup>	722 <sup>7</sup>	641 <sup>7</sup>	663 <sup>7</sup>	526 <sup>7</sup>	525 <sup>7</sup>	596 <sup>7</sup>	597 <sup>7</sup>	415 <sup>7</sup>
Gascoyne	73 <sup>8</sup>	73 <sup>8</sup>	56 <sup>8</sup>	110 <sup>8</sup>	142 <sup>8</sup>	119 <sup>8</sup>	124 <sup>8</sup>	113 <sup>8</sup>	138 <sup>8</sup>
Perth	30 <sup>9</sup>	30 <sup>9</sup>	24 <sup>9</sup>	30 <sup>9</sup>	37 <sup>9</sup>	37 <sup>9</sup>	36 <sup>9</sup>	40 <sup>9</sup>	95 <sup>9</sup>
Great Southern	5 <sup>10</sup>	3 <sup>10</sup>	5 <sup>10</sup>	3 <sup>10</sup>	5 <sup>10</sup>	6 <sup>10</sup>	6 <sup>10</sup>	7 <sup>10</sup>	5 <sup>10</sup>
Offshore petroleum			19,287	21,202	18,722	23,183	23,731	24,416	26,455
<b>Total</b>	<b>43,160</b>	<b>53,425</b>	<b>58,610</b>	<b>71,310</b>	<b>70,906</b>	<b>101,164</b>	<b>106,045</b>	<b>101,845</b>	<b>121,620</b>

Note: Mining includes petroleum. Offshore petroleum are either State or Commonwealth owned and are not attributed to the regions. Data are on a financial year basis.  
Source: BANKWEST CURTIN ECONOMICS CENTRE | WA Department of Mines and Petroleum.

The total value of mineral and petroleum exports from Western Australia in 2013-14 was \$118 billion. Of this, 59% was in iron ore, 19% was in petroleum and 10% was in gold. 95% of iron ore production are mined in the Pilbara region, dominated by two of the world's top three producers – Rio Tinto and BHP Billiton, and the remainder comes from five mines in the Mid West, three mines in the Kimberley and two mines in the Wheatbelt (Department of Mines and Petroleum 2014).

According to Department of Mines and Petroleum (2014), WA is the largest producer of petroleum products in Australia, accounting for 65% of natural gas production and 62% of crude oil and condensate. LNG (natural gas that are liquefied for ease of transportation) forms the largest component of petroleum sales but is largely located off the shores of the Pilbara and Kimberley in commonwealth territory.

Western Australia is also the state's major producer of gold, accounting for between 70-75% of total production. The top three projects are Boddington (Peel region, operated by Newmont Boddington Pty Ltd), Golden Mile (Goldfields – Esperance region, operated by KCGM) and Telfer Gold (Pilbara region, operated by Newcrest Mining).

Port Hedland is the world's largest bulk-export terminal – in 2013-14 Port Hedland moved 370 million tonnes of exports and received 2.2 million tonnes of imports.

Western Australia has world class port operations which, over the past decade has been fine-tuned to clockwork precision and efficiency by the iron ore exporting ports in the highly lucrative and competitive business. Indeed, Port Hedland is the world's largest bulk-export terminal – in 2013-14 Port Hedland moved 370 million tonnes of exports and received 2.2 million tonnes of imports. In terms of the value of exports, the iron ore exporting ports of Dampier and Cape Lambert (Rio Tinto) and Port Hedland (BHP Billiton and FMG) contribute 61% of the state's value of merchandise export.

Fremantle is the state's largest general cargo port, transporting goods in containers as well as non-containerised cargo such as motor vehicles, steel, machinery imports and livestock (Ports Handbook Western Australia 2014). Fremantle's Outer Harbour – to the south at Kwinana – is one of Australia's major bulk cargo ports handling grain, petroleum, liquid petroleum gas, iron ore, minerals and other bulk commodities. Table 12 shows the value generated by exports from the state's major ports.

**Table 12 Western Australia exports by major regional ports: 2011-12 and 2012-13**

Major port	Region	Total exports 2011-12	Total exports 2012-13
Dampier	Pilbara	33,855	33,058
Port Hedland	Pilbara	30,694	29,670
Fremantle	Perth	9,971	10,037
Cape Lambert	Pilbara	9,769	8,228
Offshore WA ports	Offshore	7,013	5,224
Bunbury	South West	4,245	4,720
Geraldton	Mid West	2,612	3,214
Esperance	Goldfields - Esperance	2,626	2,545
Total of major ports		100,785	96,696
Total state merchandise export		120,535	115,590
Balance		19,750	18,894

Note: Balance indicates goods that are not exported through ports and also accounts for exports by non-major WA ports.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Reproduced from the WA Department of State Development's Western Australia Economic Profile - October 2013 (original source: ABS Cat No 5368.0).

In terms of volume Table 13 shows the tonnages traded by the major ports in the state. Shipments from the top two port authorities Port Hedland and Dampier are dominated by capesize vessels bound for China, with each vessel capable of carrying 180,000 tonnes of ore. The story is not all about iron ore. As mentioned above Fremantle moves general cargo. The port of Albany's main export commodity in 2013-14 was grain, followed by woodchips. In 2013-14 the highest percentage of the Port of Bunbury's throughput was Alumina, at 69%. Broome was the only port where imports (petroleum, at 36%) exceeded exports in terms of throughput by commodity in 2013-14.

**Table 13 Western Australia trade volume by major regional ports: 2013-14**

Major port (Port authority)	Region	Total exports 2013-14 (kilo tonnes)	Total imports 2013-14 (kilo tonnes)
Port Hedland	Pilbara	370,061	2,240
Dampier	Pilbara	176,696	831
Fremantle	Perth	19,597	13,810
Geraldton	Mid West	17,724	771
Esperance	Goldfields - Esperance	14,110	829
Bunbury	South West	13,818	1,787
Albany	Great Southern	4,455	101
Broome	Kimberley	267	250
Wyndham	Kimberley	2,127	54

Note: Data provided by port authorities.

Source: BANKWEST CURTIN ECONOMICS CENTRE | WA Ports Handbook 2014.

## Optimising WA regional trade and economic development

WA has been fortunate in that its main export commodity – iron ore – has been the most sought after raw ingredient in the past decade, fuelled by China's accelerating industrialisation. Whilst iron ore fines may not be worth their weight in gold the sheer volume of shipments (measured in hundreds of thousands of tonnes) has transformed Western Australia into an economic powerhouse through the multiplier effect of profits generated by the sector. With all the benefits a natural question to ask is: Has the boom also led to complacency? With budgets in surpluses, low unemployment, high per capita income and a general pride within the community, has the recent slowdown led to a sense of foreboding amongst West Australians? This is one of the main concerns that is front of mind for state government and business leaders.

An important challenge is to broaden the base of regional economies and aim to expose more products and services to overseas markets. With this, what role do the regions play? Each of the state's nine regions has a statutory authority from the state government in the form of a Development Commission that is tasked with promoting the economic and social development of the region. With state funding through the Royalty for Regions scheme every region has access to considerable funding over a five year period to develop major initiatives on economic, social and community development. Many of these existing and new initiatives are highlighted in the Regional Investment Blueprints of each regional development commission.

By going through each region's investment blueprint we are able to obtain an indication of the extent to which there are provisions for international trade with existing partners or new markets in the future. For example, the March 2015 Gascoyne blueprint provides for tourism expenditure to increase from its current level of \$246 million to \$686 million in their 2050 vision. The Great Southern region outlined transformational projects to develop transport and industry hubs, and to leverage on and develop iconic and creative tourism. The Wheatbelt's blueprint has a specific articulation of global drivers of growth.

To the extent that there are explicit or implied provisions for the development of trade within the blueprints by running the blueprints through a simple word cloud algorithm we are able to identify consistently repeated key words such as 'markets', 'opportunities', 'tourism' and 'export'. Clearly, capturing additional market share for trade and seizing the opportunities presented by Asia's growth is on the blueprints of most of the regions. What remains important is the translation from ideas, concepts and visions to practical policies. On this, to an extent the seeds have already be sown, with discussions on regional cities (super towns) and coordination between industrial sectors here and abroad facilitated by business leaders.

Whilst iron ore fines may not be worth their weight in gold the sheer volume of shipments (measured in hundreds of thousands of tonnes) has transformed Western Australia into an economic powerhouse.

An important challenge is to broaden the base of regional economies and aim to expose more products and services to overseas markets.



# WA's trading environment

- benefits and barriers

## Education services in WA: Education as an attractor to international business and investment

Over the past several years the sector that has been most successful in terms of enrolments and commencements is the Vocational Education and Training (VET) sector.

ELICOS (English Language Intensive Courses for Overseas Students) has also been a booming industry.

As indicated in Table 3, personal travel has generated the most export income at least over the past five years. An emerging sector is that of education-related travel, which is a \$1.3 billion industry in 2013-14. Education services do not just include tuition fees, but also the travel costs and the expenses of foreign students whilst studying in Western Australia.

Table 14 shows the breakdown of international students in WA from 2012 to 2014, in terms of enrolments and commencements, by the various sectors. Over the past several years the sector that has been most successful in terms of enrolments and commencements is the Vocational Education and Training (VET) sector where students study and apply themselves in externships in not only the trades but also in business and computing studies. ELICOS (English Language Intensive Courses for Overseas Students) has also been a booming industry. ELICOS students typically proceed to other sectors of education such as VET or Higher education (universities).

**Table 14** International students in WA by sector: 2012-2014

Sector	2012	2013	2014	2012	2013	2014
	Enrolments			Commencements		
Higher education	18,737	17,888	18,024	6,769	6,885	7,173
VET	11,420	11,438	13,168	6,846	7,857	9,339
Schools	1,268	1,073	882	633	540	433
ELICOS	8,244	9,804	11,460	6,573	7,935	9,192
Non-award	1,822	2,087	2,484	1,464	1,733	2,082
<b>Total</b>	<b>41,491</b>	<b>42,290</b>	<b>46,018</b>	<b>22,285</b>	<b>24,950</b>	<b>28,219</b>

Source: BANKWEST CURTIN ECONOMICS CENTRE | Department of Education and Training – International student data/PRISMS database.

Table 15 focuses on Higher education and reveals where the international students are from. Indeed most of the students are from neighbouring Asia (7 of the top 10), with China being the source of the majority of our international students in higher education. India has been the biggest success story, with enrolments doubling in a period of just two years.

The main universities in Western Australia have regional campuses. As examples The University of Western Australia has The Albany Centre for studies in environmental science, anthropology and sociology, and early childhood teaching, Curtin University has the Western Australian School of Mines in Kalgoorlie, and Notre Dame has a campus in Broome offering courses in education and training. The majority of international students though choose to study in the Perth campuses, which both speaks well of the general attraction of Perth as an education destination but also present opportunities for the WA regions to perhaps do more to attract international students.

Overall the state of WA's education export service is healthy, and as the majority of the services are provided to our immediate neighbours it speaks well of the state's engagement with this important region of the world. The sector should not be regarded just as a provider of education and innovation, but should also be promoted as a valuable piece of infrastructure through which to attract skilled labour to the state, and to build global business networks. There is good evidence to suggest that successive cohorts of students who study in Australia bring future benefits to the state through personal contacts and connections when they establish themselves in overseas businesses either here in Australia or in other countries with whom we do business.

**Table 15 International student enrolments in higher education by top 10 nationalities: 2012-14**

Higher education enrolments	2012	2013	2014
Top 10 enrolments by country of origin	Enrolments		
China	4,858	4,451	4,175
Malaysia	2,711	2,424	2,153
India	849	1,037	1,632
Singapore	1,742	1,603	1,406
Indonesia	1,050	972	896
Hong Kong	599	673	716
Vietnam	601	537	640
Nepal	162	331	484
Saudi Arabia	556	501	482
Kenya	453	434	441

Note: Ranked in descending order of 2014 enrolments.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Department of Education and Training – International student data/PRISMS database.

## Barriers to WA regional trade

It is a challenge for smaller or emerging businesses to access said infrastructure, especially when the networks are stretched to capacity.

This section discusses barriers that impede trade from regional Western Australia with its trading partners. An export transaction from a business in regional WA to its overseas customer (perhaps involving intermediaries in the metropolitan area or the customer's subsidiary at a different location) is an involved process, most notably engaging the entire supply chain and distribution network. However, it is not difficult to identify bottlenecks such as those that have affected WA in the past and which remain present in varying degrees. In the case of the export of goods, are barriers to trade emanating from regional centres partly inevitable due to geography? We argue that where there are bottlenecks they go beyond geographic isolation.

It is true that there have been immense spending on infrastructure development in some export-oriented regions, with the Pilbara being the prime example. However, much of those spending are private investment that are largely restricted to the use of the operators. It is a challenge for smaller or emerging businesses to access said infrastructure, especially when the networks are stretched to capacity. Now, whose responsibility is it to provide for such infrastructure? On the one hand it is the direct responsibility of the exporters. On another their very success can bring about considerable benefit to the state in the form of taxes, royalties, and other flow-on effects. Hence, it is also very much the case that the state is an important stakeholder in ensuring the success of our export-oriented businesses.



## To market, to market...

At a macroeconomic level protectionist policies are barriers that can significantly limit the access of overseas markets for our regional producers. WA farmers, who rely strongly on demand from China and Indonesia in light of the relatively small domestic market, are especially vulnerable to practices that distort the market such as tariffs, domestic subsidies and import quotas. Geopolitical friction between governments can also affect the fortunes of innocent local suppliers. Much of the above however are best resolved through negotiations in international organisations or diplomatic channels.

An efficient supply chain is important for getting products manufactured and delivered to overseas customers on a least cost basis. Industries that produce elaborately transformed manufactures can be especially challenged by supply chain issues. Though by no means the largest sector ETM exports by WA in 2013-14 amounted to almost \$3 billion. Other sectors such as wheat production and export can attract considerable costs given the distances involved from farm to port.

Finally, the notion of brand recognition should not be downplayed. To the extent that cost and quality controls are important factors in generating profits a distinct advantage can be gained by promoting the state or its regions as a brand – 'Western Australia Pty'. This is, however, not as easy an exercise as it may appear. For example, though the Margaret River region produces world class wines it is also home to a vibrant tourism, food and creative industry, all of which deserves promotion and recognition. The questions becomes how can the region be successfully marketed as a coherent brand without diluting the message. Could the example set by New Zealand's hugely successful promotional efforts be an aspirational target for this state or its region to emulate?

At a macroeconomic level protectionist policies are barriers that can significantly limit the access of overseas markets for our regional producers.



# WA's trade strategy

and policy

## What do Free Trade Agreements mean for WA?

The deal struck between China and Australia through the recent Free Trade Agreement offers mixed support to WA industry. Some agriculture sub-sectors in WA will benefit from phased tariff reductions, particularly producers of meat, seafood, wine and other boutique foods and horticulture.

The deal struck between China and Australia through the recent China-Australia Free Trade Agreement (ChAFTA) offers mixed support to WA industry. Some agriculture sub-sectors in WA will benefit from phased tariff reductions, particularly producers of meat, seafood, wine and other boutique foods and horticulture. There are enhanced opportunities for joint ventures between Australian and Chinese companies, with tourism and hospitality sectors also provided with opportunities to establish outlets in China. However, there has been no agreement on lower tariffs for staple crops – wheat, maize, corn, rice or canola – or for wool and cotton.

There is some nervousness about the agreed policy for Chinese-financed investment projects in Australia being supported by migrant workers without the requirement for local labour market testing. Trade agreements shouldn't be allowed to affect labour standards adversely, or crowd out local labour market opportunities. Notwithstanding the legitimate caution regarding these aspects of the trade deal with China, it ought to be possible for Australia to derive labour market benefits from a more open economic relationship with our major trading partner. Additional investment under the ChAFTA offers some potential for new labour market opportunities to be created for Australian workers too, provided an active defence of labour market standards remains under any new trade arrangements.

Australia has a number of existing trade agreements with other areas in the region – including the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA), the Singapore-Australia Free Trade Agreement (SAFTA), the Korea-Australia Free Trade Agreement (KAFTA) and the Japan-Australia Economic Partnership agreement. A number of these make specific provision for enhanced economic cooperation between businesses in Australia and Asia. Taken together with other Free Trade Agreements, the China Australia Free Trade Agreement incentivises joint ventures between Australian and Chinese companies and further reinforces the environment in which international business partnerships provide as a new direction for international trading relationships.

Open trading relationships have historically delivered positive benefits to Australian businesses, workers and households, and there is no reason why FTAs shouldn't deliver value to Western Australia – as long as the State's economic structures, particularly the labour market, are protected and supported.

## Western Australia Pty – how are we selling the State?

There is a compelling need to improve the clarity of Western Australia as a 'value proposition' for visitors, consumers, prospective business clients and overseas markets. 'Brand Australia' already has a strong reputation derived from its openness, quality of life, and abundance of natural resources as well as the strength and calibre of its business activities.

The State can certainly leverage significant benefit from this awareness of the Australian brand, but it is important to develop a complementary strategy that establishes the 'unique selling points' of Western Australia. There is a need to create more awareness of WA products and services on international stage, and to develop 'Western Australia Pty' as a brand.

Victoria has been highly proactive in promoting trade with other countries, with the active involvement of business leaders in planning and participating in delegations and missions to establish new trade links. South Australia engaged in highly successful campaigns over the last five years to market its education services to the international community. There is some evidence that their investment in such initiatives has generated a good return in the form of increased international student intakes (in what is unarguably a competitive marketplace made all the more challenging given the high value of the dollar).

One important element in the marketing strategy for WA is to communicate effectively the state's regional diversity, and to sell regional economic strengths in combination – for example, the wine industry in the South West packaged alongside high quality foods, culture and creative industries, tourism and hospitality; marine ecology and eco-tourism in the Kimberley and the north of the State alongside the developing agriculture and aquaculture sectors. There are direct benefits to be derived from the complementarities and shared values in such activities when selling the state's regions to an international market.

It is important that Western Australia remains active in communicating the State's unique value to prospective trading partners both in the Asia region as well as in the wider global marketplace.



# Summary

and conclusions

## Summary and conclusions

*Tiger, Tiger, Burning Bright? Western Australia's trade and economic development with Asia* is the fifth report in the Bankwest Curtin Economics Centre's Focus on Western Australia series. The report takes stock of the current trade landscape for Western Australia in light of the recent slowdown in China's economic growth and the pressure that this slowdown is placing on the State's businesses and finances. Opportunities are examined for enhanced future trade and strengthened economic relationships with China, Japan and other countries in the Asia-Pacific and Indo-Pacific regions.

International trade has a role to play in supporting a diversification of the strengths in the WA economy. Iron ore will remain a core strength of WA's export mix, with oil and natural gas likely to continue to grow over the medium term. The market for international education is also an area where the state has done particularly well in over recent years. With the recent decline in the Australian dollar and several higher education institutions in the state ranking highly in international surveys, Perth is well placed to advance this trend. With a world class wine region in the South West of the state, coupled with an emerging food tourism industry, the future is bright for these and the tourism industry in general for the state. Agriculture is another sector that is garnering a lot of attention with considerable investment in the recognition that a steady supply and agri-food security being key areas for development moving forward.

There has been a decline in manufacturing in Western Australia, and a reduction in the volume of manufacturing exports from WA to overseas markets that exceeds the rate from other states and territories. Australia is a net importer of manufactured commodities, which raises a question about whether the resources boom has negatively affected the competitiveness of other industry sectors in the state – the so-called 'Dutch disease'.

High exchange rates have certainly affected the competitiveness of WA manufacturing, agriculture, education and tourism, although recent falls in the Australian dollar may alleviate the currency pressures for the State's businesses going forward.

There is evidence of a decline in capital expenditure in manufacturing, which gives some cause for concern given the role that investment and technological progress has to play in maintaining manufacturing capacity. There is a clear need for new investment to support innovation, increased capacity and productive efficiencies in manufacturing in order that the sector can continue to compete effectively and grow its international market share.

China will remain a strong market for Western Australia's primary resources, as will Japan as one of our traditional trading partners. Together, the value of WA's exports to China and Japan amounted to some \$95 billion in 2013-14. However, trading opportunities have also developed with other Asian countries over the last five years – and WA is extremely well positioned to capitalise on new trading opportunities both in terms of the scale and composition of its trade with Asian partners.



But the State's trade and economic development strategies should include a 'focus on quality' to capitalise on opportunities to sell to new markets for hi-tech or high-end products. Economic liberalisation across the Asian continent, with higher discretionary incomes among the rising middle class in Asia's emerging economies, has created a growing demand for prestige and luxury commodities – gold, nickel, manufactures, high quality agriculture and food – as well as tourism and education exports.

Alongside China and the traditional Japanese market as a natural outlet for the expansion of high value commodity exports, there are emerging opportunities for Western Australia to service the demand among other Asian trading partners – Indonesia, Malaysia and India in particular. WA has a comparative advantage in this regard, being well situated in relation to time-zones and proximity to a number of Asian countries in the region – and given its reputation for high quality produce.

The narrative regarding Australia's trading patterns and new trading opportunities with Asia is changing, with the traditional notion of the bilateral trader ("we sell, you buy") giving way to international business partnerships between Australian and Asian companies. Building on similar measures in earlier trade agreements with Japan, Korea and Singapore, the recent China-Australia Free Trade Agreement (ChAFTA) adds to this changing narrative through its explicit support for joint ventures and economic cooperation.

The WA economy can gain strength and resilience through trade diversification, not just in the breadth of commodities traded but also the countries with whom we do business.



# Glossary

## **APEC**

Asia-Pacific Economic Cooperation. Established in 1989, this forum is comprised of 21 member nations to leverage the growing interdependence of the Asia-Pacific region, which includes Australia and New Zealand. Its aim is to create greater prosperity for the people of the region by promoting balanced, inclusive, sustainable, innovative and secure growth and by accelerating regional economic integration.

## **ASEAN**

Association of Southeast Asian Nations. Established in 1967, the aims of the 10 member association are to foster political, economic and social cooperation and regional stability. ASEAN approaches its activities based on the principles of consultation, consensus and cooperation.

## **Dutch disease**

Dutch Disease is the term commonly applied to a situation where a currency appreciation from rapid growth in a country's capital intensive resources sector leads to a loss of competitiveness in labour intensive industries. The term was coined after the resource-driven boom in Holland following the natural gas discovery in 1959 caused a significant appreciation of the Dutch currency and decimated Holland's manufacturing industry.

## **Exporter**

An exporter is defined as the owner of the exported good or the provider of the exported service. In accordance with balance of payments principles, if an export takes place, it must involve an Australian resident selling a good or a service to a non-resident (i.e. it involves a change of ownership). International trade in services statistics are compiled on a balance of payments basis and only cover transactions between Australian residents and non-residents.

## **Net export**

This is a widely used economic concept that is not restricted to National Accounts. Net exports is a measure of total exports less total imports.

## **State of origin of exports**

The State of origin of the commodity recorded on export documentation can be used to identify the State from which the exported goods were sourced. State of origin is the State in which the final stage of production or manufacture occurs. Determining a single State of origin is difficult when there may be several stages in the manufacturing process, each of which may take place in a different State. For example, fruit may be grown in one State, canned in another, and exported from another.





# References

## References

Department of Mineral and Petroleum, Statistics Digest 2013-14, 2014.

Department of Transport, Ports Handbook – Western Australia 2014, 2014.

Duncan, A.S. and K. Leong, 'A Regional Framework for Analysing the West Australian Economy', Bankwest Curtin Economics Centre Working Paper WP 14/5, 2014.

KPMG, Demystifying Chinese Investment in Australia: China's Outbound Direct Investment in Australia, August 2012 (updated 2015).









## Contact

### **Bankwest Curtin Economics Centre**

Tel: +61 8 9266 2873

Email: [bcec@curtin.edu.au](mailto:bcec@curtin.edu.au)

[business.curtin.edu.au/bcec](http://business.curtin.edu.au/bcec)

© Curtin University of Technology 2015  
Curtin University is a trademark of Curtin University of Technology  
CRICOS Provider Code 00301J  
ADV081679