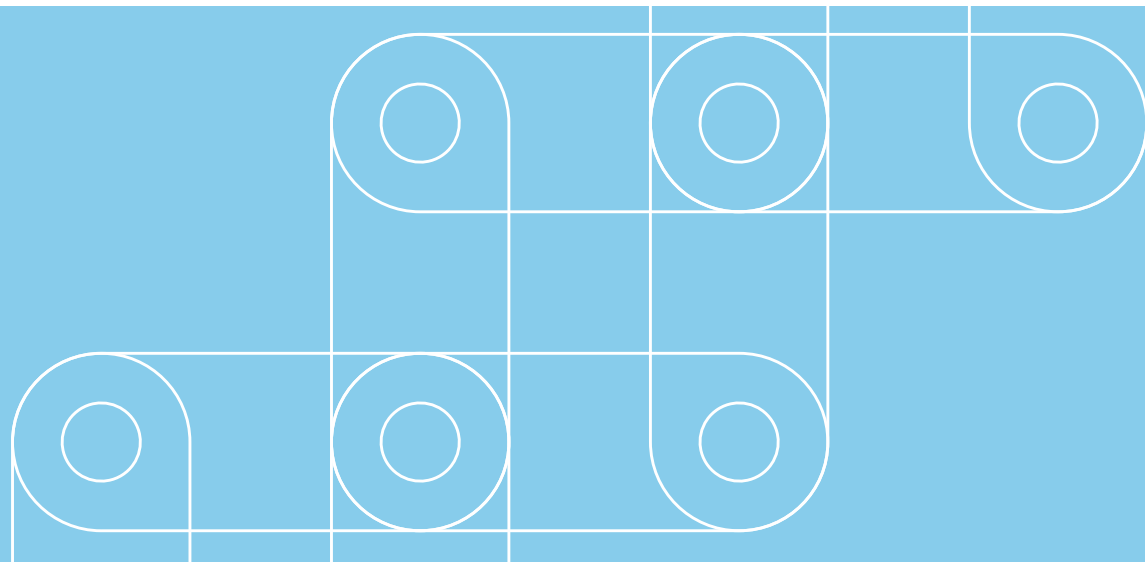




Government of **Western Australia**  
Department of **Treasury**

# The Structure of the Western Australian Economy

May 2014



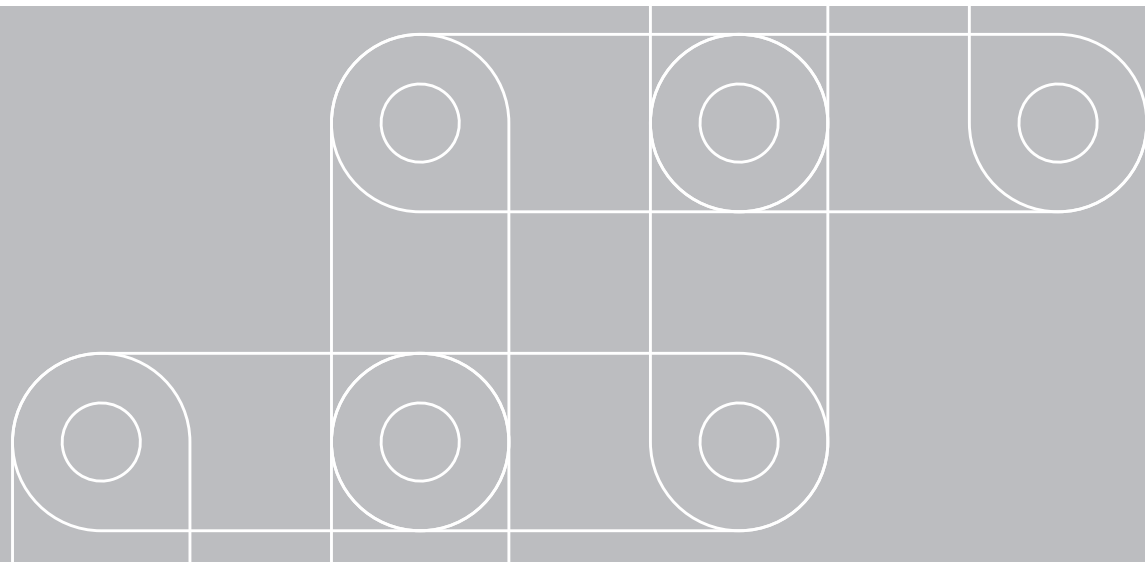




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May 2014



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ISBN: 978-0-7307-4562-4

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# Introduction

This paper examines the underlying structure of the Western Australian economy and its transformation over the past ten years.

The industries examined are mining and petroleum, manufacturing, services, construction, agriculture, forestry, fisheries, tourism, energy, water, waste; and non-market activities such as public administration and safety, education and health care.

The analysis of each industry and its contribution to the Western Australian economy is based on the value of production (or output/supply) and is presented in nominal or current (nominal) price terms (i.e. the prices that prevailed at the respective point in time) as gross value-add by industry. This approach is used to provide an insight to the structure of the economy at any point in time, based on the price levels that prevailed. Economic growth rates and growth rates by industry are presented in real (chain volume) terms to provide a better indication of movements in real output over time<sup>1</sup>.

The paper identifies that over the past decade, from 2002-03 to 2012-13, the State's abundance of natural resources which, along with the close proximity to Asia, has led to an increased dominance of the mining and petroleum industries in the economy. Higher commodity prices and strengthening demand for resources (particularly energy and iron ore) from emerging economies such as China led to significant levels of investment in the State's mining and petroleum industry. Over the decade China became Western Australia's number one export destination.

The mining and petroleum industry's share of Gross State Product has varied during the past decade. From less than one-fifth in 2003-04, the industry's share increased to over one-third in 2010-11, before moderating to around 30% in 2012-13. The rapid growth and rising influence of the mining industry over the decade benefited other industries of the economy, particularly construction (through business investment and engineering construction) and manufacturing (through the downstream processing of minerals).

---

<sup>1</sup> Industry shares can only be compared using nominal or current price values because it is only in nominal terms that measures of industry output are additive – that is the sum of the industry value of production is equal to the value of total production. In contrast, the real value of industry production in any year other than the selected base year (2011-12) does not add to the value of total output. This means that real measures of output cannot be used to calculate each industry share of total output except in the base year. The reason that real (chain volume) estimates are not additive other than in the base year is because each component of GSP is deflated by its own price index rather than a common total GSP price index, and the rate of change in the individual component indices over time may vary significantly from the rate of change in the total value of GSP. This is why comparisons of real growth can be calculated over time, but why changes in real shares cannot.

## **The Structure of the Western Australian Economy**

The paper concludes with an analysis of the impact of the changing structure of the State's public sector finances over the past ten years.

Although the rapid expansion of the mining and petroleum industry boosted the State's own-source revenue, particularly royalty income, it resulted in a sharp decline in the State's share of GST revenue grants. The strong rate of economic growth, and a corresponding acceleration in the State's population growth during the period, increased the demand for social and economic infrastructure, and core services such as health and education.



# Overview

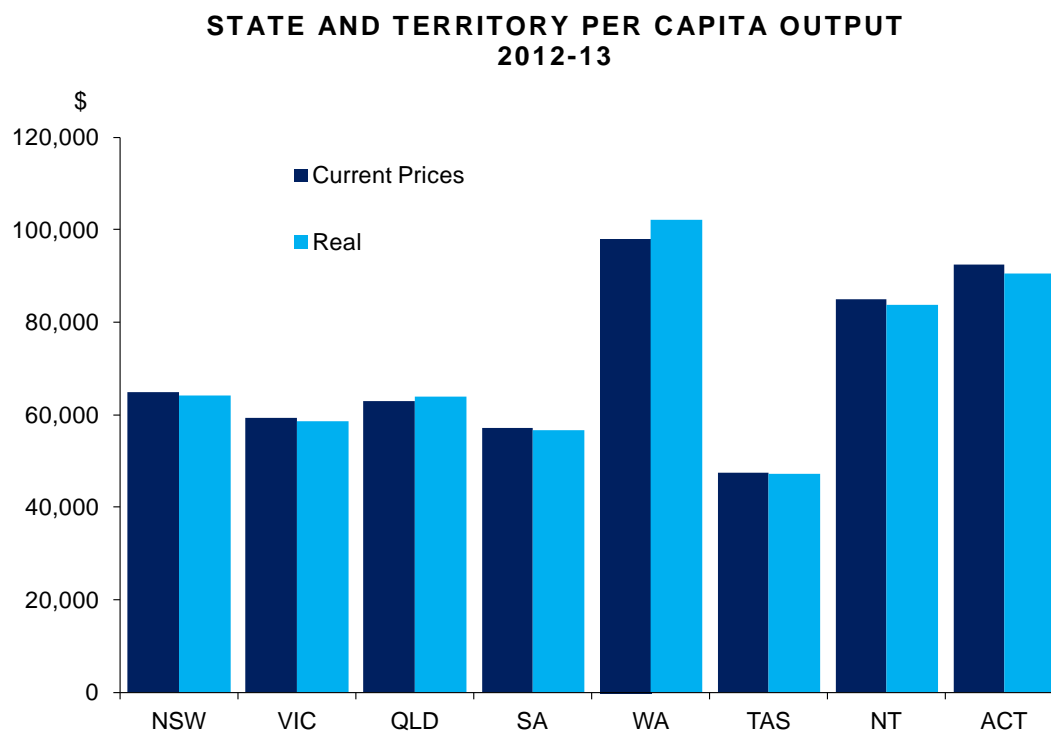
## Structure of the Economy in 2012-13

### Gross State Product

In 2012-13, Western Australia's Gross State Product (GSP) was worth \$242.7 billion in 2012-13 dollars and \$253.0 billion in real terms<sup>2</sup>, making it the fourth largest State economy in Australia.

The State accounted for 16.0% of national output despite having only 10.8% of the national population – a higher per capita ratio than any other State or Territory. Western Australia's GSP per capita was \$98,069 in nominal terms and \$102,232 in real terms, significantly higher than the national figure of \$66,397 and \$66,549 in nominal and real terms respectively.

Figure 1



Source: Australian Bureau of Statistics, cat. no. 5220.0.

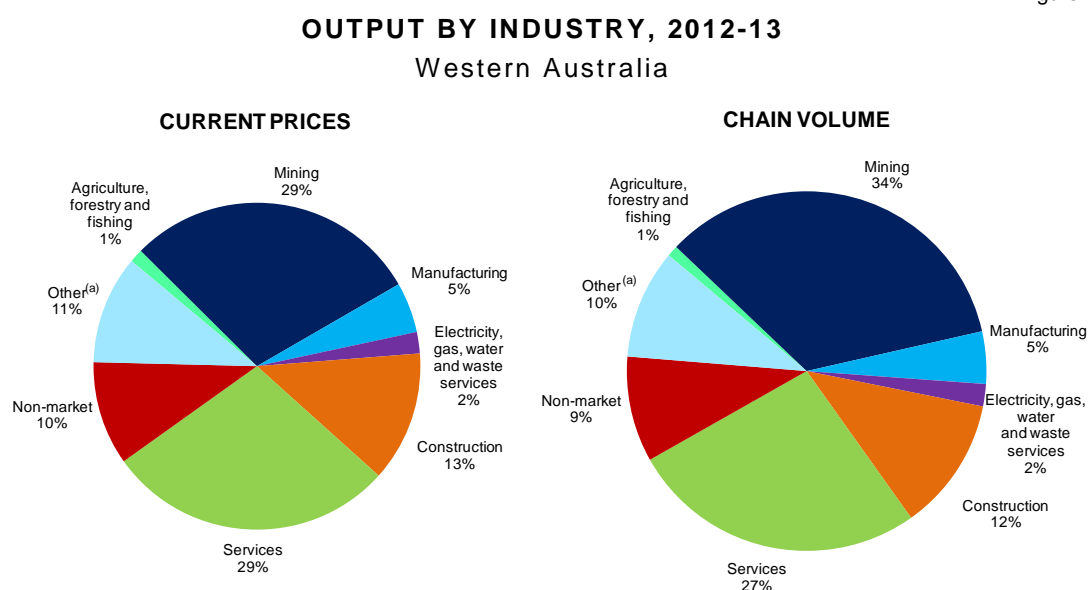
<sup>2</sup> The real (chain volume) measure of GSP presented above is an estimate of the volume of goods and services produced in the State economy, with 2011-12 being the base year for prices. Chain volume measures abstract from price movements by measuring GSP in constant dollar terms. Prices in the overall State economy declined by 4.1% in 2012-13, following a 1.1% increase in 2011-12 and a 17% increase in 2010-11.

## The Structure of the Western Australian Economy

The mining and petroleum industry was the State's largest single industry, accounting for 29.2% of output<sup>3</sup>, followed by the services industry<sup>4</sup>, which accounted for 28.5% of output (see Figure 2). In real terms, the mining and petroleum industry had a larger share of the economy (34.3%). The difference between current prices and real measures reflects a decline in merchandise export prices of 12.1% in 2012-13, following increases of 0.9% in 2011-12, and 32.7% in 2010-11.

The services industry was the second largest, accounting for 28.5% of output (or 26.6% in chain volume terms). Professional, scientific and technical services, and transport, postal and warehousing were the largest service industries.

Figure 2



<sup>(a)</sup> Other includes ownership of dwellings, taxes less subsidies on products and the statistical discrepancy.

Source: Australian Bureau of Statistics, cat. no. 5220.0.

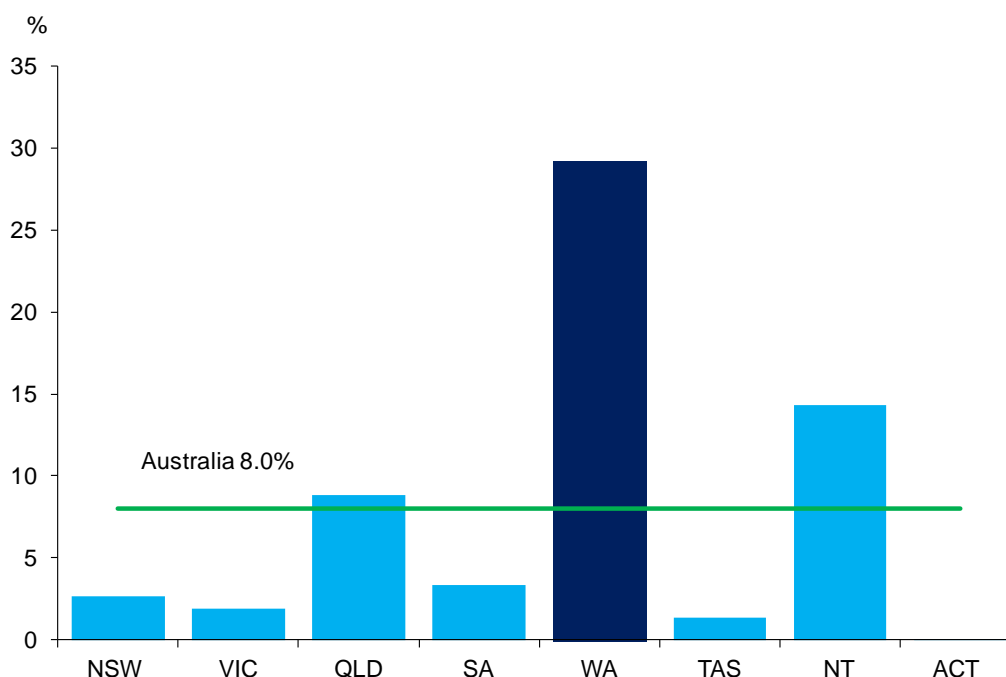
Nationally, mining and petroleum's share of the economy was less than a third of its share of the Western Australian economy, at 8.0% (9.6% in chain volume terms) of Australian Gross Domestic Product (GDP) (see Figure 3). Conversely the services (41.4%) and non-market (16.3%) industries made a significantly larger contribution to national output than in Western Australia.

<sup>3</sup> For the purpose of this paper, the term 'output' will refer to gross value-add, which deducts intermediate production.

<sup>4</sup> Details of the composition of the services, non-market and other sectors are contained in the glossary.

Figure 3

### MINING AND PETROLEUM AS A PROPORTION OF THE ECONOMY, 2012-13



Source: Australian Bureau of Statistics, cat. no. 5220.0.

### **Employment**

The structure of the Western Australian economy is significantly different when measured by contributions to employment rather than output. Most notably, whilst the mining and petroleum industry accounted for around a third of Western Australia's output, it comprised only 8.7% of the State's total employment in 2012-13. This reflects the highly capital-intensive nature of the industry. In contrast, the services industry accounted for a greater portion of the State's total employment (46.5%) relative to total output (28.5%).

Western Australia's health care and social assistance industry was the largest in terms of contribution to employment in 2012-13 (if disaggregated from the non-market sector), employing 10.7% of the State's workforce. It was closely followed by the retail trade (once disaggregated from the services industry) and construction industries, which generated 10.4% and 9.9% of employment respectively.

The industry structure of the Western Australian economy, when measured by employment, more closely aligns with that of the national economy (as illustrated in Table 1).

Table 1

**EMPLOYMENT BY INDUSTRY, 2012-13**

	<b>Western Australia</b> (%)	<b>Australia</b> (%)
Agriculture, forestry and fishing	3.0	2.8
Mining and petroleum	8.4	2.3
Manufacturing	7.1	8.3
Electricity, gas, water and waste services	1.7	1.3
Construction	10.0	8.7
Services	46.4	50.7
Non-market	23.5	26.0
<b>All industries</b>	<b>100.0</b>	<b>100.0</b>

Note: Columns may not add due to rounding.

Source: Australian Bureau of Statistics, cat. no. 6291.0.55.003.

## Key Trends: 2002-03 to 2012-13

Over the past decade, real economic growth in Western Australia out-paced the rest of the nation, growing on average by 4.9% per annum compared to 3.0% per annum nationally.

Mining and petroleum was the largest single industry contributing to the State's economic growth over the decade, representing 29.2% of the Gross State Product (GSP) in 2012-13. The services industries in total were the largest contributor to growth, accounting for 28.5% of GSP by 2012-13. The manufacturing, construction, services and non-market industries also experienced stronger growth in Western Australia than at the national level in 2012-13.

In nominal terms, the mining and petroleum industry experienced very strong annual growth of 15.4% over the ten-year period, compared to real growth of 6.0% per annum. This indicates that the rising dominance of mining and petroleum was a combined result of strong growth in the prices received for Western Australia's commodities over the decade as well as an increase in real output. The growth of the mining and petroleum industry also corresponded with an increase in the contribution to Western Australia's total operating revenue. Total mining and petroleum revenue (including royalty income, North West Shelf grants, Commonwealth compensation for changed crude oil excise arrangements, and lease rentals) increased from 9.9% of total revenue in 2002-03 to 21.8% in 2012-13.

Table 2

**INDUSTRY STRUCTURE**

## Output

	Western Australia			Australia		
	Annual Average Growth		2012-13 Share	Annual Average Growth		2012-13 Share
	2002-03 to 2012-13			2002-03 to 2012-13		
	Nominal %	Real %	% of GDP	Nominal %	Real %	% of GDP
Agriculture, forestry and fishing	1.7	-2.8	1.3	3.9	3.5	2.2
Mining and petroleum	15.4	6.0	29.2	12.8	4.5	8.0
Manufacturing	4.6	4.1	5.0	1.5	0.0	6.7
Construction	18.6	6.8	12.9	9.2	5.1	7.7
Electricity, gas, water and waste services	9.0	3.8	2.1	8.2	1.1	2.9
Services	8.8	4.8	28.5	6.6	3.2	41.4
Non-market	8.5	4.0	10.3	7.2	3.2	16.3
Other <sup>(a)</sup>	9.1	1.6	10.7	5.5	2.1	14.8
<b>Total</b>	<b>10.8</b>	<b>4.9</b>	<b>100.0</b>	<b>6.6</b>	<b>3.0</b>	<b>100.0</b>

<sup>(a)</sup> Other includes ownership of dwellings, taxes less subsidies on products and the statistical discrepancy.

Note: Columns may not add due to rounding.

Source: Australian Bureau of Statistics, cat. no. 5220.0.

## Commodity exports and investment

Over the last ten years, Western Australia's economic performance has become increasingly reliant on the strong global demand for its commodity exports, particularly from China which overtook Japan as the State's number one export destination in 2006-07. Western Australia's mining and petroleum exports totalled \$98.0 billion in 2012-13, rising by an average of 17.6% per annum over the decade.

The value of the State's key exports, such as iron ore, petroleum, and gold, increased significantly since 2002-03 (see mining and petroleum chapter for more information on commodity prices). This has driven an unprecedented surge in mining investment, as higher prices represent an incentive for resource companies to invest in new projects and capacity expansions. This investment has contributed significantly to the State's economic growth, as measured by output.

In September 2013, Western Australia had an estimated total of \$103.7 billion worth of mining projects under construction<sup>5</sup>. This compares to just \$3.7 billion of mining projects under construction in the State in September 2003<sup>6</sup>.

<sup>5</sup> Deloitte Access Economics, Investment Monitor, September 2013.

<sup>6</sup> Deloitte Access Economics, Investment Monitor, September 2003, nominal value.

The industry has become increasingly dominated by iron ore and petroleum production, due to the strong increase in China's demand for steel to support the country's rapid industrialisation and urbanisation, and rising demand for energy in emerging economies. China's share of Western Australia's exports quadrupled over the past ten years, with iron ore the primary commodity exported to the country. Furthermore, the largest projects under construction in Western Australia at present are LNG projects, such as the \$55 billion Gorgon project and the \$29 billion Wheatstone project.

The growing importance of iron ore production to the State was also reflected in a large increase in the contribution of iron ore royalties to total royalty income over the decade, from 41.1% of total royalty income in 2002-03 to 87.1% in 2012-13.

## Trends across industries

The increase in the share of mining to the State's GSP over the past ten years was driven by both price and volume. The volume of mining output increased by 91.1% while the prices received for mining production increased by 132.7% over this period<sup>7</sup>. The increase in the price level for mining spilled over to related industries such as construction (up 185.9%), transport (up 105.1%) and administrative and support services (up 124.4%). The electricity, gas, water and waste services industry's share of annual output remained broadly unchanged over the decade.

However the strength of the mining and petroleum industry over the past decade has 'crowded out' other industries in terms of share of the economy. Agriculture, forestry and fishing was the only industry to decrease in size since 2002-03, however the services industry, manufacturing and the non-market sector all had a smaller share of the State economy in 2012-13, despite growing in size over the past decade (see Figure 4).

The expansion of the mining and petroleum industry indirectly contributed to growth by providing a boost to the state's construction industry, particularly engineering construction. The construction sector recorded the largest annual average growth in output over the decade, although residential construction activity has weakened over the past five years. Residential construction activity declined by an average of 0.6% per year between 2007-08 and 2012-13, compared to 5.2% annual average growth over the previous decade.

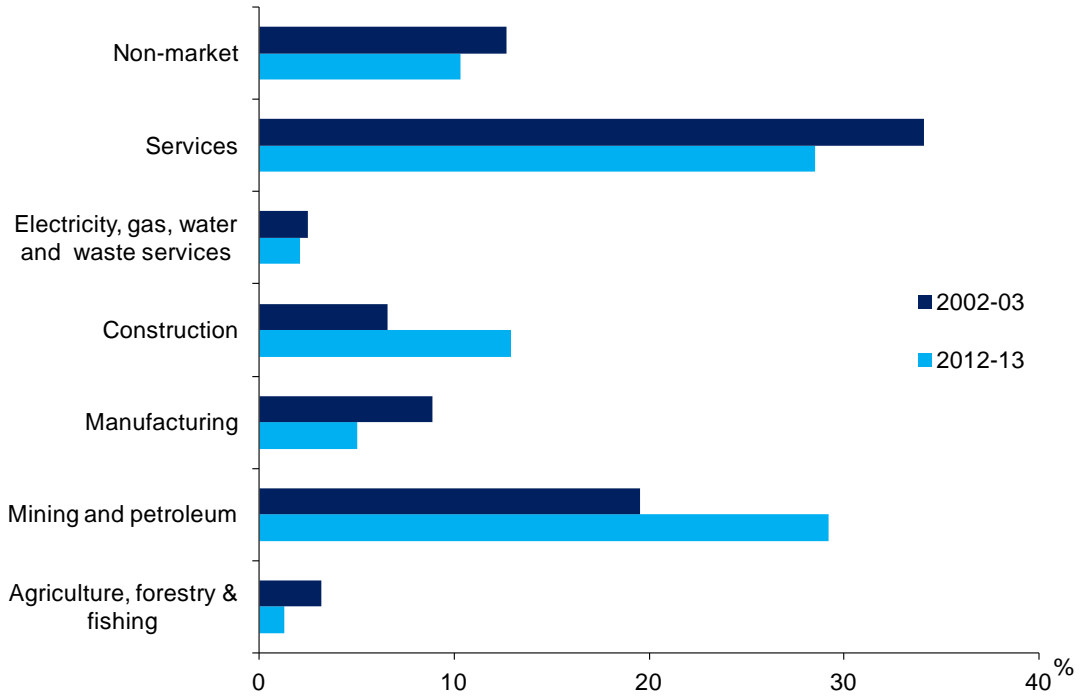
Although the manufacturing industry's share of output declined over the past ten years, its real output in annual average terms grew at a reasonably strong pace of 4.1% per annum. This is stronger than national manufacturing which did not grow over the same period.

---

<sup>7</sup> The changes in the price level at the industry level are derived from the GSP deflators in Australian Bureau of Statistics cat. no. 5220.0.

Figure 4

**SHARE OF GROSS STATE PRODUCT BY INDUSTRY**  
Western Australia

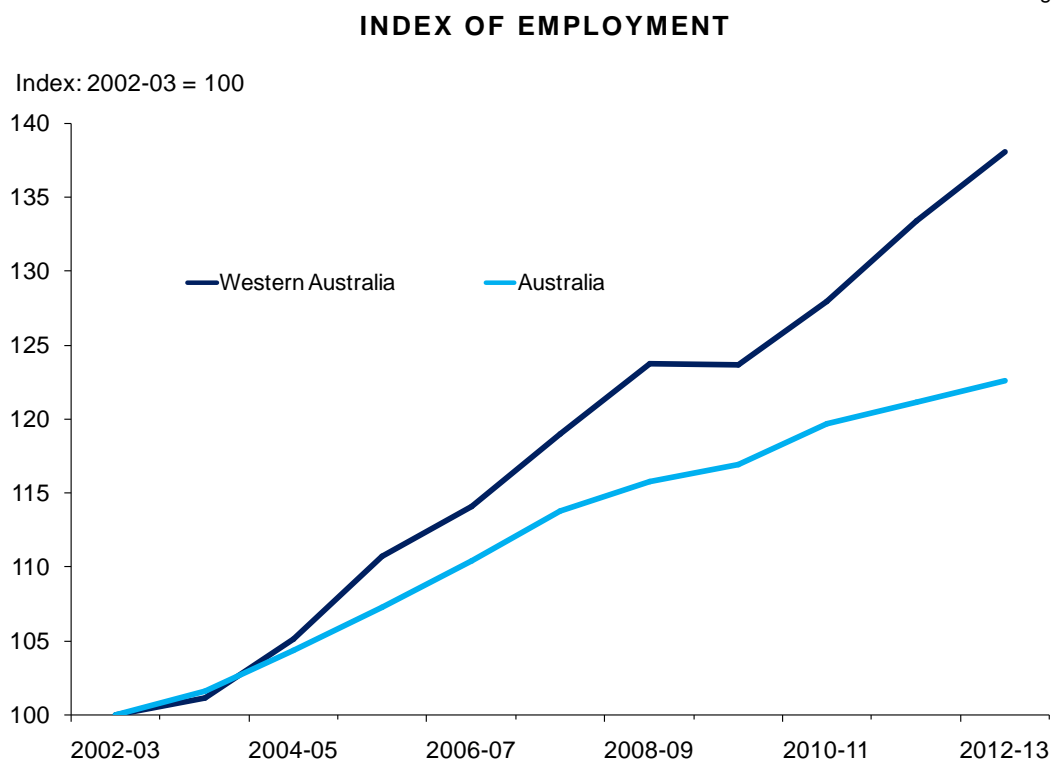


Source: Australian Bureau of Statistics, cat. no. 5220.0.

## Labour market trends and population growth

Over the decade there was strong demand for labour in Western Australia, particularly around the mid and latter part of the decade. This was largely driven by robust employment growth in the mining and related industries, reflecting strong resource investment activity over most of the past ten years.

Figure 5

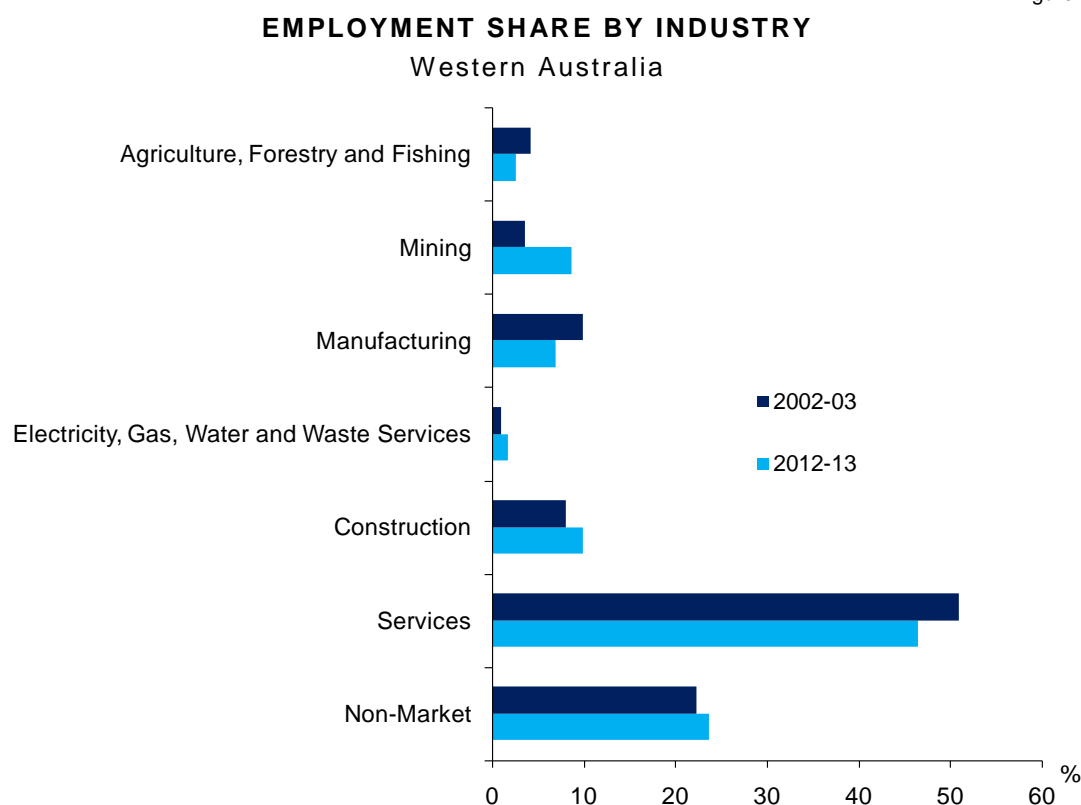


Source: Australian Bureau of Statistics, cat. no. 6202.0.

As Figure 5 illustrates, employment in Western Australia grew at a faster rate than national employment over the past ten years, at an average rate of 3.3% and 2.1% per annum respectively. Strong employment growth over the period resulted in higher payroll tax collections, rising from \$1.0 billion in 2002-03 to \$3.5 billion in 2012-13. As a share of total State taxes, payroll tax revenue increased from 29.0% to 41.7% over the same period.



Figure 6

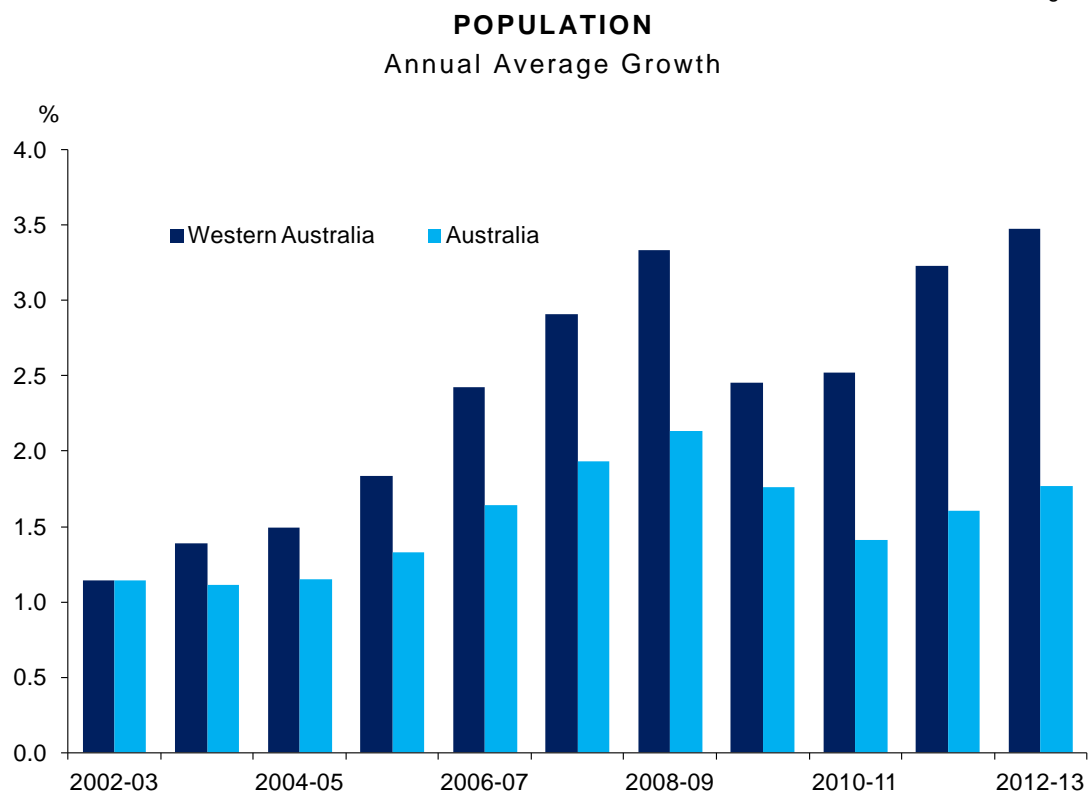


Source: Australian Bureau of Statistics, cat. no. 6291.0.55.003.

Although the mining and petroleum industry is relatively capital-intensive, its share of employment in Western Australia more than doubled over the decade, from 3.6% to 8.7% (as shown in Figure 6). This is consistent with exceptional resource investment over the past decade, which generated additional demand for labour (particularly during the construction phase of major projects). Employment growth was also strong in related industries such as construction, particularly in the first half of the decade during the upswing in new residential dwelling construction in the State.

Western Australia's population growth outpaced growth in the Australian population over the past decade, with the State recording average growth of 2.5% per annum since 2002-03, compared to 1.6% growth nationally. The State's annual average population growth peaked at a record high of 3.5% in 2012-13 (Figure 7), after moderating somewhat in the years following the global financial crisis (GFC). Prior to the GFC, the State's population was expanding at a similar pace to that experienced over the past two years.

Figure 7



Source: Australian Bureau of Statistics, cat. no. 3101.0.

Robust growth in recent years was underpinned by strong levels of net overseas migration (NOM) (Figure 8), with the State's share of national NOM exceeding its population share by around two to one. Notably, the number of skilled migrants applying for temporary subclass 457 business visas (long stay) almost doubled between 2006-07 and 2011-12, from 8,350 to 16,290, before falling back slightly to 14,660 in 2012-13. Although the number of 457 visa applications declined in 2012-13 (by 10.0%), this followed exceptional growth of 75.6% in the previous year.

The construction and mining industries accounted for the vast majority (around 40%) of total applications in 2012-13, which is a similar trend to previous years.

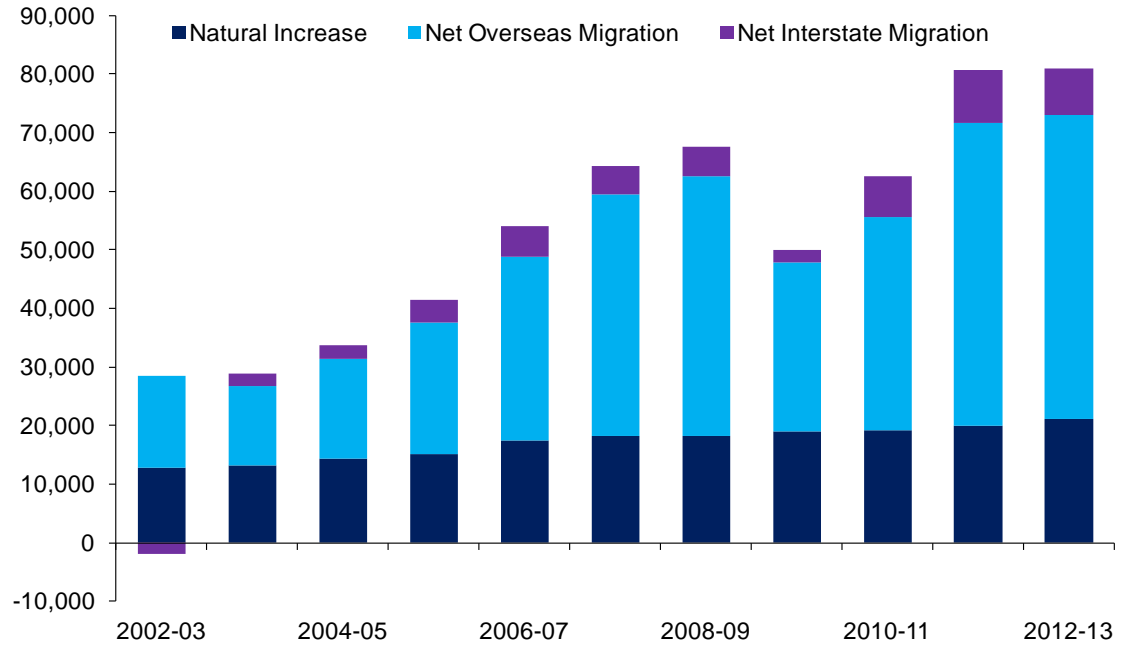
Net interstate migration strengthened over the period to reach a high in 2011-12, which is consistent with additional job opportunities in the State's resource sector over recent years. Relating to interstate migration, the Chamber of Minerals and Energy (WA) estimated that about 55% of the State's resources workforce (78,500 people) was employed on fly-in, fly-out (FIFO) rosters<sup>8</sup> and that 11% of the FIFO workforce resided interstate<sup>9</sup>.

<sup>8</sup> Economic reach of the Western Australian resources sector, July 2013, CMEWA

<sup>9</sup> Western Australia State Growth Outlook 2013, November 2012, CMEWA

Figure 8

**POPULATION CHANGE COMPONENTS**  
Levels, Western Australia



Source: Australian Bureau of Statistics, cat. no. 3101.0.

## Sectoral Analysis

### Mining and petroleum

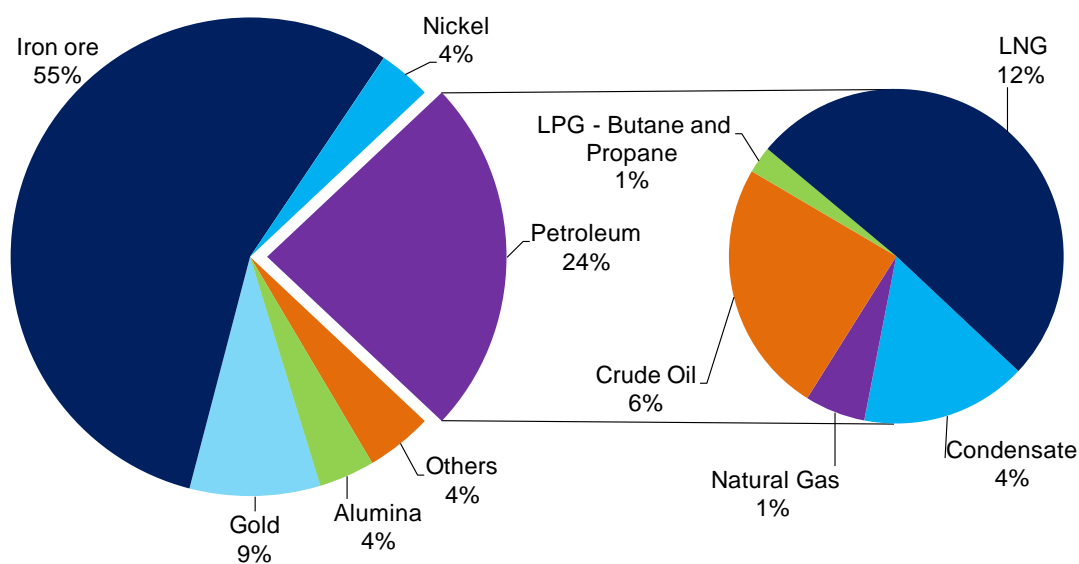
#### Structure of the industry

In 2012-13, mining and petroleum was Western Australia's largest single industry, accounting for 29.2% of State output. The total value of Western Australian mineral and energy production<sup>10</sup> decreased by 3.8% in 2012-13 to \$101.8 billion, after exceeding \$100 billion for the first time in 2010-11.

The major mineral and energy commodities produced in Western Australia were iron ore, liquefied natural gas (LNG), gold, crude oil, alumina, condensate and nickel.

Figure 9

#### COMPOSITION OF THE WESTERN AUSTRALIAN MINING AND PETROLEUM SECTOR, VALUE OF PRODUCTION 2012-13



Source: Western Australian Department of Mines and Petroleum.

<sup>10</sup> The value of minerals and energy production differs from the Australian Bureau of Statistics' measure of mining and petroleum contribution to GSP. This is because the ABS measure subtracts the contribution of other industries (inputs), such as transport or professional services from the final value of sales. Additionally, the value of production measure also incorporates the value of production of resource processing (manufacturing) industries, such as alumina processing.

Iron ore production contributed \$56.4 billion, or 55.3% of total Western Australian mining and petroleum production in 2012-13. The value of production was 7.3% lower in 2012-13 than in 2011-12. A 12.8% increase in production volume in 2012-13 was not sufficient to fully off-set a 17.8% decline in the realised price over the same period.

Petroleum<sup>11</sup> was the second largest commodity, accounting for \$24.5 billion or 24% of the State's mining and petroleum industry production in 2012-13. The value of petroleum production recorded moderate growth in 2012-13 of 2.9%, following an increase of 2.4% in 2011-12.

Table 3

**MINING AND PETROLEUM SUMMARY DATA**

Western Australia

	Production 2012-13	Production Growth 2012-13	Employment 2012-13	Annual Employment Growth 2012-13
	(\$ millions)	(%)	(persons)	(%)
<b>Iron ore</b>	56,368.8	-7.3	47,429	26.4
<b>Petroleum</b>	24,473.3	2.9	10,818	24.3 <sup>(a)</sup>
- Liquefied natural gas	12,468.2	25.2		
- Crude oil	6,003.6	-23.0		
- Condensate	3,927.8	2.2		
- Natural gas	1,434.6	-1.4		
- Liquefied petroleum gas	639.2	-13.0		
<b>Gold</b>	8,970.1	4.6	22,349	-0.4
<b>Nickel</b>	3,625.2	-2.3	7,664	-12.9
<b>Alumina</b>	3,856.4	-1.3	7,478	-27.0
<b>Base Metals</b>	1,588.5	22.3	2,882	-0.9
- Copper	1,441.2	23.7		
- Lead	47.0	265.0		
- Zinc	100.3	-17.0		
Other <sup>(b)</sup>	2,963.0	-1.0	13,896	-0.1
<b>Total</b>	<b>101,845.4</b>	<b>-3.8</b>	<b>112,516</b>	<b>6.6</b>

<sup>(a)</sup> DMP discontinued estimation of employment numbers for the petroleum sector in 2012-13. The reported figure is the 2011-12 figure escalated by the growth in employment in the oil and gas sector as reported by the ABS.

<sup>(b)</sup> 'Other' includes heavy mineral sands, salt, coal, cobalt, and diamonds.

Source: Western Australian Department of Mines and Petroleum.

<sup>11</sup> The term Petroleum is used to refer to LNG, crude oil, condensate, natural gas and liquid petroleum gas.

Although mining and petroleum accounted for nearly one third of the State's output in 2012-13, the industry provided direct employment for around 8.7% of the total workforce. The largest employer was the iron ore sector followed by gold and petroleum. The relatively small number of employees in the petroleum sector reflects the capital-intensive nature of the production process.

### Recent trends

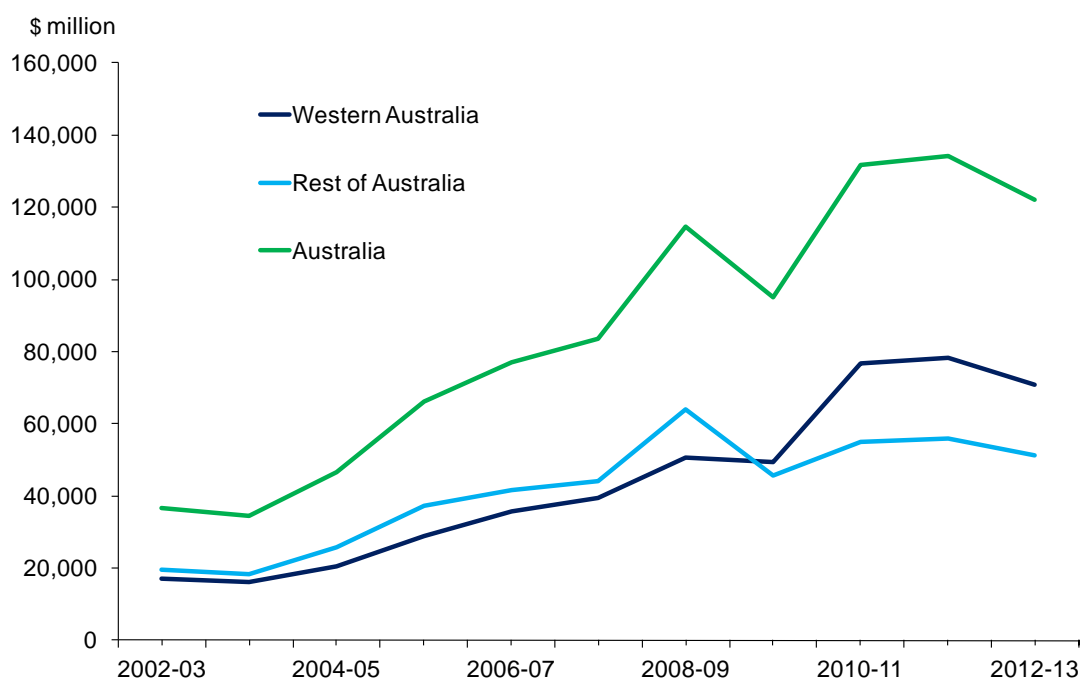
In the early part of the decade, it appeared the importance of the mining and petroleum industry was waning. Mining and petroleum's proportion of the Western Australian economy had decreased from a peak of 21.6% in 2000-01 to 17.3% by 2003-04. However, the sector's share of the economy then increased over a number of years to reach a new peak of 34.5% in 2010-11.

Growth in the State's mining and petroleum sector between 2002-03 and 2012-13 averaged 6.0% per annum, and was dominated by the iron ore and petroleum production. Since 2009-10 the value of the Western Australian mining and petroleum industry has exceeded that of the rest of Australia combined.

For the rest of Australia (excluding Western Australia), the mining and petroleum industry grew at an average rate of 2.7% per annum between 2002-03 and 2012-13. The major commodities for the rest of Australia were coal (thermal and metallurgical) and petroleum. Australia wide, over the same period, the mining and petroleum industry averaged 4.5% growth per annum.

Figure 10

### MINING AND PETROLEUM INDUSTRY Gross Value Added



Source: Australian Bureau of Statistics, cat. no. 5220.0.

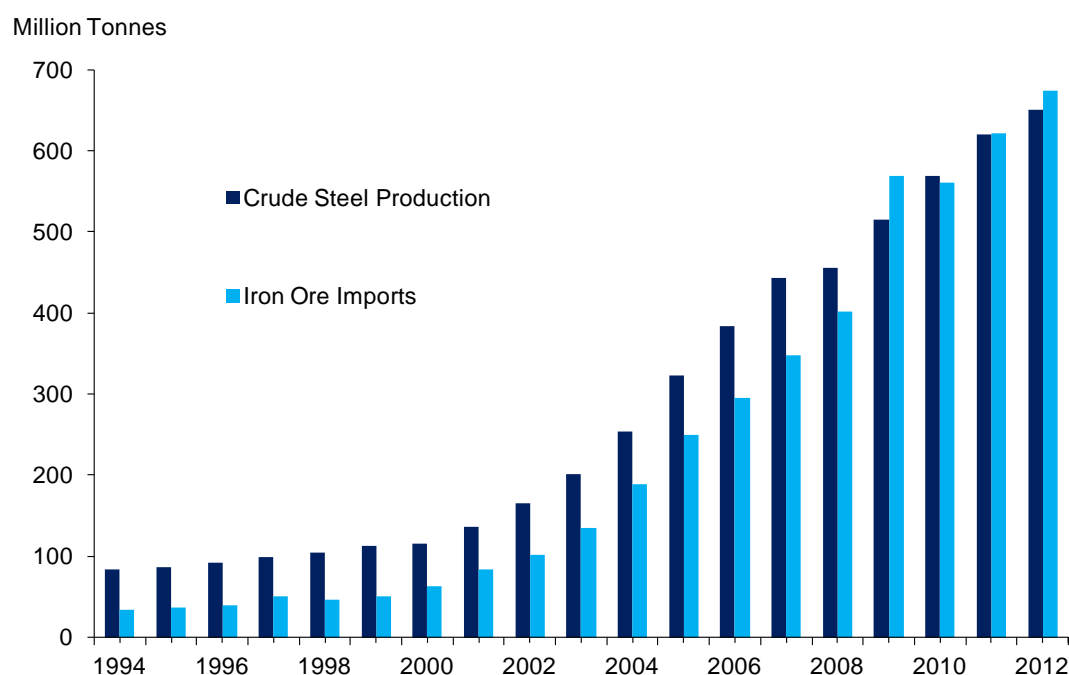
## Iron Ore

Since 1999-00, petroleum and iron ore have largely driven growth in the Western Australian resources industry with iron ore becoming the primary driver since 2007-08 in terms of production value. This reflects China's strong demand for steel as a result of its rapid and sustained urbanisation and industrialisation (see Figure 11). China's demand for steel has also driven demand for metallurgical coal (from the eastern States) for use in the refining process.

Western Australia's iron ore production was more than two and a half times higher in 2012-13 than in 2002-03, driven by the increased exports to China. In 2012-13, the State exported \$40.6 billion of iron ore to China, accounting for 72% of the State's total iron ore production worth \$56.4 billion.

Figure 11

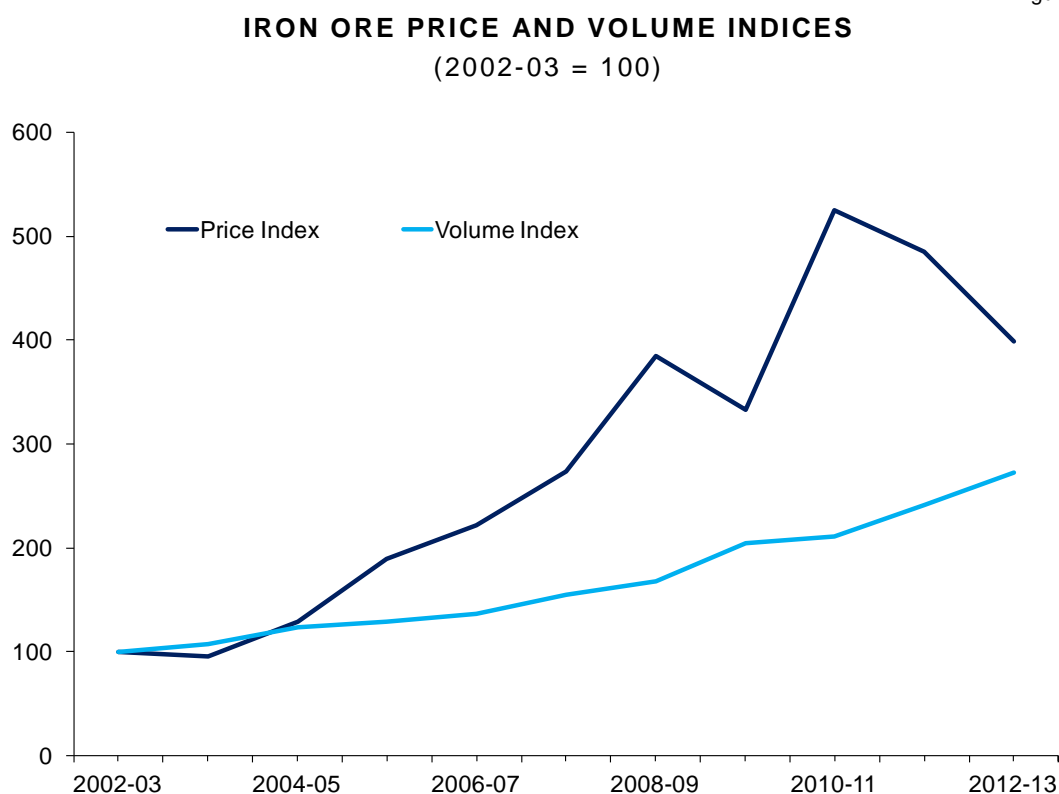
### CHINA'S CRUDE STEEL PRODUCTION AND IRON ORE IMPORTS



Source: Western Australian Department of Mines and Petroleum, TEX Report and Interfax China Ltd.

Over the last decade, the value of iron ore mining grew by 26.9% per annum. This was driven by a 172.2% increase in production volumes between 2002-03 and 2012-13, and a 298% increase in the iron ore price over the same period (see Figure 12).

Figure 12



Source: Western Australian Department of Mines and Petroleum

### ***Petroleum***

From 1994-95, the value of petroleum production was the largest in the State's resources industry until 2007-08 when the value of iron ore production surpassed it. The value of the petroleum sector has, however, shown strong average growth of 8.8% per annum for the last decade.

The petroleum sector still holds the largest value in capital investment in Western Australia, with oil and gas projects under construction and committed totalling \$96.7 billion as of September 2013. This is significantly larger than the \$24.4 billion worth of projects under-construction and committed in the metal ore sector<sup>12</sup>.

### ***Other commodities***

Gold and base metals mining experienced strong growth during the period 2002-03 to 2012-13, more than doubling in value. Growth in the value was driven by a significantly stronger gold price (up 173.3%), while volume of output declined over the decade (down 4.6%).

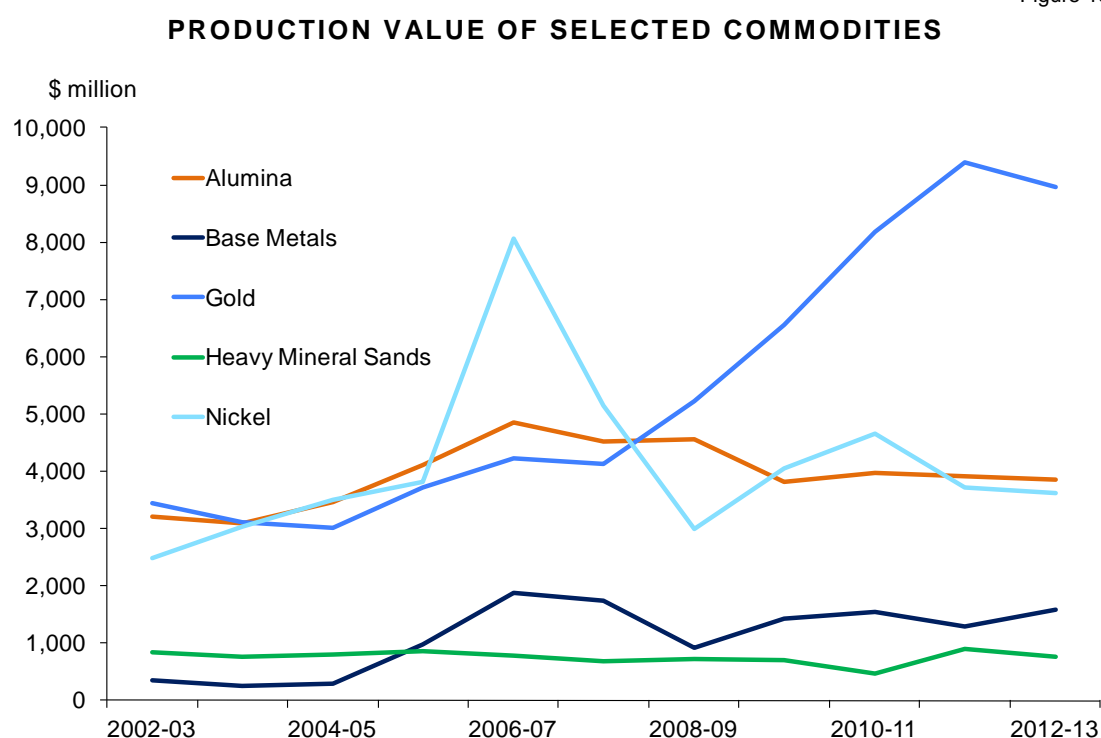
<sup>12</sup> Source: Access Economics Investment Monitor, September 2013



The value of the base metals sector (excluding nickel) grew most in the middle of the decade, increasing by 662.1% in the three years to 2006-07, due to a spike in base metal prices. The value of output peaked at \$1.9 billion in 2006-07 before moderating over the latter half of the decade, and in 2012-13 totalled \$1.6 billion.

Like other base metals, the value of nickel production increased sharply to 2006-07 peaking at \$8.0 billion, due to a sharp rise in the nickel price. A subsequent fall in the price and associated mine closures brought the value of the nickel sector down to \$3.0 billion by 2008-09. The value of output has varied between \$3.0 billion and \$4.6 billion since then, and totalled \$3.6 billion in 2012-13.

Figure 13



Source: Western Australian Department of Mines and Petroleum.

The value of the alumina sector increased by 20.3% between 2002-03 and 2012-13 peaking at \$4.8 billion in 2006-07 in line with higher metals prices. Volumes increased in the first half of the decade before levelling off since 2008-09.

The value of the State's heavy mineral sands output was 10.8% lower in 2012-13 compared to 2002-03. After being relatively stable for most of the decade, in recent years this sector has been quite volatile, with a 32.0% contraction in output experienced in 2010-11 followed by a recovery in 2011-12 with growth of 89.8%.

## Employment

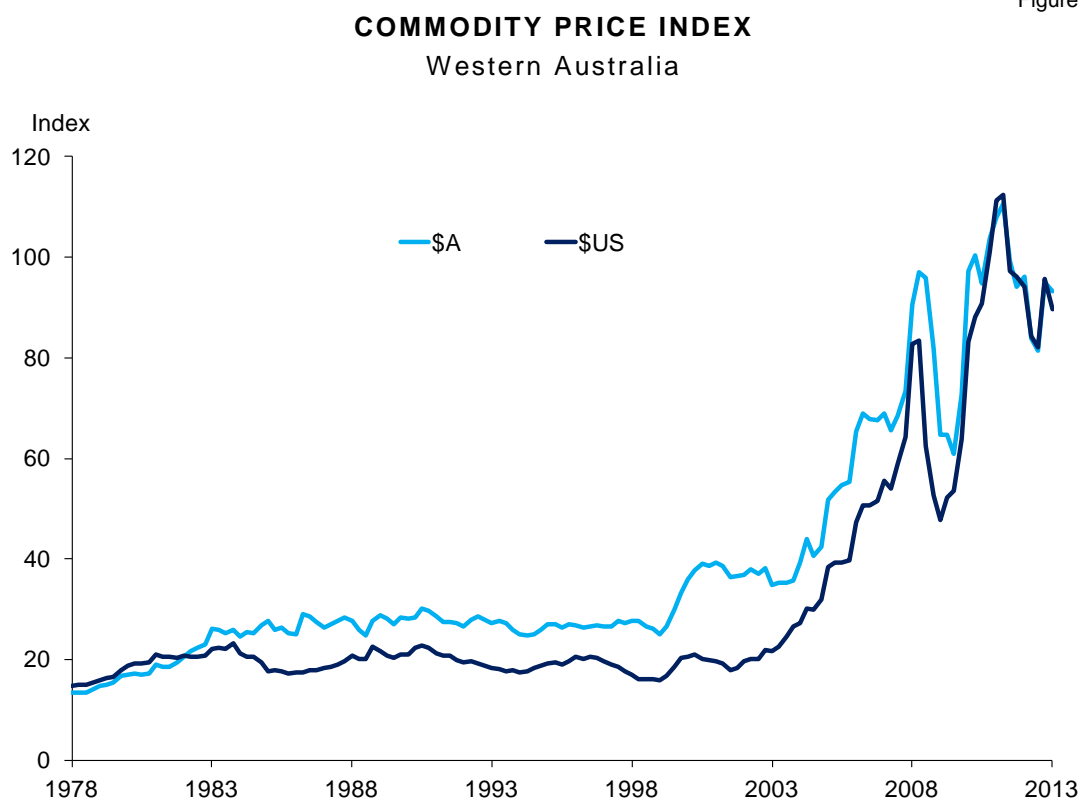
In 2012-13, the mining and petroleum industry accounted for 8.7% of total employment in Western Australia, according to the Australian Bureau of Statistics. The industry's share of total employment has more than doubled since 2002-03, when the sector employed just 3.6% of the workforce.

The largest employer was the iron ore sector<sup>13</sup>, which employed 47,429 people in 2012-13, over four times as many as the sector employed in 2002-03 (10,876). The next largest employer was the gold sector which employed 22,349 people in 2012-13, which is nearly double what it was in 2002-03.

## Commodity Prices

The Department of Treasury's Western Australian Commodity Price Index is a weighted measure of changes in prices received for the State's commodities. After a period of relative stability, the index reveals a significant increase in price over the past ten years.

Figure 14



Note: The Commodity Price Index is a weighted index of prices for iron ore, gold, oil, LNG, copper, nickel, zinc and alumina.

Source: Western Australian Department of Treasury.

<sup>13</sup> Source: Department of Mines and Petroleum. This data is derived from companies who are required to report the number of staff who are working at a Western Australian Mining tenement. It therefore excludes staff who work in the offshore petroleum industry or who work offsite in the mining industry.

The US dollar index rose faster than the Australian dollar index over this period, as the Australian dollar also appreciated significantly against the US dollar. Similarly the decline in the Australian dollar index lagged the US dollar index during the GFC, as a depreciation of the Australian dollar initially offset declines in commodity prices. The historical correlation between the Australian dollar and commodity prices offers a weak 'natural hedge', which can moderate the impact of commodity price movements.

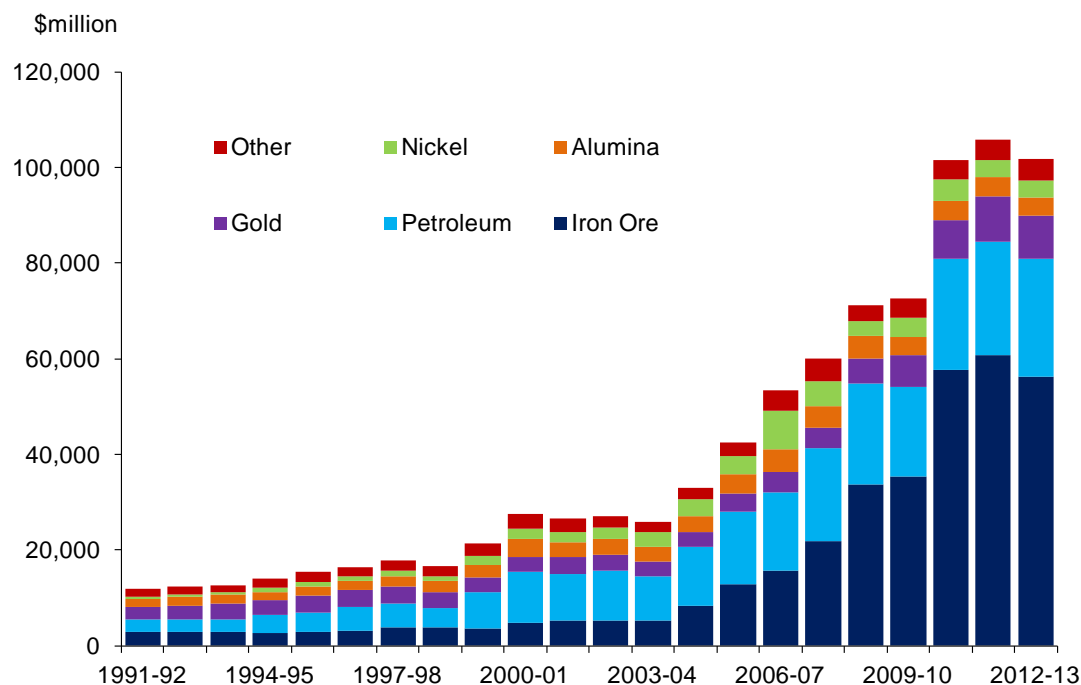
### Diversity

In 2002-03, the three most valuable commodities, namely iron ore, petroleum products (including gas) and gold represented 68.8% of total mining and petroleum output. By 2012-13, these commodities accounted for 88.2% of total mining and petroleum output, indicating a significant decrease in diversification.

This was driven by growth in the value of production from the three most valuable commodities (16.7% per annum) exceeding growth in the value of production of the five remaining commodities (3.3% per annum). Western Australia still produces a similar number of resource commodities as in 2002-03.

Figure 15

#### VALUE OF MINING AND PETROLEUM INDUSTRY BY COMMODITY Western Australia



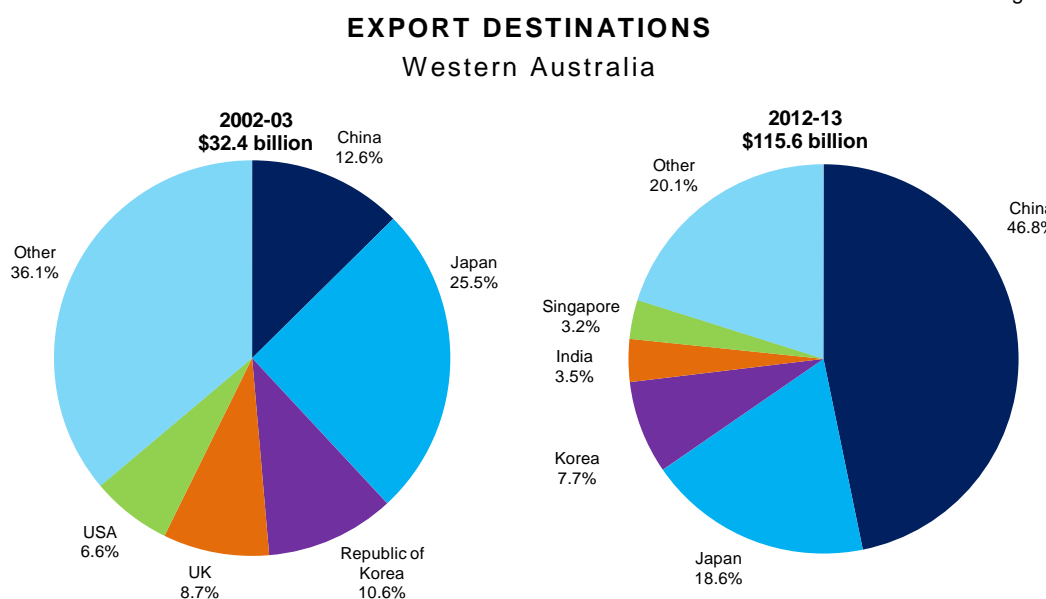
Source: Western Australian Department of Mines and Petroleum Statistics Digest 2012-13.

## Exports

The value of mining and petroleum exports<sup>14</sup> from Western Australia has increased significantly from \$19.4 billion in 2002-03 to \$98.0 billion in 2012-13, which equates to an average growth rate of 18.4% per annum. This rate of growth was faster than the total of all other merchandise goods which expanded from \$13.0 billion in 2002-03 to \$18.0 billion in 2012-13, or by an average of 2.5% per annum. Consequently, the mining and petroleum exports, as a share of total exports, increased from 59.8% in 2002-03 to 84.5% in 2012-13.

A key dynamic in recent years has been a significant rise in the importance of China as an export destination. Over the ten years to 2012-13, the value of merchandise exports to China increased from \$4.1 billion to \$54.1 billion. This represents an annual average growth rate of 29.5%, which is substantially higher than the 13.6% growth rate for total exports. As a result, the share of Western Australia's merchandise exports to China also increased significantly, from 12.6% to 46.8%.

Figure 16



Source: Australian Bureau of Statistics, cat. no. 5368.0

The increase in exports to China was largely driven by a substantial increase in iron ore exports, from \$1.7 billion in 2002-03 to \$40.6 billion in 2012-13. Both the volume (up by 708.3%) and price (up by 339.8%) of iron ore going to China increased significantly over this period.

<sup>14</sup> The value of mineral and petroleum exports is a Treasury calculation derived from ABS cat. no. 5368. It excludes 'confidential items' such as alumina.

The emergence of gold exports to China is another key dynamic over the past decade. In 2002-03 there were no exports of non-monetary gold from Western Australia to China, whereas in 2012-13 the State exported \$6.0 billion worth of non-monetary gold, making it second to iron ore as the most valuable commodity export to China<sup>15</sup>. A reduction in gold import regulation in China means that it was easier for gold to be imported in 2012-13 than in 2002-03.

Japan (\$21.5 billion) and Korea (\$8.3 billion) were the second and third most significant export destinations by value in 2012-13. Combined exports to Japan and Korea increased at an annual average rate 10.0% over the decade. However exceptional growth from China meant that the relative share of exports going to these countries declined from 36.0% in 2002-03 to 26.3% in 2012-13.

Another significant dynamic over the past decade has been the relative decline in importance of developed countries as destinations of Western Australia's exports. Exports to members of the Organisation for Economic Co-operation and Development (OECD) declined from 61.6% of total exports in 2002-03 to 33.7% of total exports in 2012-13. This decline is more pronounced in exports to the current 27 member countries of the European Union (EU), which in 2002-03 comprised 14.9% of the State's exports and in 2012-13 declined to 4.7%.

## Manufacturing

### *Structure of the industry*

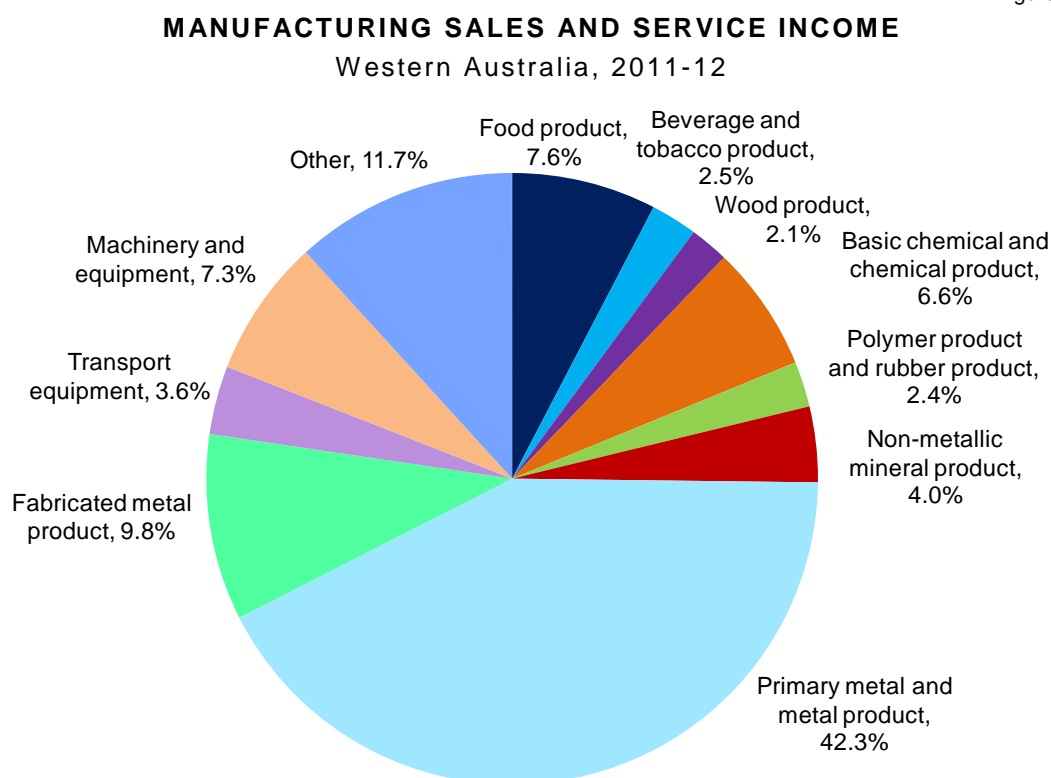
Manufacturing accounted for 5.0% of the State's economy in 2012-13, compared to a contribution of 8.9% in 2002-03. The industry is closely linked to mining and petroleum, with metal product manufacturing comprising a significant share of total manufacturing income. Metal product manufacturing includes alumina smelting, gold refining and nickel smelting. In 2011-12, metal product manufacturing accounted for 42.3% of Western Australia's total manufacturing sales and service income<sup>16</sup>.

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<sup>15</sup> The sum of Western Australia's gold exports is generally significantly greater than the value of production as the Perth Mint imports and then re-exports gold produced from around the region.

<sup>16</sup> Industry value added data by manufacturing subdivision is no longer collected by the ABS at the State level. Sales and service income includes the sale of goods, income from services and rent, leasing and hiring income.

Figure 17



Source: Australian Bureau of Statistics, cat. no. 8155.0

Western Australia was the biggest manufacturer of metal products in Australia, as measured by income in 2011-12, with the State accounting for 40% of national sales and service income in 'primary metal and metal product manufacturing'.

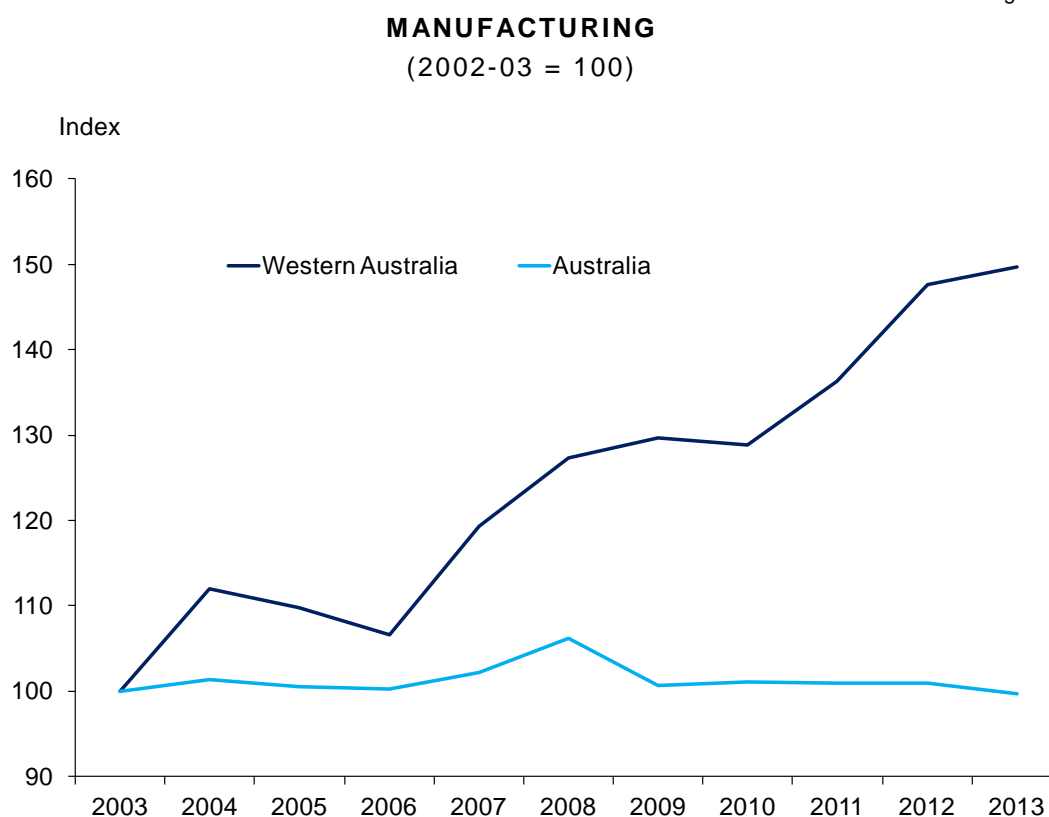
The manufacturing industry accounted for around 6.9% of total employment in Western Australia in 2012-13, slightly above its share of output. Employment was largely dominated by 'metal product' manufacturing and by 'machinery and equipment manufacturing'. These industries accounted for almost half of total manufacturing employment<sup>17</sup>. 'Food product' manufacturing was also a significant industry in terms of contribution to employment.

<sup>17</sup> Includes fabricated metal product manufacturing and transport equipment manufacturing.

### Recent trends

Although the manufacturing industry's share of the State economy declined over the past decade, in real terms the industry grew by an average of 4.1% per annum in the ten years to 2012-13. This is in contrast to the national manufacturing sector which did not expand in real terms over the decade. Consequently, Western Australia's share of national manufacturing output also increased over the past decade from 8.9% in 2002-03 to 11.9% in 2012-13. Projects which would have contributed to the increase in manufacturing output from Western Australia include the expansions of the Worsley and Pinjarra alumina refineries.

Figure 18



Source: Australian Bureau of Statistics, cat. no. 5220.0.

The total number of people employed in the manufacturing industry in Western Australia has remained steady over the past decade. The proportion of those employed in the manufacturing of primary metals and metal products increased from 11.3% in 2002-03 to 15.5% in 2012-13, at an annual average growth rate of 2.9% over the past decade. Employment in the rest of the industry contracted at an average rate of 0.8% per annum over the same period.

Table 4

**MANUFACTURING INDUSTRY**  
Employment, Western Australia

	Employment, 2012-13	Annual average growth, 2002-03 to 2012-13	Share of manufacturing employment, 2012-13
	('000)	(%)	(%)
Food product	11.6	-0.5	12.6
Beverage and tobacco	1.9	-0.1	2.1
Textile, leather, clothing and footwear	3.2	-4.4	3.5
Wood product	2.3	-4.6	2.5
Pulp, paper and converted paper	0.7	-9.0	0.7
Printing	3.7	-1.1	4.1
Petroleum and coal	2.1	8.2	2.3
Chemical product	4.0	-1.3	4.4
Polymer and rubber	3.7	-0.4	4.1
Non-metallic mineral	4.1	-4.4	4.5
Primary metal and metal product	14.2	2.9	15.5
Fabricated metal product	7.1	-0.9	7.8
Transport equipment	7.0	-2.7	7.6
Machinery and equipment	10.2	-1.6	11.2
Furniture and other	15.7	4.7	17.2
<b>Total</b>	<b>91.5</b>	<b>-0.1</b>	<b>100.0</b>

Source: Australian Bureau of Statistics, Datacubes.

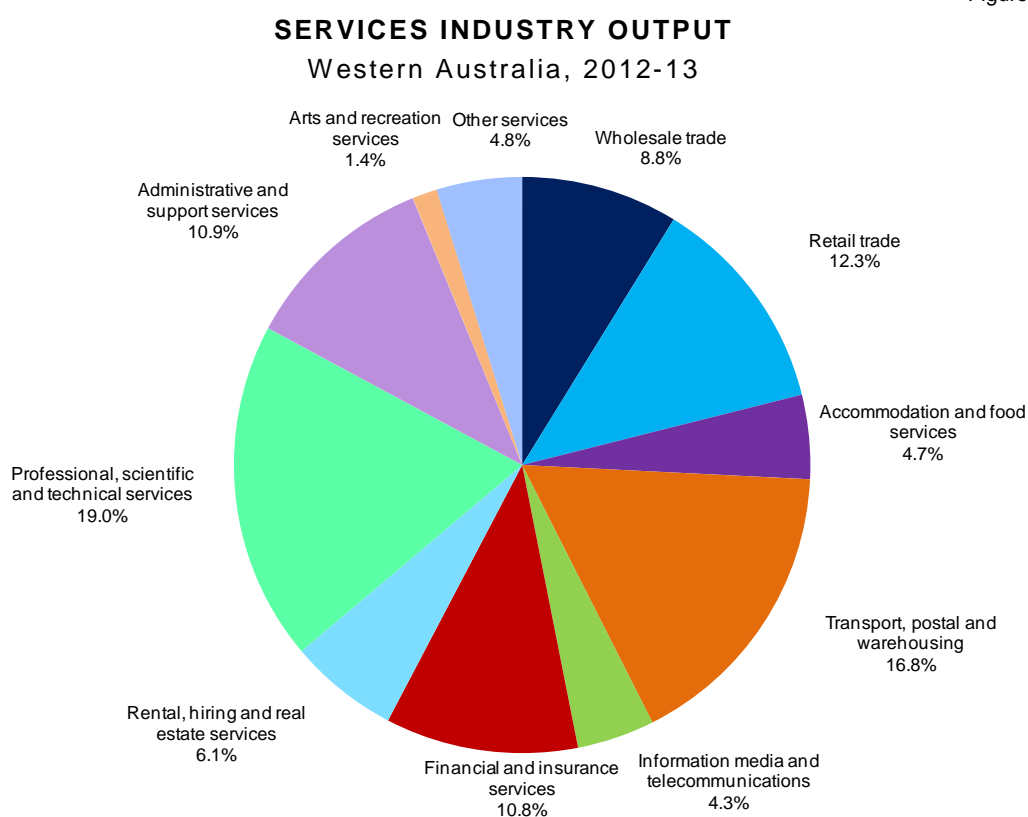


## Services

### Structure of the industry

Western Australia's services industry accounted for 28.5% of output in 2012-13, compared to 34.1% in 2002-03. Whilst the industry represents a significant portion of the State's economy, it has a greater presence nationally, where it accounted for 41.4% of national output in 2012-13. The share of the services industry nationally remained relatively stable over the past decade.

Figure 19



Source: Australian Bureau of Statistics, cat. no. 5220.0.

Western Australia's services industry experienced a moderate structural change over the past decade, underpinned by changing relative activity in some service industries. 'Professional, scientific and technical services'<sup>18</sup> has overtaken 'retail trade' to become the largest industry (with a share of 19%) within the State's services industry in 2012-13 (Figure 19). These services had a relatively smaller presence nationally (with a share of 16.4%).

<sup>18</sup> Includes 'scientific research services', 'architectural, engineering and technical services', 'legal and accounting services' and 'advertising services'.

Conversely, the information media and telecommunications industry experienced the largest fall, from 7.4% of the State's service industry in 2002-03 to 4.3% in 2012-13. The wholesale trade (down 2.6%), financial and insurance services (down 2.4%) and retail trade (down 1.9%) industries' share of output also fell over the past decade.

Compared to the structure of the national services industry in 2012-13, the financial and insurance services industry (19.6%) was more prominent at the national level compared to Western Australia (10.8%), as most company headquarters and back office services are located in Sydney and Melbourne.

On the other hand, the 'transport, postal and warehousing' industry (including 'road freight transport', 'rail freight transport' and 'port freight transport') had a greater presence (at a share of 16.8%) in Western Australia's services industry compared to the national share of 11.7%, largely because its operations complement the mining and petroleum industry.

Table 5

<b>SERVICES INDUSTRY</b>			
Employment, Western Australia			
	Employment, 2012-13	Annual average growth, 2002-03 to 2012-13	Share of services employment, 2012-13
	('000)	(%)	(%)
Accommodation and food services	71.8	1.9	11.7
Administration and support services	48.1	3.3	7.8
Arts and recreation services	22.6	4.2	3.7
Financial and insurance services	32.8	1.9	5.4
Information media and telecommunications	15.8	-1.1	2.6
Professional, scientific and technical services	102.8	5.5	16.8
Rental, hiring and real estate services	23.3	2.3	3.8
Retail trade	136.6	1.7	22.3
Transport, postal and warehousing	64.0	4.7	10.4
Wholesale trade	41.8	0.5	6.8
Other services	53.7	-0.5	8.8
<b>Total</b>	<b>613.3</b>	<b>2.4</b>	<b>100.0</b>

Source: Australian Bureau of Statistics, cat. no. 6291.0.55.003.

The services industry was the State's largest employer in 2012-13, accounting for 46.5% of total employment. The 'wholesale trade' and 'retail trade' industries employed almost a third of total services industry employees, reflecting the highly labour-intensive nature of those industries. The 'professional, scientific and technical services' industry was also a significant employer, followed by the 'accommodation and food services' industry. 'Information media and telecommunications' had the smallest share of employment within the services industry, mainly because most publishing, broadcasting and telecommunications services are based in Sydney and Melbourne.

### **Recent trends**

Western Australia's services industry increased by an average of 4.8% per annum since 2002-03, outpacing national services growth of 3.2%. The fastest growing industries in the State's services industry were 'professional, scientific and technical services' and 'wholesale trade', growing by an average of 7.4% and 6.2% respectively. The slowest growing industries were the 'financial and insurance services' and 'information media and telecommunications' industries, whose growth of 3.3% was less than total services growth.

The fastest growing industry at the national level was the 'financial and insurance services' industry (4.8%), followed by the 'professional, scientific and technical services' industry (4.2%). The slowest growing industry was 'other services' (0.8%).

Overall, most service sector industries recorded stronger average growth over the past decade in Western Australia compared to nationally. The only exception was the 'financial and insurance services' industry, which grew slower in Western Australia.

Given the overall robust activity in Western Australia's services industries, the State increased its share of national services output from 9.0% in 2002-03 to 11.0% in 2012-13. This share is close to Western Australia's share of the national population in 2012-13 of 10.8%.

However as mentioned earlier, the service industry's share of the State economy has fallen over most of the past decade. It stood at the lowest level in 2010-11 of 26.5%, but increased over the past two years up to 28.5% in 2012-13.

Notwithstanding this, whilst the flow-on effects from the mining and petroleum boom (such as higher prices) may have been detrimental to some industries, service industries connected to the resources sector have experienced strong activity in recent years. This is illustrated through industries such as 'professional, scientific and technical services' and 'transport, postal and warehousing', which increased their relative contributions to the State's services industry over the past decade.

In terms of employment, 'professional, scientific and technical services' employment experienced the strongest annual average growth over the past decade, consistent with the growth of services to support the mining and petroleum industry such as engineering and specialist technical services. Employment in 'transport, postal and warehousing', and 'arts and recreation services' also increased strongly.

## Construction

### *Structure of the industry*

The construction industry in Western Australia accounted for 12.9% of State output in 2012-13 (amounting to \$31.3 billion), compared to 6.6% in 2002-03. The construction industry grew at an average rate of 6.8% per annum from 2002-03 to 2012-13. This was the strongest rate of growth of all industries.

The total final value of major work done in the construction industry (which includes the value of inputs such as materials) was \$56.1 billion in 2012-13.<sup>19</sup> The value of major work done in the construction industry is greater than the output of the industry, because it includes the value of inputs.

This is reflected in engineering construction (including construction of road networks, heavy industry, telecommunications and electricity supply networks), which accounted for over three-quarters (78.3%) of the total value of work done. Residential construction (11.7%) and non-residential building (9.9%) also contributed to the total. Minor construction (less than \$10,000 in value), which does not require a building permit are excluded from this series. Consequently, most residential renovations are not included.

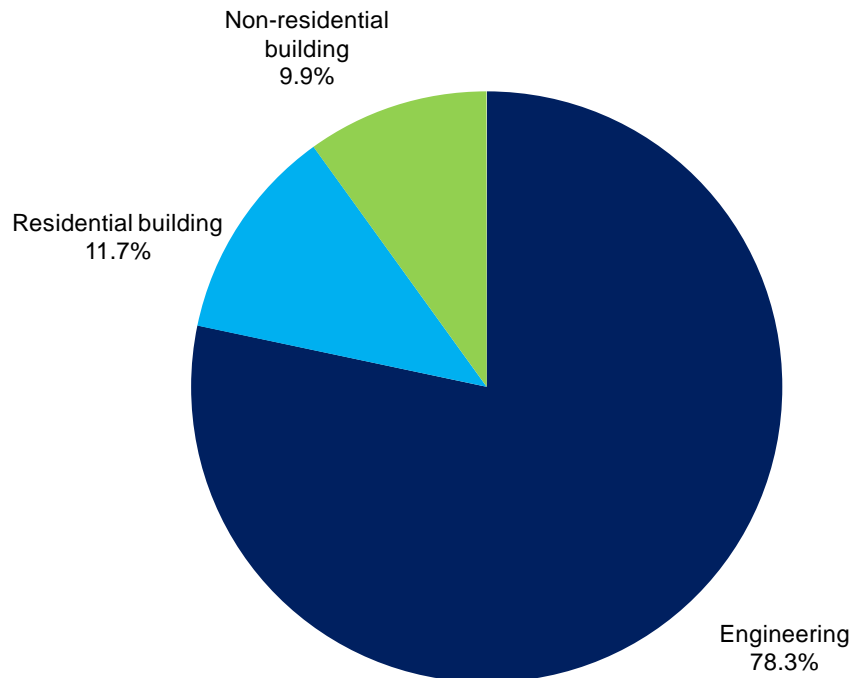
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<sup>19</sup> Australian Bureau of Statistics, cat no 8755. This series is a subset of the construction work included in the state and national accounts as it excludes minor construction, such as many residential renovations, and construction which does not require a building permit. The national and state accounts also reflect transfers of ownership between the public and private sectors.

Figure 20

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**CONSTRUCTION ACTIVITY**  
Western Australia, 2012-13

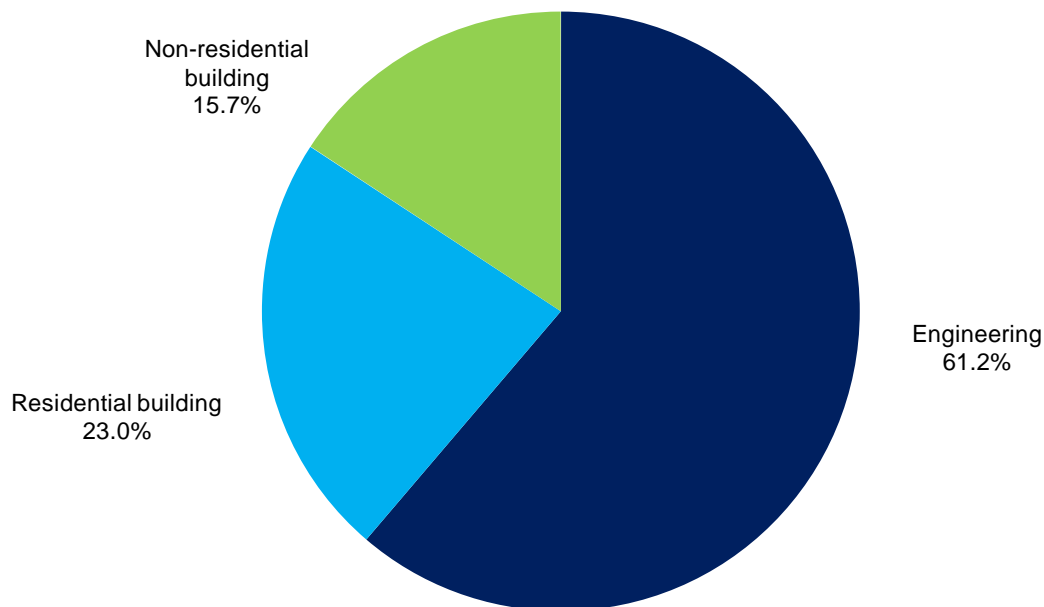


Source: Australian Bureau of Statistics, cat. no. 8755.0.

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The structure of Western Australia's construction industry differs considerably from the national industry, primarily because engineering construction nationally is lower relative to total construction (see Figure 21). Engineering construction in Western Australia is heavily influenced by investment in the relatively large resources sector.

**CONSTRUCTION ACTIVITY**  
Australia, 2012-13



Source: Australian Bureau of Statistics, cat. no. 8755.0.

In 2012-13, the construction industry employed 130,500 workers or 9.9% of the total workforce in Western Australia. More than two-thirds of construction employees were employed in construction services, primarily in building installation and completion. These services include plastering, carpentry, painting, plumbing and electrical services.

Table 6

<b>CONSTRUCTION INDUSTRY</b>			
Employment, Western Australia			
	Employment, 2012-13	Annual average growth, 2002-03 to 2012-13	Share of construction employment, 2012-13
	('000)	(%)	(%)
<b>Building construction</b>			
Residential building construction	10.7	8.0	8.2
Non-residential building construction	4.2	3.9	3.2
Other building construction	8.8	2.2	6.7
Total	23.6	4.8	18.1
<b>Heavy and civil engineering construction</b>	11.5	5.3	8.8
<b>Construction services</b>			
Land development and site preparation	8.3	4.8	6.4
Building structure services	12.3	4.6	9.5
Building installation services	27.9	7.6	21.4
Building completion services	22.5	2.0	17.2
Other construction services	16.5	5.6	12.6
Total	87.5	4.8	67.1
<b>Other construction</b>	7.9	25.4	6.0
<b>Total</b>	<b>130.5</b>	<b>5.5</b>	<b>100.0</b>

Source: Australian Bureau of Statistics, Datacubes.

### ***Recent trends***

The structure of the construction industry in Western Australia has changed over the past ten years as the contribution made by engineering construction increased from 52.0% in 2002-03 to 78.3% in 2012-13. This caused both residential building and non-residential building to decline relative to the total level of activity despite both building sectors also growing over the same period of time (Table 7). Residential construction activity, however, slowed over the past five years.

Table 7

<b>CONSTRUCTION ACTIVITY</b>		
Western Australia		
	Annual average growth 2002-03 to 2012-13 (%)	Annual average growth 2007-08 to 2012-13 (%)
Residential building	1.8	-2.5
Non-residential Building	10.5	9.2
Engineering Construction	20.5	16.1

Source: Australian Bureau of Statistics cat. no. 8755.0.

This trend reflects the strong growth in business investment over the past decade, underpinned by a rapid expansion in the resources sector. Employment in the construction industry grew at an annual average rate of 5.5% since 2002-03, compared with 3.3% growth in total employment.

Excluding other construction, residential building construction had the strongest annual average growth for the decade at 8.0%, followed by building installation services at 7.6%. Residential building construction includes house and other residential related construction, whilst building installation services include services such as plumbing, electrical and air conditioning services.

The number of job vacancies in construction related trades has varied in recent years. Vacancies rose from a total of about 3,500<sup>20</sup> in 2006-07 and 2007-08 to a peak of about 4,100 in 2010-11, before moderating to reach a low of around 2,500 vacancies in 2012-13<sup>21</sup>. A decline in the number of vacancies since 2010-11 is consistent with a slowdown in new dwelling construction over the past two years.

## Agriculture, Forestry and Fishing

The agriculture, forestry and fishing industry accounted for 1.3% of Western Australia's GSP in 2012-13. The share of the industry varies considerably from year to year, primarily due to variability in weather conditions.

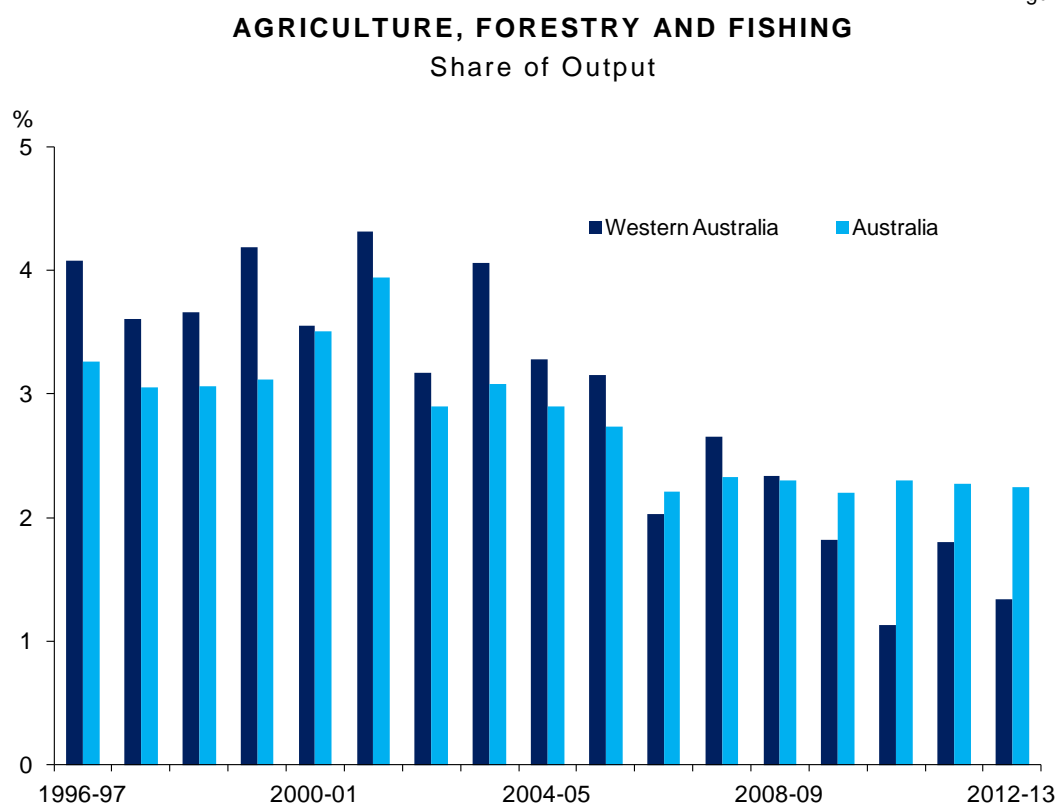
Western Australia has typically had a proportionately larger agriculture, forestry and fisheries industry than Australia as measured by share of output. However, in recent years this has reversed. Over the longer term, the industry has made a declining contribution to output in both Australia and Western Australia. This trend has been more pronounced in Western Australia as the economy and population have grown at a faster rate.

<sup>20</sup> Department of Employment Internet Vacancy Index

<sup>21</sup> This measure can be quite volatile, with the number of vacancies occasionally varying by large amount over short time periods.



Figure 22



Source: Australian Bureau of Statistics, cat. no. 5220.0.

Agriculture was the largest employer within the industry (accounting for 87.0% of the total sector's employment in 2012-13). Other major employers were 'support services' (7.9%) and 'forestry and logging' (3.4%). The share of agricultural employment has increased since 2002-03 from 80.7%.

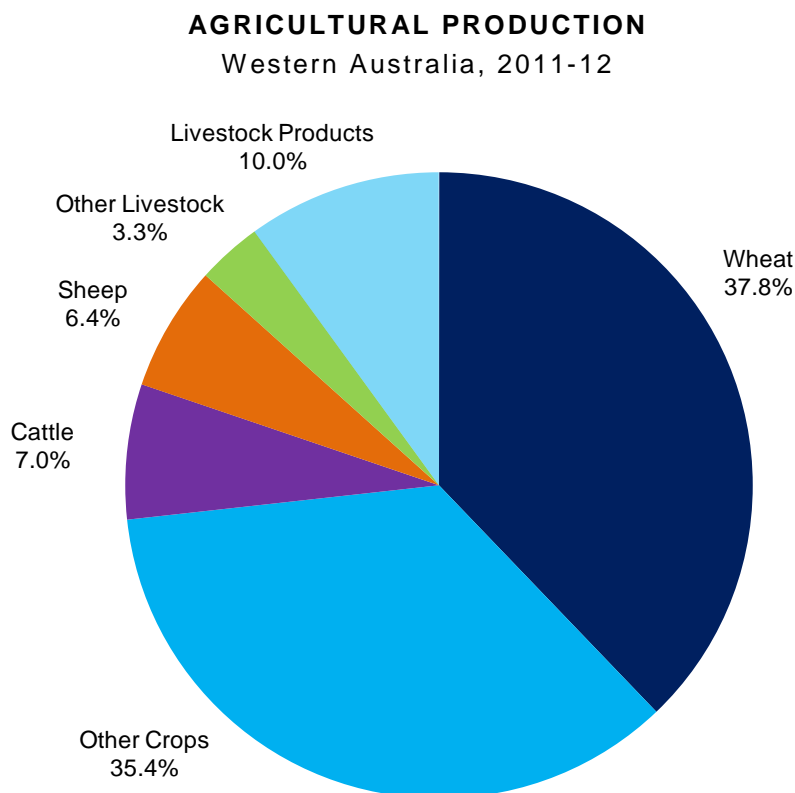
### ***Agriculture***

The gross value of agricultural production in Western Australia was \$7.5 billion in 2011-12<sup>22</sup>. Crop production accounted for the bulk of agricultural production (at 73.3%), of which 51.6% is accounted for by wheat. Western Australian Treasury calculates that around 80% of the crop production in 2011-12 was from dry land cropping<sup>23</sup>.

<sup>22</sup> Australian Bureau of Statistics, cat. no. 7503.0.

<sup>23</sup> Dry land cropping relies on seasonal rains rather than irrigation. Typically most cereals, legumes and oilseeds are farmed in this manner in Western Australia throughout the Wheatbelt.

Figure 23



Source: Australian Bureau of Statistics, cat. no. 7503.0.

The dominance of dryland crop production means that changes in seasonal conditions can have a substantial impact on the total value of production particularly when the main growing areas in the Wheatbelt are affected. In 2011-12, the value of wheat production doubled to \$2.8 billion<sup>24</sup> following a strong winter growing season in 2011.

### **Forestry**

Native forests covered around 17.7 million hectares of land in Western Australia in 2010-11. This equates to about 7% of the total land mass in the State and represents 12% of Australia's native forest.<sup>25</sup> However, most of the stock of native forest in Western Australia is not suitable for commercial logging as it is remote and contains a relatively low volume of wood.

<sup>24</sup> Australian Bureau of Statistics, cat. No. 7503.0

<sup>25</sup> Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) "Australia's Forests at a Glance 2012" available online at [http://adl.brs.gov.au/data/warehouse/9aaf/9aafe003/fag12d9aafe003201208/ForestsAtGlance\\_2012\\_v1.0.0\\_lr.pdf](http://adl.brs.gov.au/data/warehouse/9aaf/9aafe003/fag12d9aafe003201208/ForestsAtGlance_2012_v1.0.0_lr.pdf)

Plantation forests in Western Australia covered an area of 413,000 hectares in 2010-11. This accounted for around 20% of plantations nationally and was second only to Victoria. Most of Western Australia's plantations are hardwood and consequently the State has the largest area of hardwood plantations in the nation<sup>26</sup>. In 2010-11, forestry exports (comprising mostly of woodchips) totalled \$358.0 million.

### **Fisheries**

Production in the fisheries industry includes the harvesting of wild animals and production from aquaculture farms. In 2011-12, the gross value of fisheries production in the State was \$385 million, of which about 72% was derived from wild-catch production animals and 28% from aquaculture production. La Niña events are likely to have affected the production cycle of scallops. The production value fell by 94.0% (\$14 million) to \$1 million. The value of rock lobster production fell in 2011-12 by \$7 million to \$177 million, primarily driven by a 7% decrease in production.<sup>27</sup>

Table 8

#### **FISHERIES PRODUCTION** Western Australia, 2011-12

	(\$'000)
Crustaceans	216,005
Molluscs	15,425
Fish	43,961
Aquaculture	109,235
Other	1,133
<b>Total</b>	<b>384,755</b>

Source: ABARES, November 2013.

<sup>26</sup> ABARES "Australian Forests at a Glance 2011" available online at [http://data.daff.gov.au/data/warehouse/pe\\_abares99001800/Forests\\_at\\_a\\_glance\\_2011\\_hres.pdf](http://data.daff.gov.au/data/warehouse/pe_abares99001800/Forests_at_a_glance_2011_hres.pdf)

<sup>27</sup> ABARES "Australian Fisheries Statistics 2012" available online at [http://data.daff.gov.au/data/warehouse/9aam/afstad9aamd003/2012/AustFishStats\\_2012\\_v1.0.0.pdf](http://data.daff.gov.au/data/warehouse/9aam/afstad9aamd003/2012/AustFishStats_2012_v1.0.0.pdf)

## The 'Non-Market' Sector

### *Structure of the industry*

The 'non-market'<sup>28</sup> sector comprises industries that have their outputs predominantly supplied by the public sector. In current price terms, the non-market sector accounted for 10.3% of Western Australia's output in 2012-13, down from 12.7% in 2002-03.

The non-market sector represents a smaller proportion of activity in Western Australia compared to nationally, where it accounted for 16.3% of output in 2012-13. This share has been trending upwards since 2007-08.

Table 9

### NON-MARKET INDUSTRY OUTPUT Gross Value Added (%)

	Western Australia		Australia	
	Annual average growth, 2002-03 to 2012-13	Share of economy 2012-13	Annual average growth, 2002-03 to 2012-13	Share of economy 2012-13
Public administration and safety	4.4	2.8	2.7	5.2
Education and training	2.4	2.9	2.1	4.6
Health care and social assistance	4.9	4.5	4.6	6.4
<b>Total</b>	<b>4.0</b>	<b>10.3</b>	<b>3.2</b>	<b>16.3</b>

Source: Australian Bureau of Statistics, cat. no. 5220.0.

The health care and social assistance industry was the largest contributor to the State's non-market sector output in 2012-13 (43.9%), followed by education and training (28.4%), and public administration and safety (27.7%). A notable compositional change over the decade was in the health care and social assistance industry, which increased its share by 4.1% at the expense of the share of public administration and safety industry.

Nationally, the compositional change within the non-market sector was similar to Western Australia's over the previous decade. The health care and social assistance industry increased its share from 34.3% in 2002-03 to 39.5% in 2012-13, mainly at the expense of the public administration and safety industry (whose share declined from 36.4% to 32.2% over the same period).

<sup>28</sup> The 'non market' sector includes the public administration and safety, education and training, and health care and social assistance industries. This differs from the Australian Bureau of Statistics' definition, which is broader and includes property and business services, personal and other services, and ownership of dwellings.

Table 10

**NON-MARKET INDUSTRY, EMPLOYMENT**

Western Australia

	Employment, 2012-13	Annual average growth, 2002-03 to 2012-13	Share of industry employment, 2012-13
	('000)	(%)	(%)
Public administration and safety	72.9	3.2	23.4
Education and training	98.2	2.9	31.5
Health care and social assistance	140.6	5.1	45.1
<b>Total</b>	<b>311.8</b>	<b>3.9</b>	<b>100.0</b>

Source: Australian Bureau of Statistics, 6291.0.55.003.

The non-market sector was the second-largest employer in the State in 2012-13, employing 311,804 people or 23.7% of the Western Australian workforce. Almost half of these workers were employed in the health care and social assistance industry.

**Recent trends**

Western Australia's non-market sector grew at a slightly stronger pace over the past decade relative to nationally, averaging 4.0% and 3.2% annual growth respectively. Growth at the State level was outpaced by total GSP growth, while national growth was broadly consistent with GDP growth.

The fastest growing non-market industry in both Western Australia and nationally was health care and social assistance. This reflects the ageing population and the additional demand for health related services.

Western Australia marginally increased its share of national non-market industry output over the past decade, with its share at 10.1% in 2012-13 (up from 8.9% in 2002-03). Despite this, the share remained below the State's population share of 10.8%.

Despite increasing at the national level, the non-market sector's share of the Western Australian economy declined over the past decade. This is attributable to the large and growing presence of the mining and petroleum industry in the State over this period.

The contribution of public administration and safety to total non-market industry employment remained fairly constant over the past ten years. However, the share of education and training employment decreased by 3.3% while health care and social assistance increased by 5.0%. Overall growth of non-market employment over the last decade exceeded total employment growth in Western Australia. This likely reflects the increased demand for government services with strong population growth over the period.

## Electricity, Gas, Water and Waste Services

Western Australian electricity, gas, water and waste services accounted for 2.1% of State output in 2012-13, slightly down from 2.4% in 2002-03. The industry employed 1.7% of the total State workforce in 2012-13.

The industry's output grew by an average of 4.4% per annum since 2002-03, outpacing average growth nationally of 1.1% per annum. Western Australia's share of national electricity, gas, water, and waste services output increased from 10.8% in 2002-03 to 11.5% in 2012-13.

Since 1995, the public monopolies that have supplied the State's energy market have gradually been reformed to enhance efficiency and quality of energy provisions.

Employment growth in the industry was strongest in gas supply, reflecting the increased use of natural gas in electricity generation and resource processing in Western Australia over the past decade. Accordingly, the gas supply industry's share of industry employment almost doubled over the past ten years from 8.1% in 2002-03 to 16.0% in 2012-13.

Table 11

### ELECTRICITY, GAS, WATER AND WASTE SERVICES INDUSTRY EMPLOYMENT

Western Australia

	Employment, 2012-13	Annual average growth, 2002-03 to 2012-13	Share of industry employment 2012-13
	('000)	(%)	(%)
Electricity supply	8.9	9.8	40.1
Gas supply	3.6	16.4	16.2
Water supply, sewerage and drainage services	5.9	5.1	26.8
Waste collection, treatment and disposal services	3.5	7.9	15.9
<b>Total <sup>(a)</sup></b>	<b>22.1</b>	<b>8.7</b>	<b>100.0</b>

<sup>(a)</sup> The total includes 1.2% of industry employment that has no further description.

Source: Australian Bureau of Statistics, Datacubes. Tourism

## Tourism

Historically, it has been difficult to measure the value of the tourism industry in Western Australia because the System of National Accounts (SNA) does not recognise tourism as a single industry. Whilst conventional industries are defined on the basis of the goods and services produced, tourism is defined according to the type of consumer, namely foreigner (from overseas, interstate or intrastate) or resident. Therefore, expenditure by tourists can impact on a wide range of conventional industries.

In light of this, State Tourism Satellite Accounts (TSA) are produced to supplement the SNA by measuring tourism's contribution to the economy. This allows a comparison to be made with other industries.

### ***Structure of the industry***

Tourism directly accounted for 1.7% of Western Australia's output in 2012-13, down from a 2.3% share in 2006-07. It was estimated at \$3.9 billion in 2012-13.<sup>29</sup>

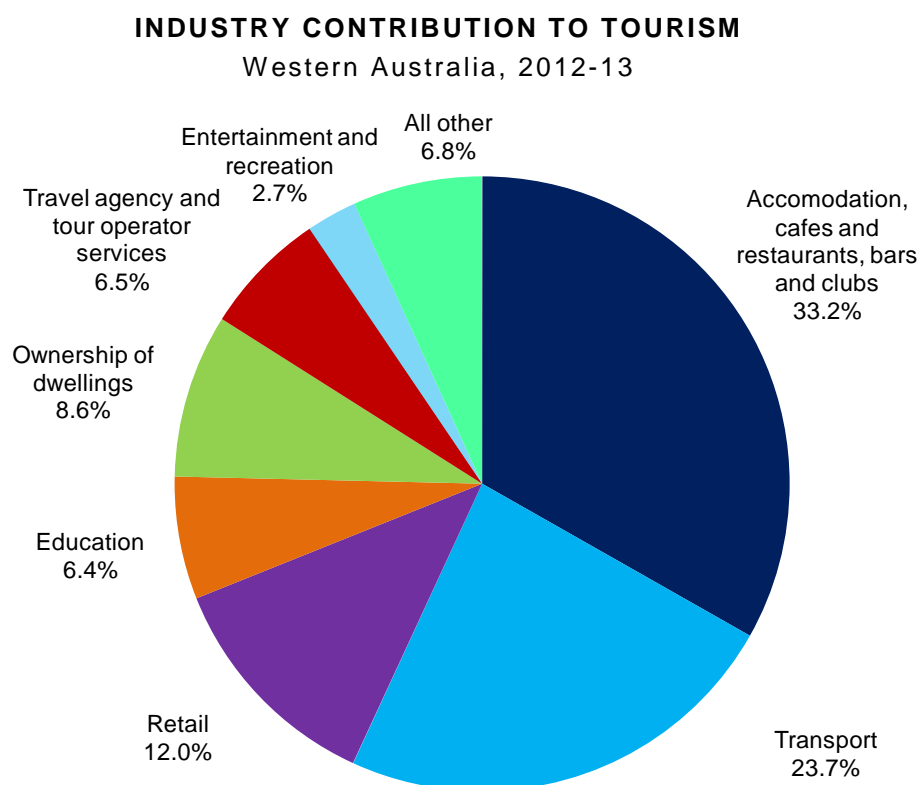
The tourism industry provided the second smallest relative contribution to the State's economy in 2012-13. Its share of 1.7% was less than the 2.7% share nationally, and the lowest of all jurisdictions. However, similar to Western Australia's experience, tourism's share of the national economy has declined since 2006-07.

By industry, accommodation, cafes and restaurants, bars and clubs were the largest contributors to the State's tourism industry in 2012-13 (Figure 24). This was followed by the transport and retail industries.

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<sup>29</sup> The tourism industry also made an indirect contribution of \$3.9 billion, accounting for an additional 1.7% of the State's economy in 2012-13.

Figure 24



Source: State Tourism Satellite Accounts 2012-13, Tourism Research Australia, Canberra.

The structure of the tourism industry in Western Australia was broadly similar to the national composition in 2012-13. The main differences were that the retail, and accommodation, cafes and restaurants, bars and clubs industries had larger shares of tourism nationally (13.4% and 34.5% respectively) than in Western Australia. Whilst the transport and travel agency and tour operator services industries accounted for a smaller share of total tourism at the national level.

Table 12

**TOURISM OUTPUT BY CATEGORY**  
Western Australia, 2012-13

	Gross Value Added (\$ million)	Share of tourism GVA (%)
<b>Domestic</b>	<b>2,619</b>	<b>67.7</b>
Same day travel	324	8.4
Intrastate	1,494	38.6
Interstate	801	20.7
<b>International</b>	<b>1,248</b>	<b>32.3</b>
<b>Total</b>	<b>3,867</b>	<b>100.0</b>

Source: State Tourism Satellite Accounts 2012-13, Tourism Research Australia, Canberra.



In terms of tourism category, domestic tourism accounted for over two-thirds of Western Australia's tourism output in 2012-13, with international tourism accounting for around 30% (Table 12). This composition was broadly consistent across jurisdictions.

The structure of the Western Australian and national tourism industries are broadly similar. Western Australia has a slightly higher proportion of intrastate travel and international tourism, while shares of interstate and same day tourism in the State had a smaller share. Lower interstate tourism can be attributed to Western Australia being relatively isolated compared to other Australian states, whilst the large size of the State makes same day tourism more difficult than in most other Australian jurisdictions.

In terms of employment, tourism directly accounted for 4.3% of total employment in Western Australia in 2012-13. Tourism's share of total employment was greater than the industry's share of State output, as tourism tends to be more labour-intensive on average than other forms of economic activity.

Accommodation, cafes and restaurants, bars and clubs along with retail trade accounted for the largest shares of total direct tourism employment in Western Australia in 2012-13, at 50.2% and 16.8% respectively. These were also the largest employing tourism industries at the national level.

### **Recent trends**

The nominal value of Western Australia's tourism industry increased by an average of 4.6% per annum between 2006-07 and 2012-13, the same rate of growth as the national tourism industry. Strong growth in non-tourism industries is the main contributor to the fall in tourism's share of the State economy over this period. In particular, strong mining and petroleum growth in Western Australia has drawn labour and resources away from other trade-exposed industries, such as tourism.<sup>30</sup>

Notwithstanding this, some of the State's tourism-related industries, such as aviation and accommodation, benefited from the resources boom given their association with business and employment related travel.<sup>31</sup> For example, routes from Perth to the major mining centres in regional Western Australia experienced strong growth in passenger volumes since 2004-05. This complements Table 12, which shows the strong contribution of intrastate tourism to the State's domestic tourism output in 2012-13.

Western Australia contributed slightly less to national tourism output (9.9%) relative to its population share of 10.8% in 2012-13. On the other hand, the traditional tourism state of Queensland contributed more to national tourism relative to its population share.

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<sup>30</sup> The economic impact of the current mining boom on the Australian tourism industry, Tourism Research Australia, Canberra.

<sup>31</sup> Ibid. 30

## The Structure of the Western Australian Economy

The proportion of people employed in the Western Australian tourism industry has declined since 2006-07, when the industry employed 4.8% of the State's workforce. The 4.3% share of employment for 2012-13 ranks the State in the lower range when compared to other jurisdictions, and lower than the national share of 4.7%.

## The State Finances

The value of the Western Australian public sector has increased substantially over the period since 2002-03. This has been mainly driven by general government sector<sup>32</sup> operating outcomes, which have been the principle focus of financial policy control by successive Governments over the last decade.

Through the middle of the last decade, the State benefited from strong revenue growth, driven mainly by growing tax revenue (reflecting the impact of the State's labour market activity on payroll tax collections and the strength of the pre-Global Financial Crisis (GFC) property market on transfer duty collections). Also, royalty revenue increases was dominated by the rapid growth in iron ore royalties during this period.

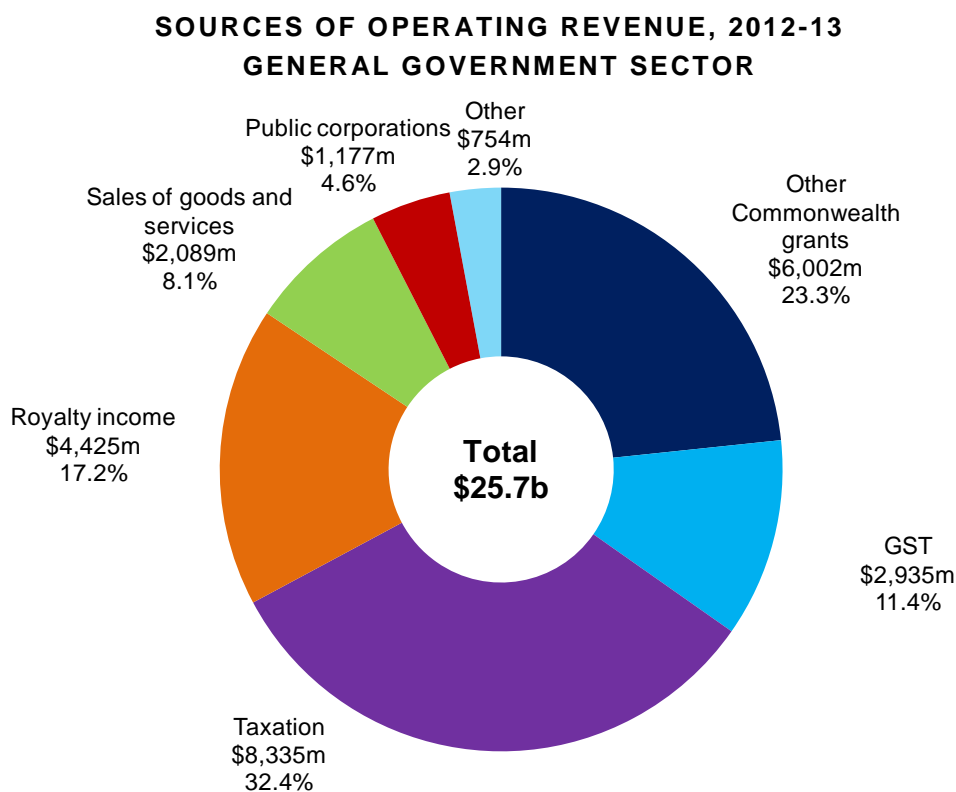
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<sup>32</sup> The general government sector delivers services such as education, health and law and order, largely funded by central revenue such as taxes, royalties and Commonwealth grants (such as GST revenue). The remainder of the public sector consists of non-financial corporations (such as electricity and water utilities, ports and the Public Transport Authority) and financial corporations (such as the Western Australian Treasury Corporation and the Insurance Commission of Western Australia). Public corporations operate in markets and seek to recover a significant proportion of their running costs through user charges.

## Operating revenue

Figure 25 illustrates the sources of Western Australia's general government sector operating revenue in 2012-13 (a breakdown of all revenue is provided in Appendix 2).

Figure 25



Source: Western Australian Department of Treasury

## Commonwealth Grants

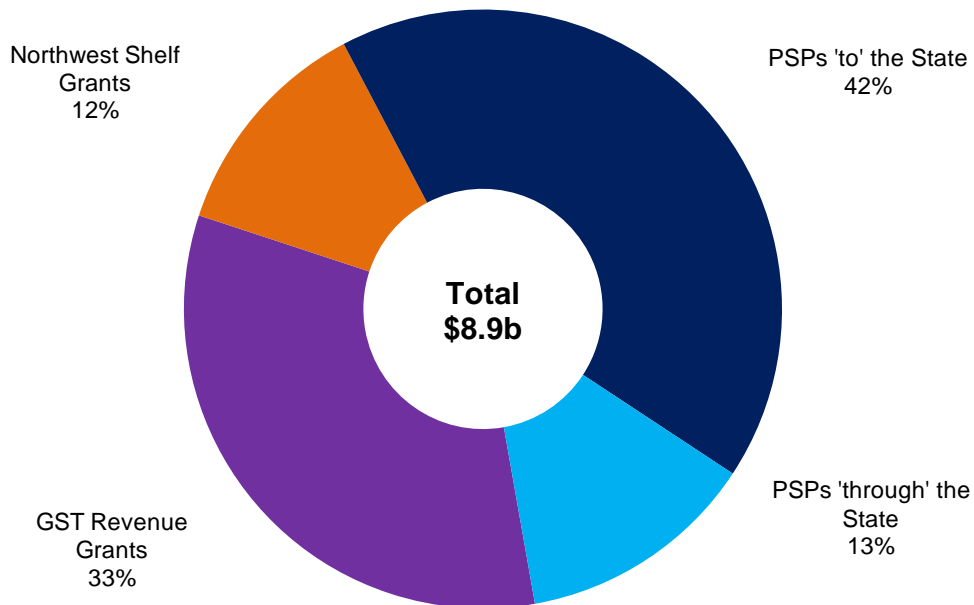
Similar to the other States, the Western Australian Government receives substantial grant funding from the Commonwealth. This comprises general purpose grants (which have no spending restrictions) and payments for specific purposes (PSPs). General purpose grants consist of Goods and Services Tax (GST) revenue grants and North West Shelf royalty grants.

However, as a share of Western Australia's total general government sector revenues, Commonwealth grants declined from 48% in 2002-03 to 35% in 2012-13.

The States' high collective reliance on Commonwealth grants reflects the Commonwealth's dominance of the major tax bases, and the States' responsibility for most core service delivery (popularly known as vertical fiscal imbalance). In this regard, in 2011-12 the Commonwealth Government raised an 81% share of total government taxes, while only accounting for 55% of government spending in Australia.

Figure 26

**COMMONWEALTH GRANTS FOR WESTERN AUSTRALIA**  
2012-13



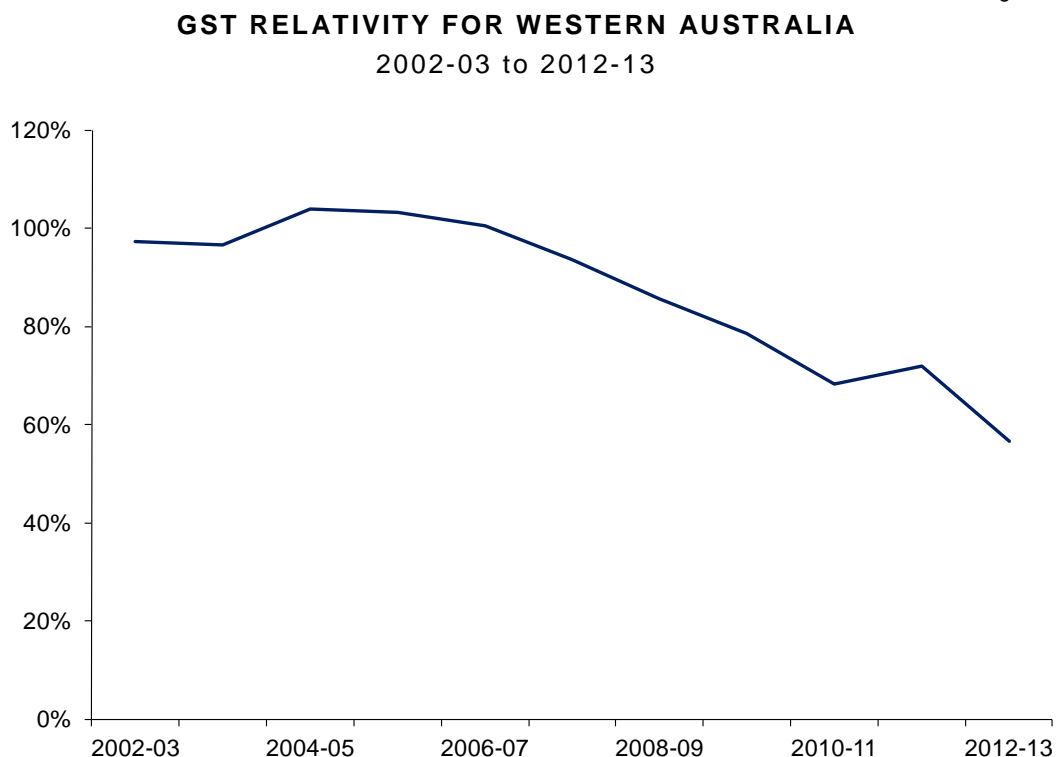
Source: Western Australian Department of Treasury

### ***GST Revenue Grants***

GST revenue grants are distributed among the States according to the recommendations of the Commonwealth Grants Commission (CGC), using a principle of fiscal equalisation. Under this principle, GST grant shares are adjusted from an equal per capita starting point to offset differences in States' revenue raising capabilities and expenditure needs (measured on a per head basis). For example, Western Australia's grant share is adjusted downward on account of its high capacity to raise mining royalties (compared to its population size), and adjusted upward on account of the high proportion of its population living in high cost remote areas and its large indigenous population (compared to its population size).

Western Australia's GST relativity (i.e. its share of national GST grants divided by its population share) fell from 98% in 2002-03 to 55% in 2012-13. These declines are mainly driven by strong growth in Western Australia's capacity to raise mining and petroleum royalties, compared with other States.

Figure 27



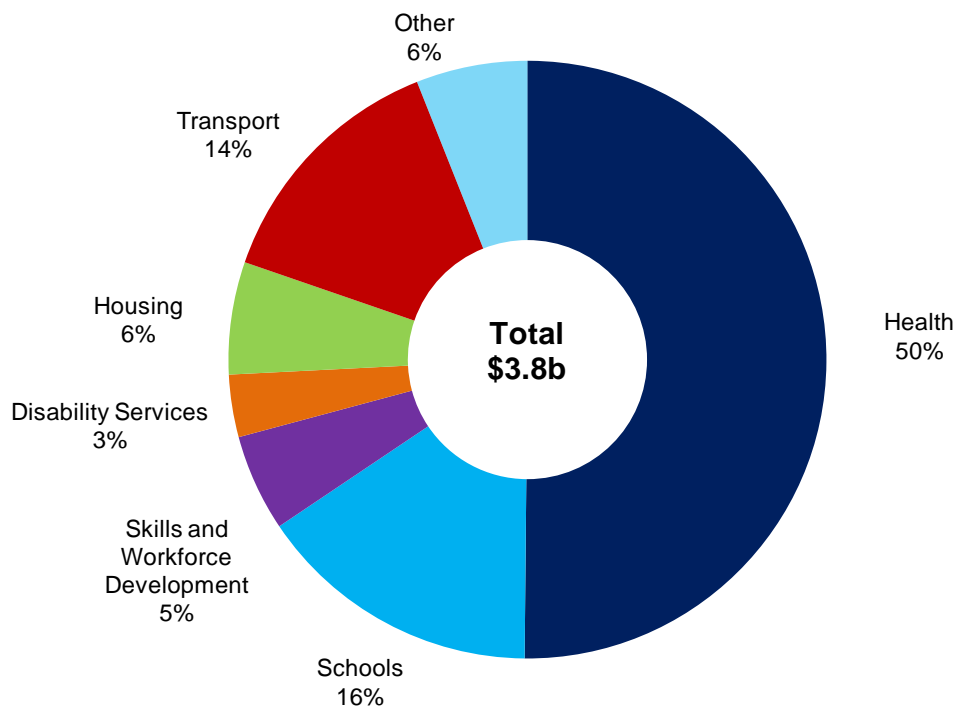
### ***North West Shelf Grants***

Western Australia receives a share of the royalties derived by the Commonwealth from the North West Shelf gas project, as the State provided substantial start-up assistance for the project. As the Commonwealth has jurisdiction over offshore areas, these royalties are returned to the State as grants.

### ***Payments for Specific Purposes***

Payments for specific purposes (PSPs) for Western Australia comprise payments ‘to’ the State, which are payments for specific purposes within the State’s responsibility; and payments ‘through’ the State, which are on-passed to other sectors (e.g. local governments, non-government schools, first home owners).

Figure 28

**BREAKDOWN OF PSPS 'TO' WESTERN AUSTRALIA 2012-13**

Source: Western Australian Department of Treasury

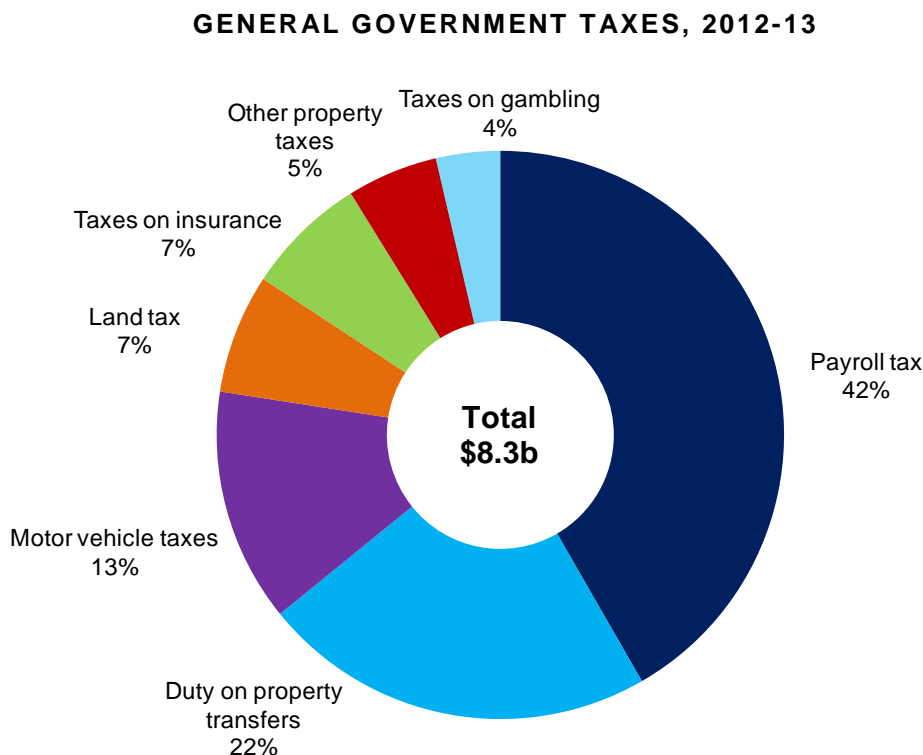
PSPs 'to' the State have undergone major reforms since 2009. As a result of these reforms, PSPs 'to' the State presently comprise:

- National Specific Purpose Payments for schools, skills and workforce development, affordable housing and disability services, which can be used for any purpose within these service areas;
- National Health Reform payments, which mainly comprise the Commonwealth's contributions to State hospital costs;
- payments under 'National Partnership' agreements between the Commonwealth and States, which are spent in accordance with conditions contained within the agreements; and
- payments for Commonwealth own-purpose expenditure programs.

## State Taxes

State taxation accounts for a significant proportion of general government operating revenue. The annual share of State taxation in the total operating revenue has been relatively stable, averaging 30.7% between 2002-03 and 2012-13.

Figure 29



Source: Western Australian Department of Treasury

Payroll tax was the largest source of State taxation revenue in 2012-13, accounting for \$3,476 million, or 42% of total State tax collections, followed by duty on property transfers (1,870 million, or 22%) and motor vehicle taxes (\$1,109 million, or 13%). This compares with the period between 2004-05 and 2007-08, when strong property market activity boosted duty on property transfers which overtook payroll tax to be the largest source of State tax revenue during that time.



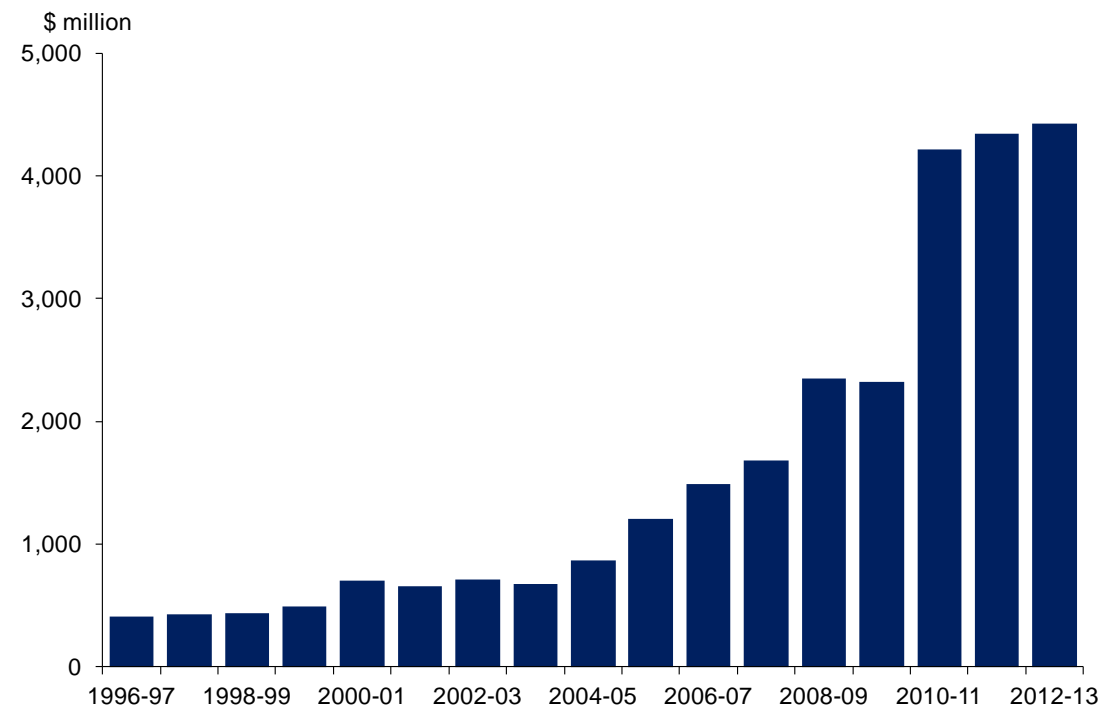
## Mining and Petroleum Royalties

Mining royalties represent the price paid to the community by mining companies for the right to extract resources that are owned by the community. In 2012-13, royalties totalled \$4,425 million (excluding North West Shelf petroleum royalties), the highest on record.

Royalties increased by 1.9% (or by \$82 million) in 2012-13, following 3.1% growth in 2011-12. The softer rate of growth reflected a lower average iron ore price for 2012-13 (compared to 2011-12) and a persistently high \$US/\$A exchange rate, which averaged US102.7 cents for the year, compared to US103.2 cents the year before.

Figure 30

### ROYALTY INCOME Western Australia

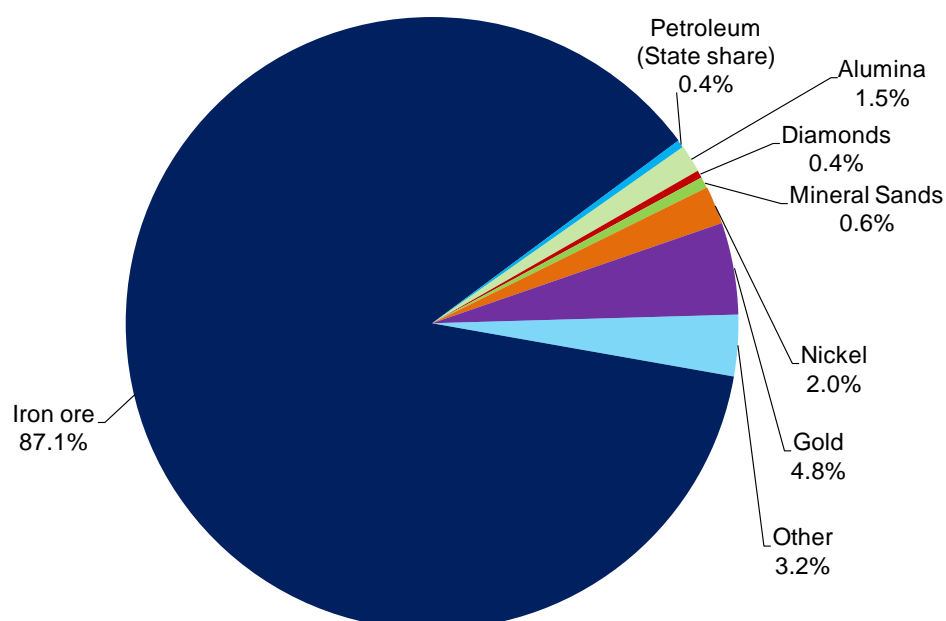


Source: Western Australian Department of Treasury

The main trend evident over the past decade has been the increasing importance of iron ore royalties. Royalties from iron ore comprised 41.1% of total royalties in 2002-03. This increased to 87.1% by 2012-13, with shares from all other commodities much less evenly balanced compared to a decade ago.

Figure 31

**ROYALTY INCOME BY COMMODITY, 2012-13**



Source: Western Australian Department of Treasury

As such, in 2012-13 royalties from iron ore remained the largest source of royalty income for Western Australia (\$3,853 million). This was followed by gold (4.8% or \$214 million) and from 'other' sources (3.2% or \$143 million), which mainly comprises royalties from commodities such as copper, zinc and coal.

Table 13

**ROYALTY INCOME BY COMMODITY**  
Western Australia

	2002-03 (\$m)	2007-08 (\$m)	2012-13 (\$m)
Iron ore	290	1131	3853
Petroleum	61	52	18
Alumina	52	79	65
Diamonds	91	40	18
Mineral Sands	25	21	26
Nickel	52	130	88
Gold	83	99	214
Other	53	128	143
<b>Total</b>	<b>707</b>	<b>1680</b>	<b>4425</b>

<sup>(a)</sup> Excludes North-West Shelf royalties

Source: Western Australian Department of Treasury

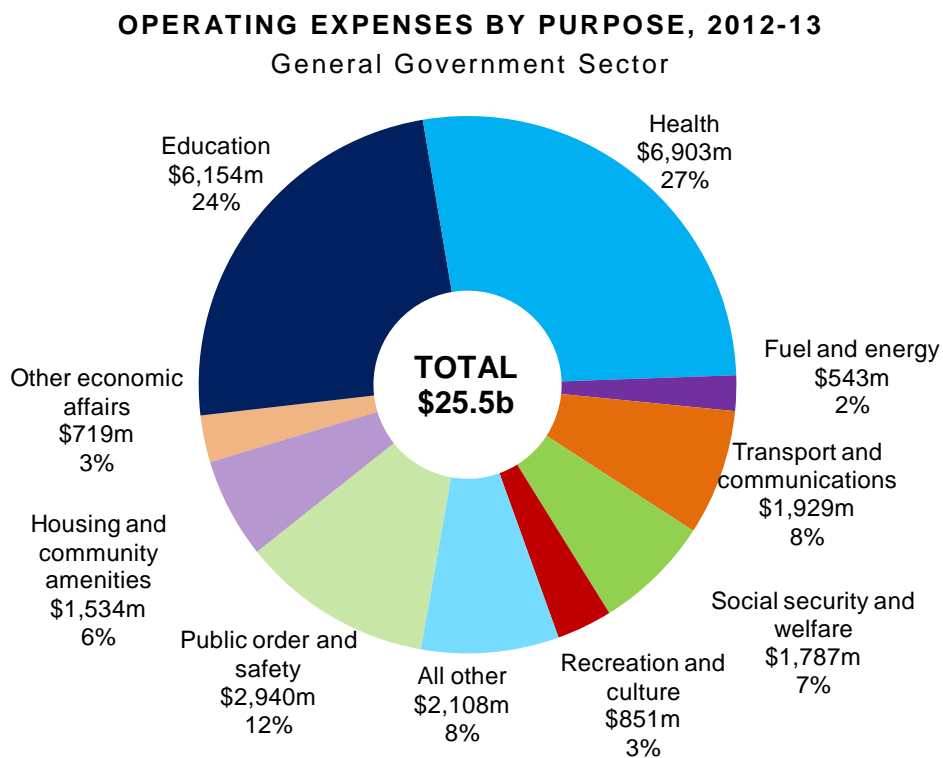
## Operating Expenses

Total expenses for the general government sector were \$25.5 billion in 2012-13. This compares with \$11.6 billion in 2002-03. Expenses for the sector have more than doubled over the period 2002-03 to 2012-13, growing by an average of 8.2% per annum.

However, recent revenue challenges (reflected in moderating revenue growth since the GFC began in 2008-09) have been accompanied by an increased effort to reduce or reprioritise recurrent spending growth over the last four years (see below).

The vast majority of general government sector expenses are directed to providing key services in health, education, and public order and safety.

Figure 32



Source: Western Australian Department of Treasury

A more detailed breakdown of these expenses, together with a comparison with the mix of spending in 2002-03, is provided in the following table.

Table 14

**OPERATING EXPENSES BY PURPOSE<sup>(a)(b)</sup> 2002-03 AND 2012-13**  
**General Government Sector**

	2012-13		2002-03		Variance	
	Value \$ million	Share of Total %	Value \$ million	Share of Total %	Value \$ million	Percentage Points
Education	6,154	24.2	3,062	26.4	3,092	-2.2
Health	6,903	27.1	2,799	24.1	4,104	3.0
Public order and safety	2,940	11.5	1,193	10.3	1,748	1.3
Transport and communications	1,929	7.6	1,044	9.0	884	-1.4
Housing and community amenities	1,534	6.0	864	7.4	670	-1.4
Social security and welfare	1,787	7.0	478	4.1	1,309	2.9
Other purposes	969	3.8	574	4.9	395	-1.1
Recreation and culture	851	3.3	403	3.5	448	-0.1
Other economic affairs	719	2.8	227	2.0	493	0.9
Fuel and energy	543	2.1	77	0.7	467	1.5
General public services	569	2.2	499	4.3	70	-2.1
Agriculture, forestry, fishing and hunting	376	1.5	276	2.4	100	-0.9
Mining and mineral resources other than fuels; manufacturing; and construction	194	0.8	122	1.0	72	-0.3
<b>TOTAL GENERAL GOVERNMENT EXPENSES</b>	<b>25,468</b>		<b>11,616</b>		<b>13,853</b>	

(a) Government Purpose Classification (GPC) is a standard classification of public spending maintained by the Australian Bureau of Statistics. It does not align directly with Departmental spending in jurisdictions which may deliver services that cross functional areas. For example, WA Health delivers *health* and *social security and welfare* services under the GPC categories. Aggregate agency spending is also adjusted to exclude transactions with other general government sector agencies.

(b) The accuracy of spending by GPC data is subject to ongoing refinement and improvement. Calculation methods and the allocation of spending to the various GPCs are continually being updated based on data availability and correspondence with the Australian Bureau of Statistics and the Commonwealth Grants Commission. As such, figures in this table and the preceding chart may not match those previously published.

Source: Western Australian Department of Treasury

Spending on the key health, education and public order and safety services accounted for 63% of total general government sector expenditure in 2012-13. This compares to total spending of 61% for these areas a decade earlier in 2002-03.

At \$6.9 billion, or 27.1% of total expenditure in 2012-13, recurrent spending on health comprised the largest share of total general government expenditure. Spending on health has increased by an average 9.4% per annum since 2002-03, driven by employee costs (including growth in both in wages and staffing levels), which in turn mainly reflect demand for the delivery of health services. This trend reflects the impact of both the growth and ageing of the population, and the availability and deployment of new health technologies. The expansion of service capacity across the State through infrastructure developments, while allowing more patients to receive services in their home regions, has also made a contribution to increasing health costs, reflecting the generally higher costs of delivering services in remote locations.

However, spending on education has also increased substantially over the last decade, growing by an average of 7.2% per annum, to reach \$6.2 billion in 2012-13. This increase reflects increased remuneration for teachers to make them the best paid in the nation, increased demand for support for students who have a disability or have English as a second language as well as rapid enrolment growth in recent years. The share of total general government sector expenses used for education spending has decreased from 26.4% in 2002-03 to 24.2% in 2012-13.

Spending on public order and safety (which includes services such as police, fire protection, corrective services, prosecutorial services, etc.) has grown by 9.4% per annum over the past decade, with total spending on this item rising from \$1.2 billion in 2002-03 to \$2.9 billion in 2012-13. This increase is largely due to changes in sentencing practices and pressure from significant population growth resulting in a larger number of police officers, growth in prisoner numbers, and associated court and prison officer costs.

These trends in spending reflect a focus on delivering a high level of service provision in core areas to the Western Australian community. Community demand for these labour intensive services has increased in line with population growth over the last decade, as the above spending trends show.

In recent years, particularly following the onset of the GFC, lower priority services have been scrutinised for savings that support reprioritisation of spending to these core services. The GFC resulted in a contraction in some revenue sources (with acute declines in 2008-09 observed in transfer duty collections following a drop in property market activity at the time, and the effect of declining commodity prices on royalty revenue). At the time, the Government responded by implementing a range of savings measures including initiatives such as a 3% efficiency dividend (which reduced agencies' discretionary spending). Further measures were taken in successive budget rounds since that time, including a range of measures targeting labour costs (the most significant component of general government operating costs).

These savings have assisted in the task of containing overall expense growth at a time when revenue growth moderated, while also ensuring that spending on core services continues to support the State's rapid growth.

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## Capital and infrastructure

In the period between 2002-03 and 2012-13, the State has completed numerous projects to ensure the ongoing availability of services and facilities to the community, maintaining the State's asset base and promoting economic development.

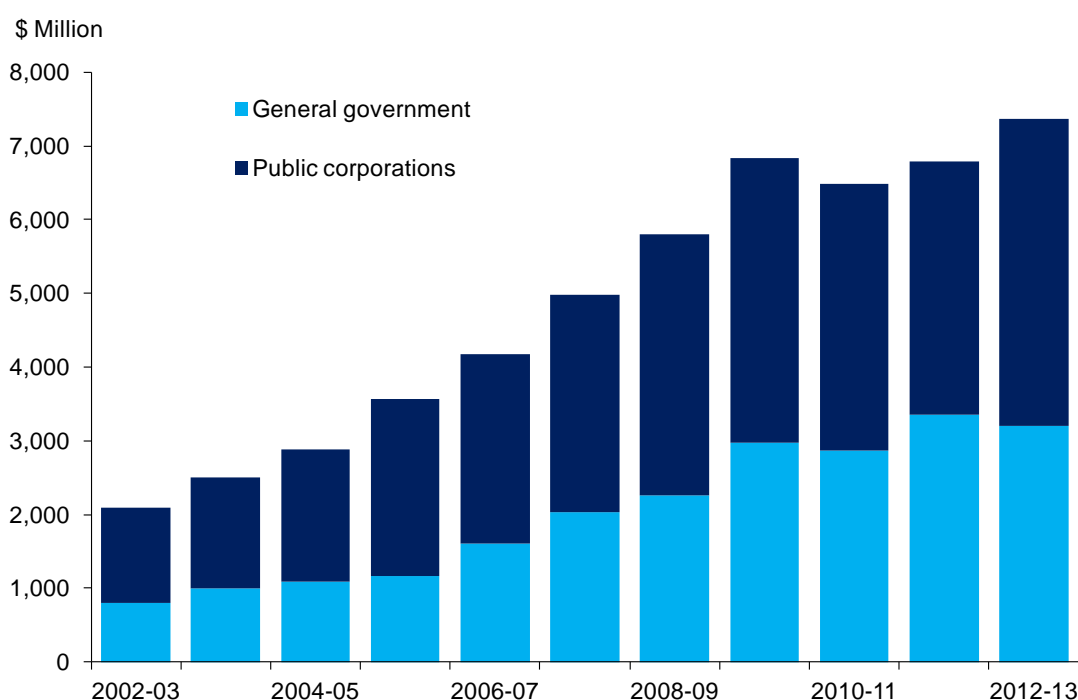
Major infrastructure projects funded by the State during this time included:

- the Perth Seawater Desalination Plant and associated infrastructure to connect the plant into the existing Perth Integrated Water Supply Scheme. The \$389 million plant, which provides a 17% increase in the public water supply, was constructed between 2004 and November 2006;
- the design and construction of the Graham Farmer Freeway (\$387 million). The freeway was constructed between 1996 and 2006, with the tunnel opening in 2000;
- the Perth-Mandurah railway line (Metro-Rail) including the purchase of rail cars and associated rail stock (\$1.69 billion). Construction commenced in 2004, and the project was completed in November 2007;
- the Southern Seawater Desalination plant, constructed near Binningup in the South West. The plant provides climate independent water support to 1.6 million people in parts of the South West, metropolitan Perth and towns and communities to Kalgoorlie-Boulder through the Goldfields Pipeline. The \$955 million project was constructed between 2007 and October 2011;
- the new Perth to Bunbury Highway, which involved the extension to the Kwinana Freeway and Peel Deviation. Worth \$705 million, the project was funded as part of a joint State and Commonwealth initiative and was completed in 2009;
- the wastewater treatment plant in Alkimos was constructed between 2008 and 2011 to cater for the growth in population in the Perth metropolitan area, and to enhance existing water treatment (\$336 million);
- the Perth Arena, an entertainment and sporting arena in the city centre of Perth was constructed between 2007 and 2012 at a cost of \$465 million;
- construction of a 300 kV line from Pinjar to Moonyoonooka (east of Geraldton), providing new transmission infrastructure to connect additional load as part of the Rural Power Improvement program. Worth \$295 million the project was undertaken between 2008 and 2012;
- two 100 megawatt high efficiency gas turbines were constructed between 2009 and 2011 at a cost of \$263 million. The turbines contribute to the reliability of electricity supply within South West Interconnected System, as well as lowering the overall carbon intensity, and improving the efficiency of the gas fired generation plant;

- work commenced on the public transport component of the Perth City Link project in 2011. The project worth \$609 million, includes the sinking of the Fremantle railway line and the construction of an underground bus station, is due to be completed in 2016; and
- in April 2012 work commenced on Elizabeth Quay, the Perth waterfront re-development. Public works for the project, worth \$450 million, are expected to be completed in 2015.

Figure 33

**ASSET INVESTMENT PROGRAM**  
Total Public Sector



Source: Western Australian Department of Treasury

## Net debt<sup>33</sup>

Reflecting the strength of the State's economy and its impact on public sector finances over the last decade, total public sector net debt declined to a very low \$3.0 billion by 30 June 2007 (or just 2.2% of GSP).

As the State's economy reacted to the turmoil generated by the GFC from late 2008, cash surpluses contracted while infrastructure spending continued at high levels in response to population and economic growth pressures (in part driven by stimulus funding from the Commonwealth, as well as existing record State support of social and economic infrastructure investment).

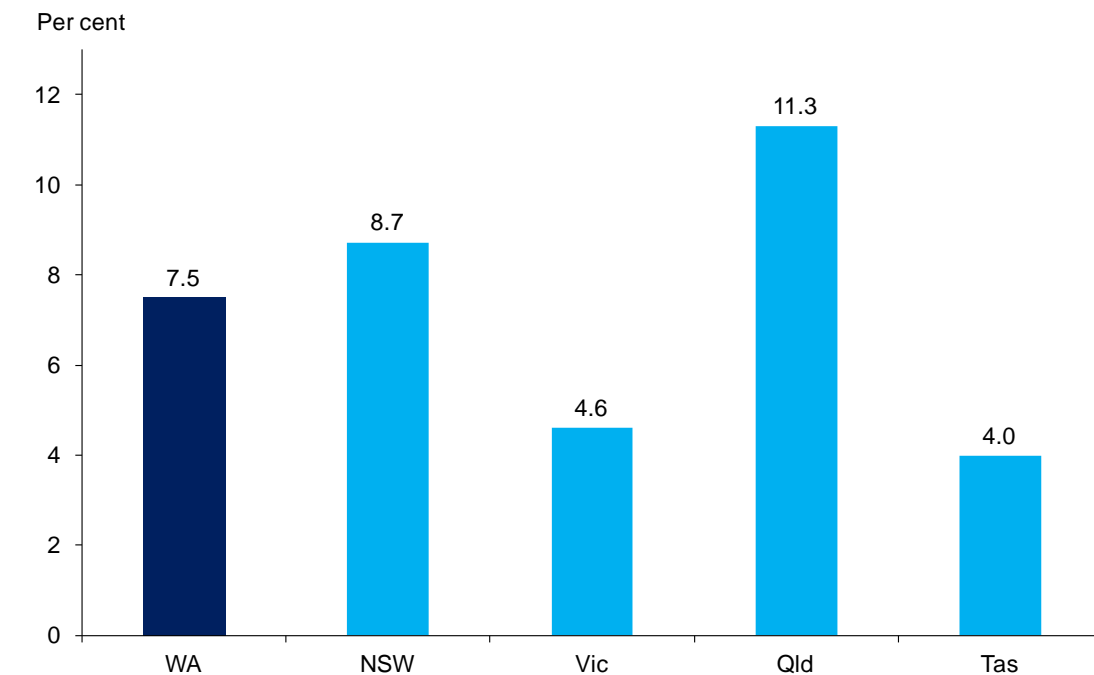
<sup>33</sup> Net debt is a financial statistical concept used internationally to measure public sector finances. In broad terms, it consists of borrowings (including finance leases) less liquid financial assets (such as cash at bank).



As operating surpluses contracted and infrastructure continued to require cash financing, net debt increased to \$18.2 billion by 30 June 2013. This level represents 7.5% of GSP in 2012-13, which is still well below public sector debt burdens across Organisation for Economic Co-operation and Development (OECD) jurisdictions and is broadly in line with those of other Australian States.

Figure 34

**NET DEBT AS A SHARE OF GSP – 2012-13**  
Total Public Sector<sup>(a)</sup>

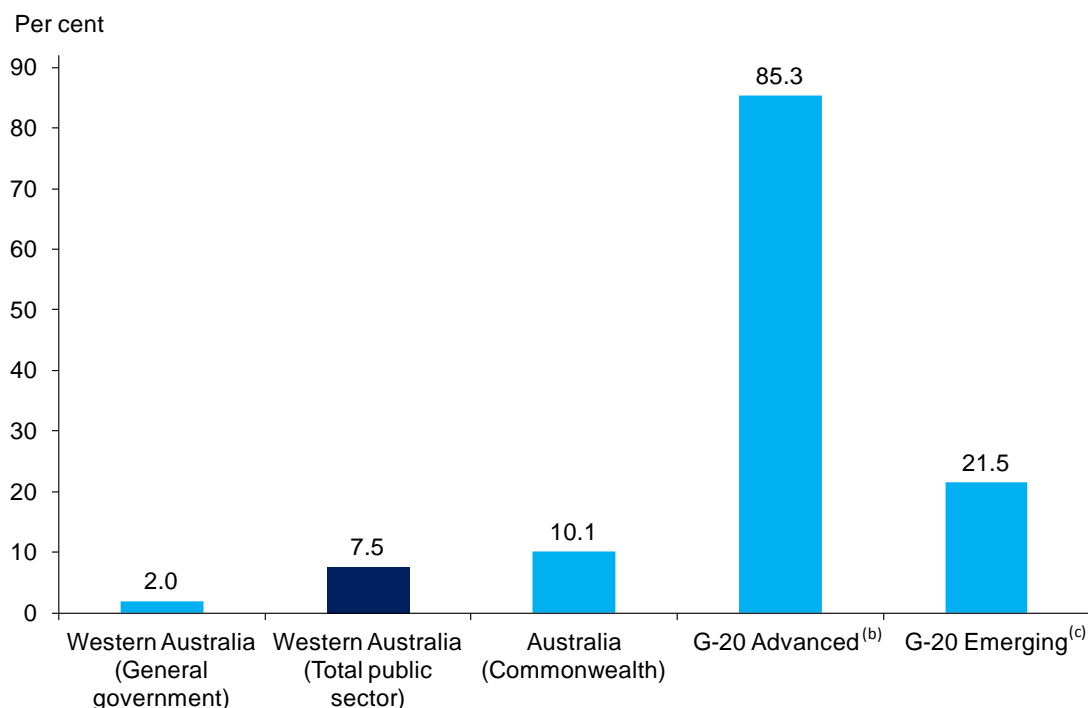


(a) Data not available for South Australia.

Western Australia's general government net debt (with interest costs that are largely tax supported) is considerably smaller than total public sector net debt (quoted above and which includes the net debt obligations of the State's public corporations that largely service debt from user charges).

Figure 35

**GENERAL GOVERNMENT NET DEBT AS A SHARE OF THE ECONOMY**  
2012-13<sup>(a)</sup>



<sup>(a)</sup> G-20 country data is reported on a calendar basis (2013). Total public sector data is not available.

<sup>(b)</sup> The G-20 Advanced countries include Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong Special Administrative Region, Iceland, Ireland, Israel, Italy, Japan, Republic of Korea, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, United Kingdom and the United States of America.

<sup>(c)</sup> The G-20 Emerging countries include 151 countries some of which are Argentina, Brazil, Bulgaria, Chile, China, Colombia, Hungary, India, Indonesia, Jordan, Kazakhstan, Kenya, Latvia, Lithuania, Malaysia, Morocco, Nigeria, Pakistan, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, South Africa, Thailand, Turkey and the Ukraine.

Western Australia’s credit rating was recently revised down by ratings agency Standard & Poor’s (S&P’s), from AAA (negative outlook) to AA+ (stable outlook). S&P’s specifically noted that Western Australia’s structural fiscal issues (i.e. volatile revenue performance, trends in expense growth, and rapidly increasing levels of borrowings), and slippage in some recent budget plans to address these issues, as well as a weaker operating outlook, were key drivers for the downgrade.

The State’s credit rating with Moody’s Investors Service remains at Aaa (negative outlook).

## Conclusion

The structure of the Western Australian economy has changed over the past ten years. The mining and petroleum industry continued to expand due to the significant increase in commodity prices over the period, which drove an unprecedented surge in mining investment. However, both the mining and petroleum industry and the economy as a whole have become less diverse in recent years.

As mining expanded, the relative contribution of a number of industries declined, including services and manufacturing. Whilst the shares of these industries decreased, most industries also experienced relatively strong rates of growth over the period, notably the construction and service industries. The agriculture, forestry and fishing industry was the only industry to decrease in size over the decade.

In terms of State finances, the rapid and sustained expansion of the mining and petroleum industry, and flow-on effects such as increased demand for labour, led to higher royalty and tax collections over the decade (although this coincided with a decline in Western Australia's GST relativity). In turn, operating expenses also rose as strong economic growth and a corresponding increase in the State's population necessitated additional investment in social and economic infrastructure and spending on core services

# Glossary

## Industry sectors

The *agriculture, forestry and fishing* industry covers those businesses engaged in breeding, keeping and cultivation of all kinds of animals or vegetables, harvesting and gathering of forest products, and catching, gathering, breeding and cultivation of marine life from ocean, coastal and inland waters.

The *construction* industry covers those businesses engaged in the construction or repair of residential and non-residential properties and public works, such as roads and railways.

The *electricity, gas, water and waste services* industry covers all businesses engaged primarily in the generation, transmission or distribution of electricity; the distribution of gas, natural gas or liquefied petroleum gas; the storage, treatment or supply of water; and the operation of sewerage or drainage systems.

The *mining and petroleum* industry includes businesses engaged mainly in mineral extraction and exploration and the provision of mining-related services. It does not include businesses engaged in the refining or smelting of minerals or ores (other than the preliminary smelting of gold), or in the manufacture of such products of mineral origin as coke or cement<sup>34</sup>. The commodities produced by the mining and petroleum sector involve the minimum amount of processing to produce a marketable product. For example, under the ABS classification, extracting bauxite from the ground is considered mining, but the processing of that bauxite into alumina is considered manufacturing.

The *manufacturing* industry covers those businesses engaged mainly in the physical or chemical transformation of materials, substances or components (either by power driven machines or by hand) into new products.

The '*non-market*' sector comprises those sectors whose outputs are predominantly supplied by the public sector (e.g. public administration and safety, health care and social assistance and education and training).

The '*services*' sector comprises many different industries. It includes accommodation and food services; information media and telecommunications; arts and recreation services; financial and insurance services; professional, scientific and technical services; rental, hiring and real estate services; transport, postal and warehousing; retail trade; wholesale trade; administrative and support services; and other services.

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<sup>34</sup> Such businesses are included in the manufacturing sector.

# Appendix 1

Table 1

## KEY BUDGET AGGREGATES Western Australia

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
<b>GENERAL GOVERNMENT SECTOR</b>											
<b>Net Operating Balance (\$m)</b>	<b>254</b>	<b>799</b>	<b>1,104</b>	<b>2,593</b>	<b>2,254</b>	<b>2,507</b>	<b>318</b>	<b>831</b>	<b>1,604</b>	<b>649</b>	<b>249</b>
Revenue (\$m)	11,869	12,851	14,333	16,667	17,573	19,345	19,435	22,039	23,909	25,220	25,718
Revenue Growth (%)	6.7	8.3	11.5	16.3	5.4	10.1	0.5	13.4	8.5	5.5	2.0
Expenses (\$m)	11,616	12,052	13,229	14,073	15,320	16,837	19,117	21,208	22,306	24,571	25,468
Expenses Growth (%)	6.3	3.8	9.8	6.4	8.9	9.9	13.5	10.9	5.2	10.2	3.7
<b>TOTAL PUBLIC SECTOR</b>											
Net Debt at 30 June (\$m)	4,497	4,194	4,001	3,179	2,984	3,634	6,688	9,896	12,026	14,523	18,188
Asset Investment Program (\$m)	2,094	2,502	2,883	3,562	4,169	4,973	5,795	6,828	6,482	6,782	7,355
Cash Surplus/-deficit (\$m)	30	143	32	1,064	426	-92	-2,439	-2,816	-2,029	-2,240	-3,888
<b>KEY FINANCIAL RATIOS <sup>(a)</sup></b>											
Cash operating surplus as a share of receipts (%)	9.2	11.4	11.4	16.2	14.1	13.5	8.4	8.3	9.2	8.3	5.9
Net debt to revenue (%)	32.4	28.3	25.1	19.2	17.9	19.0	27.6	32.2	36.9	40.3	50.6

<sup>(a)</sup> These ratios relate to the total non-financial public sector.

## Appendix 2

Table 2

<b>OPERATING REVENUE</b>											
General Government											
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>TAXATION</b>											
Taxes on employers' payroll and labour force											
<i>Payroll tax</i>	1,004	1,148	1,211	1,355	1,610	1,940	2,246	2,303	2,628	3,096	3,476
Property taxes											
<i>Land tax</i>	269	280	328	332	394	421	568	528	521	552	568
Transfer duty	-	-	-	-	-	-	1,102	1,552	1,226	1,261	1,654
Landholder duty	-	-	-	-	-	-	24	87	47	101	216
<i>Total duty on transfers</i>	833	1,207	1,218	1,906	2,079	2,265	1,126	1,639	1,273	1,362	1,870
Mortgages	96	115	140	173	121	108	4	(a)	(a)	(a)	(a)
Other stamp duties	49	53	36	33	27	-	1	(a)	(a)	(a)	5
Metropolitan Region Improvement Tax	39	44	47	53	65	76	82	78	78	84	85
Emergency Services Levy	-	75	119	130	137	150	157	169	205	220	237
Loan guarantee fees	10	10	10	13	14	14	19	28	23	25	104
<i>Total other property taxes</i>	194	297	352	404	364	348	264	275	306	329	431
Financial Institutions Duty	2	-	-	-	-	-	-	-	-	-	-
Debits Tax	95	97	100	8	-	-	-	-	-	-	-
<i>Total financial institutions taxes</i>	97	97	100	8	-	-	-	-	-	-	-
Taxes on provision of goods and services											
Lotteries Commission	94	95	98	102	112	121	134	130	126	140	151
Video lottery terminals	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Casino tax	38	47	52	59	77	84	91	92	90	108	112
Betting tax	48	56	59	64	69	30	32	32	34	38	41
Other gambling	(a)	(a)	-	-	-	-	-	-	20	19	-
<i>Total taxes on gambling</i>	180	200	209	227	259	235	257	254	270	305	304

<sup>(a)</sup> Amount less than \$500,000

Note: Columns may not add due to rounding.

Table 2 (cont.)

**OPERATING REVENUE**  
General Government

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Contribution to fire brigades	69	31	-	-	-	-	-	-	-	-	-
Insurance duty	220	279	280	296	309	342	377	404	442	487	555
Other	18	19	19	30	27	30	21	24	26	22	22
<i>Total taxes on insurance</i>	<i>307</i>	<i>328</i>	<i>299</i>	<i>326</i>	<i>336</i>	<i>372</i>	<i>397</i>	<i>428</i>	<i>468</i>	<i>509</i>	<i>576</i>
Taxes on use of goods and performance of activities											
Vehicle licence duty	232	273	303	342	393	393	318	332	338	367	404
Permits - oversize vehicles and loads	2	3	3	3	4	5	4	5	6	7	8
Motor vehicle recording fee	42	45	37	30	32	34	40	43	45	46	48
Motor vehicle registrations	299	320	341	361	396	434	486	516	557	599	650
<i>Total motor vehicle taxes</i>	<i>574</i>	<i>641</i>	<i>684</i>	<i>736</i>	<i>825</i>	<i>866</i>	<i>848</i>	<i>895</i>	<i>946</i>	<i>1,019</i>	<i>1,109</i>
<i>Other taxes on use of goods and performance of activities</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>350</i>	<i>-</i>	<i>-</i>
<b>Total Taxation</b>	<b>3,459</b>	<b>4,198</b>	<b>4,401</b>	<b>5,295</b>	<b>5,867</b>	<b>6,447</b>	<b>5,706</b>	<b>6,324</b>	<b>6,763</b>	<b>7,173</b>	<b>8,335</b>
<b>CURRENT GRANTS AND SUBSIDIES</b>											
<i>General Purpose Grants</i>											
GST grants	2,910	3,158	3,646	3,816	3,968	3,984	3,529	3,590	3,158	3,454	2,935
Budget Balancing Assistance	44	-	-	-	-	-	-	-	-	-	-
Competition Reform	72	34	54	67	-	4	-	-	-	-	-
North West Shelf grants	435	363	506	610	657	798	844	897	933	925	1,031
Compensation for Commonwealth crude oil excise arrangements	-	-	-	-	-	71	23	50	61	75	63

Note: Columns may not add due to rounding.

Table 2 (cont.)

**OPERATING REVENUE**  
General Government

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<i>Grants through the State</i>											
Schools assistance – non-government schools	380	432	493	526	566	603	751	769	776	831	873
Local government financial assistance grants	102	103	105	111	116	122	132	136	148	154	158
Local government roads	71	71	72	76	79	83	89	90	98	101	101
First Home Owners' Grant - extension	6	-	-	-	-	-	-	-	-	-	-
First Home Owners' Boost	-	-	-	-	-	-	100	168	29	1	(a)
<i>National Specific Purpose Payment Agreement Grants</i>											
National Healthcare	-	-	-	-	-	-	1,056	1,136	1,224	1,312	-
National Schools	-	-	-	-	-	-	318	329	357	378	406
National Agreement for Skills and Workforce Development	-	-	-	-	-	-	131	132	135	139	146
National Disability Services	-	-	-	-	-	-	75	78	94	110	127
National Affordable Housing	-	-	-	-	-	-	122	125	127	129	135
<i>National Health Reform</i>	-	-	-	-	-	-	-	-	-	-	1,398
<i>Nation Building and Jobs Plan</i>											
Schools	-	-	-	-	-	-	78	70	-	-	-
Housing	-	-	-	-	-	-	22	20	-	-	-
Transport	-	-	-	-	-	-	15	5	-	-	-
<i>Other Grants/National Partnerships</i>											
Health	-	-	-	-	-	-	439	318	473	505	474
Housing	-	-	-	-	-	-	29	23	6	2	6
Roads	-	-	-	-	-	-	38	2	84	68	69
Other	-	-	-	-	-	-	298	290	301	493	394

Note: Columns may not add due to rounding.



Table 2 (cont.)

**OPERATING REVENUE**  
General Government

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<i>Specific Purpose Grants to the State</i>											
Australian Health Care Agreement	718	730	796	817	869	971	-	-	-	-	-
Other health	268	251	285	282	301	349	-	-	-	-	-
Schools assistance – government schools	197	207	218	281	292	312	-	-	-	-	-
Vocational training	85	92	91	96	98	102	-	-	-	-	-
Roads	34	30	32	27	39	36	-	-	-	-	-
Other	143	111	171	180	171	364	-	-	-	-	-
<b>Total Current Grants and Subsidies</b>	<b>5,464</b>	<b>5,583</b>	<b>6,468</b>	<b>6,890</b>	<b>7,155</b>	<b>7,800</b>	<b>8,089</b>	<b>8,228</b>	<b>8,003</b>	<b>8,678</b>	<b>8,316</b>
<b>CAPITAL GRANTS</b>											
<i>Specific Purpose Grants through the State</i>											
Schools assistance – non-government schools	10	10	11	18	19	31	18	309	230	40	25
<i>Nation Building and Jobs Plan</i>											
Schools	-	-	-	-	-	-	-	651	437	40	-
Housing	-	-	-	-	-	-	4	368	155	20	-
Transport	-	-	-	-	-	-	10	5	-	-	-
<i>Other Grants/National Partnerships</i>											
Housing	-	-	-	-	-	-	40	180	101	181	93
Roads	-	-	-	-	-	-	229	232	174	505	445
Other	-	-	-	-	-	-	111	233	238	296	59

Note: Columns may not add due to rounding.

Table 2 (cont.)

**OPERATING REVENUE**  
General Government

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<i>Specific Purpose Grants to the State</i>											
Roads	53	47	73	406	107	174	-	-	-	-	-
Schools assistance – government schools	24	25	26	30	31	32	-	-	-	-	-
Vocational training	15	15	20	16	15	26	-	-	-	-	-
Other	185	198	218	229	225	173	-	-	-	-	-
<b>Total Capital Grants</b>	<b>287</b>	<b>295</b>	<b>347</b>	<b>698</b>	<b>396</b>	<b>436</b>	<b>411</b>	<b>1,978</b>	<b>1,336</b>	<b>1,082</b>	<b>622</b>
<b>Sale of Goods and Services</b>	<b>990</b>	<b>941</b>	<b>982</b>	<b>1,121</b>	<b>1,232</b>	<b>1,407</b>	<b>1,410</b>	<b>1,635</b>	<b>1,754</b>	<b>1,929</b>	<b>2,089</b>
<b>Interest Income</b>	<b>107</b>	<b>128</b>	<b>142</b>	<b>170</b>	<b>246</b>	<b>332</b>	<b>285</b>	<b>227</b>	<b>321</b>	<b>304</b>	<b>255</b>
<b>REVENUE FROM PUBLIC CORPORATIONS</b>											
Dividends	390	448	468	534	421	512	466	570	687	704	796
Tax Equivalent Regime	244	310	292	315	319	368	355	350	379	381	381
<b>Total Revenue from Public Corporations</b>	<b>634</b>	<b>758</b>	<b>760</b>	<b>848</b>	<b>740</b>	<b>880</b>	<b>821</b>	<b>920</b>	<b>1,066</b>	<b>1,085</b>	<b>1,177</b>
<b>Royalty Income</b>	<b>707</b>	<b>676</b>	<b>864</b>	<b>1,205</b>	<b>1,484</b>	<b>1,680</b>	<b>2,348</b>	<b>2,324</b>	<b>4,213</b>	<b>4,343</b>	<b>4,425</b>
<b>OTHER</b>											
Lease Rentals	36	40	50	63	63	65	65	76	83	91	91
Fines	69	79	88	114	89	125	138	136	133	159	157
Revenue not elsew here counted	117	153	230	263	302	174	161	193	238	377	252
<b>Total Other</b>	<b>222</b>	<b>272</b>	<b>368</b>	<b>440</b>	<b>453</b>	<b>364</b>	<b>364</b>	<b>405</b>	<b>454</b>	<b>627</b>	<b>499</b>
<b>GRAND TOTAL</b>	<b>11,869</b>	<b>12,851</b>	<b>14,333</b>	<b>16,667</b>	<b>17,572</b>	<b>19,345</b>	<b>19,435</b>	<b>22,039</b>	<b>23,909</b>	<b>25,220</b>	<b>25,718</b>

Note: Columns may not add due to rounding.

Table 3

**OPERATING EXPENSES**  
General Government

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>OPERATING EXPENSES BY GOVERNMENT PURPOSE<sup>(a)</sup></b>											
General public services	499	399	373	351	411	294	500	428	395	327	569
Public order and safety	1,193	1,296	1,423	1,598	1,788	1,977	2,187	2,459	2,716	3,013	2,940
Education	3,062	3,250	3,646	3,777	3,991	4,359	4,884	5,651	5,699	5,870	6,154
Health	2,799	2,953	3,196	3,527	3,721	4,200	4,722	5,028	5,546	6,268	6,903
Social security and welfare	478	520	575	615	815	925	1,127	1,263	1,504	1,677	1,787
Housing and community amenities	864	880	967	1,086	1,134	1,389	1,866	1,906	1,514	1,872	1,534
Recreation and culture	403	420	485	476	538	562	620	695	739	831	851
Fuel and energy	77	82	90	107	97	91	120	312	442	528	543
Agriculture, forestry, fishing and hunting	276	291	305	388	378	423	418	354	346	400	376
Mining and mineral resources other than fuels; manufa	122	179	155	165	212	263	237	161	176	200	194
Transport and communications	1,044	986	1,166	1,187	1,363	1,381	1,476	1,611	1,788	1,981	1,929
Other economic affairs	227	244	288	318	353	370	380	678	667	753	719
Other purposes	574	551	559	477	518	602	581	662	773	853	969
<b>GRAND TOTAL</b>	<b>11,616</b>	<b>12,052</b>	<b>13,229</b>	<b>14,073</b>	<b>15,320</b>	<b>16,837</b>	<b>19,117</b>	<b>21,208</b>	<b>22,306</b>	<b>24,571</b>	<b>25,468</b>

<sup>(a)</sup> The accuracy of spending by Government Purpose Classification (GPC) data is subject to ongoing refinement and improvement. Calculation methods and the allocation of spending to the various GPCs are continually being updated based on data availability and correspondence with the Australian Bureau of Statistics and the Commonwealth Grants Commission.

Note: Columns may not add due to rounding.

