



Unpacking ABS Labour Statistics

Bjorn Jarvis, Head of Labour Statistics

Australian Bureau of Statistics
Informing Australia's important decisions



Lots and lots of regular labour market information

Household surveys

1. [Labour Force, Australia \(cat. no. 6202.0\) - Monthly](#)
2. [Labour Force, Australia, Detailed - Electronic Delivery \(cat. no. 6291.0.55.001\) – Monthly](#)
3. [Labour Force, Australia, Detailed, Quarterly \(cat. no. 6291.0.55.003\)](#)
4. [Characteristics of Employment, Australia \(cat. no. 6333.0\) - Annually](#)
5. [Participation, Job Search and Mobility, Australia \(cat. no. 6226.0\) – Annually](#)
6. [Education and Work, Australia \(cat. no. 6227.0\) – Annually](#)
7. [Characteristics of Recent Migrants, Australia \(cat. no. 6250.0\) – 4 yearly](#)
8. [Barriers and Incentives to Labour Force Participation, Australia \(cat. no. 6239.0\) – 2 yearly](#)
9. [Retirement and Retirement Intentions, Australia \(cat. no. 6238.0\) – 2 yearly](#)

Administrative data

1. [Jobs in Australia \(cat. no. 6160.0\) - Annually](#)
2. [Personal Income in Australia \(cat. no. 6524.0.55.002\) - Annually](#)

Business surveys

1. [Job Vacancies, Australia \(cat. no. 6354.0\) - Quarterly](#)
2. [Average Weekly Earnings \(cat. no. 6302.0\) – 6 monthly](#)
3. [Employee Earnings and Hours, Australia \(cat. no. 6306.0\) – 2 yearly](#)
4. [Wage Price Index, Australia \(cat. no. 6345.0\) – Quarterly](#)
5. [Employment and Earnings, Public Sector, Australia \(cat. no. 6248.0.55.002\) – Annually](#)
6. [Industrial Disputes, Australia \(cat. no. 6321.0.55.001\) - Quarterly](#)
7. [Australian Industry \(cat. no. 8155.0\) – Annually](#)
8. [Labour Costs, Australia \(cat. no. 6348.0\) – 5 yearly](#)

Labour Account

1. [Labour Account, Australia \(cat. no. 6150.0.55.003\) - Quarterly](#)

The Census also has an extensive range of labour topics.

More than just Labour Force? The 4 pillars of Labour Statistics

Household
survey
statistics

Business
survey
statistics

Admin
data
statistics

Labour
Account

What are the differences?

Household surveys

The Labour Force Survey and its related topics collect information from people and households directly, covering their labour market activity and characteristics.

This information can be collected in a very timely manner from across the entire population, enabling very frequent quality statistics, but generally with a high level geographic and population focus. Regional estimates are produced, but are based on sub-samples of the survey and therefore are more variable than national and state/territory estimates.

Administrative data (relatively new)

Administrative data refers to information maintained by governments and other entities that is made available to the ABS for statistical purposes. It includes data used for registrations, transactions and record keeping, usually during the delivery of a service.

The comprehensive nature of these data support quality regional and small population analysis. For instance, *Jobs in Australia* draws on more than 100 million job-level tax records over 6 years to support regional profiles for more than 2,000 regions. This information is constrained by the information available from particular administrative functions and also generally less timely (eg. tied to tax reference periods, or other administrative transactions).

Business surveys

Business surveys collect a broad range of information from businesses, including specific payroll, financial and HR information about businesses, their employees and jobs. Key business surveys with a labour market focus include Job Vacancies, Employee Earnings and Hours, Average Weekly Earnings and the Wage Price Index.

This information can be collected in a very timely manner from businesses, enabling very frequent quality statistics, but generally with a high level geographic (generally national state/territory) and industry focus.

Labour Account (relatively new)

The Labour Account brings together data from separate administrative, business, and household sources, adjusting and confronting the various sources until a coherent picture of the labour market is established.

This information provides the best industry estimates on the number of employed persons, the number of jobs, hours worked and income earned in each of the 19 industry divisions (each quarter) and 86 subdivisions (annually). It also provides the best information on public and private sector jobs over time. It intentionally has a high level focus - like the National Accounts, but for the labour market.

Data on the same topic?

Labour statistics users will draw upon data according to what they are looking to understand about the labour market.

Is it to understand a topic related to:

1. Demographic characteristics or information on the specific activity of individuals and households? Household surveys are usually the most useful for this.
2. Specific employer or payroll information? Business surveys are usually the most useful for this.
3. Detailed sub-population or geographic information? This is usually best sourced from administrative data, or the five-yearly Census.
4. A comprehensive 'best estimate' of key labour market indicators (based on reconciled information from all of the available data sources)? The Labour Account is designed to provide this.

Example 1. People in jobs

For example, in seeking to understand how many people are employed in jobs in Australia, you could use statistics from:

1. Monthly *Labour Force* – which provides a timely indicator on changes in employment, unemployment and underemployment, including analysis by personal characteristics such as sex, age, occupation and working arrangements.
2. The quarterly *Labour Account* – which is the best source of headline information on employment by industry. It provides an estimate of the number of jobs, hours worked, and associated labour income.
3. The annual *Jobs in Australia* – which provides granular information on all the job relationship for more than 2,200 different regions across Australia. This rich dataset is based on more than 100 million individual records which allow for micro-data analysis of the Australian labour market.

Example 2. Employee earnings

Another common example is seeking to understand changes in wages over time, where you could use statistics from:

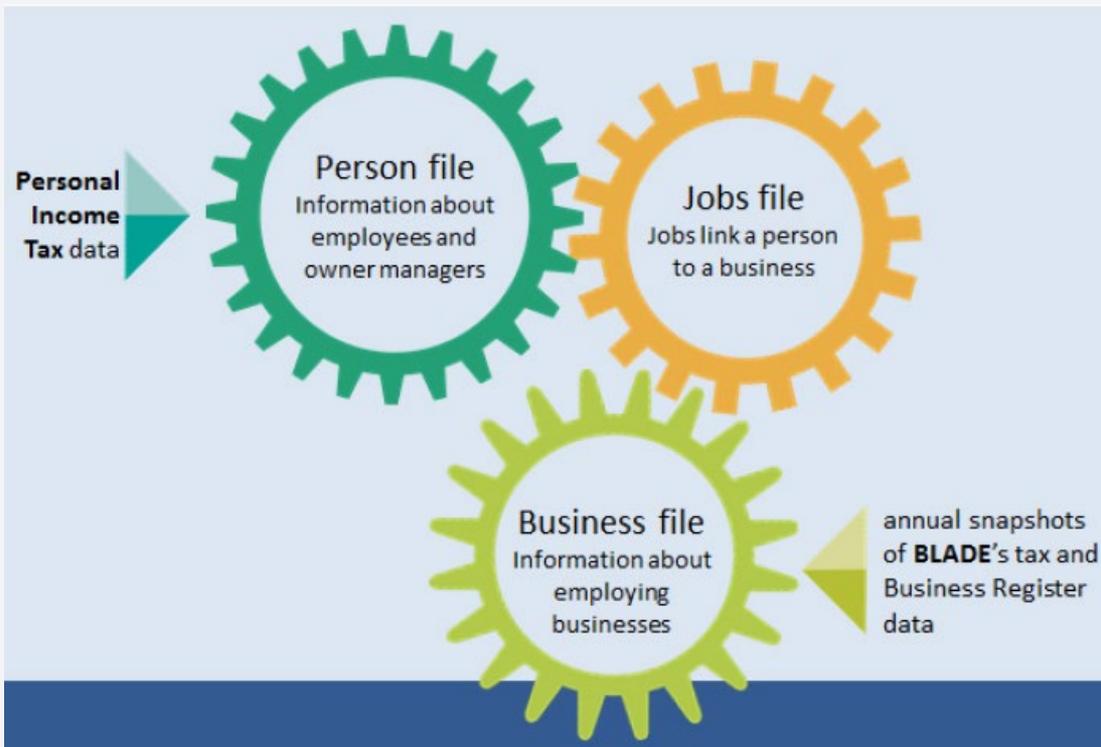
1. Quarterly *Wage Price Index* - which measures changes in the price of labour in the Australian labour market. In a similar manner to the CPI, the WPI follows price changes in a fixed "basket" of jobs and is therefore not affected by changes in quality and quantity of work.
2. The twice yearly *Average Weekly Earnings* - which provides data on average wages by industry, which provides insights into compositional changes in earnings over time.
3. The two yearly *Employee Earnings and Hours* - which provides detailed data on methods of setting pay, hours paid for and detailed distributional earnings information.
4. The annual *Characteristics of Employment* – which provides earnings by detailed socio-demographic and other characteristics.
5. The quarterly 'Compensation of Employees' measure in the *National Accounts* and quarterly measure of labour income in the *Labour Account* – which provide aggregate earnings measures.

New statistics: *Jobs in Australia*

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Linked Employer-Employee Data: basics



Note: The data are linked using encrypted ABNs and TFNs – and organised into three connected datasets.

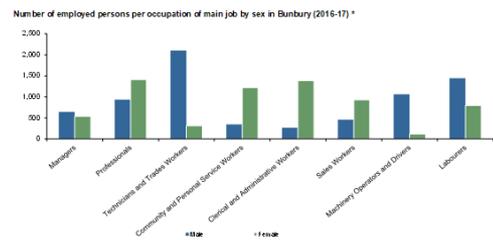
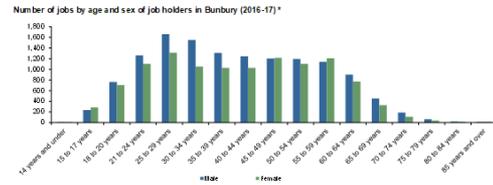
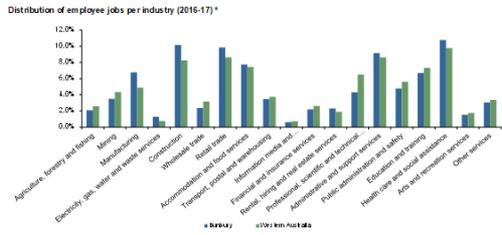
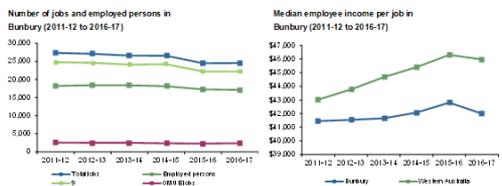
Jobs in Australia - LGA profiles

Australian Bureau of Statistics

6160.0 Western Australia Jobs in Australia Spotlights by LGA
 Released at 11:30am (Canberra time) 1 August 2019
Table 11.16 Bunbury, Western Australia, 2016-17
 The following statistics are sourced from the Linked Employer-Employee Dataset (LEED) and based on administrative/tax data containing over 18 million records each year.

QUICK STATS for 2016-17 *

Number of jobs	24,565	Employed Persons	17,127
Private sector entities	83.8 %	Males	52.9 %
Public sector entities	16.2 %	Females	47.1 %
Employment size		Employees	87.0 %
Fewer than 5 employees	12.3 %	Owner Managers of Unincorporated Enterprises	13.0 %
5-19 employees	10.3 %	Average age of employed persons	41.8 Yrs
20-199 employees	28.1 %	Multiple Job Holders	18.2 %
200 or more employees	45.2 %	Single Job Holders	81.8 %



	Bunbury			Western Australia		
	Number	Change in %	Change in per 1,000 persons	Number	Change in %	Change in per 1,000 persons
Jobs	24,565	0.3%	-10.2%	2,591,129	0.7%	-1.3%
Held by men	13,228	0.0%	-12.3%	1,118,821	0.1%	-3.1%
Held by women	11,337	0.5%	-7.8%	972,508	1.3%	0.8%
Employed persons	17,127	-0.8%	-6.0%	1,454,069	0.8%	0.9%
Single job holders	14,358	2.2%	-4.9%	1,226,134	2.0%	0.3%
Multiple job holders	2,771	7.2%	-1.1%	228,755	5.8%	4.1%
Males	1,357	9.0%	3.8%	1,111,841	5.9%	5.3%
Females	1,374	5.4%	-4.7%	1,161,914	5.3%	2.5%
Median income per job	\$42,052	-1.9%	1.3%	\$45,973	0.7%	6.8%
Total employment income	\$958.8 mil	-1.9%	-2.8%	\$53.9 bil	2.7%	9.0%

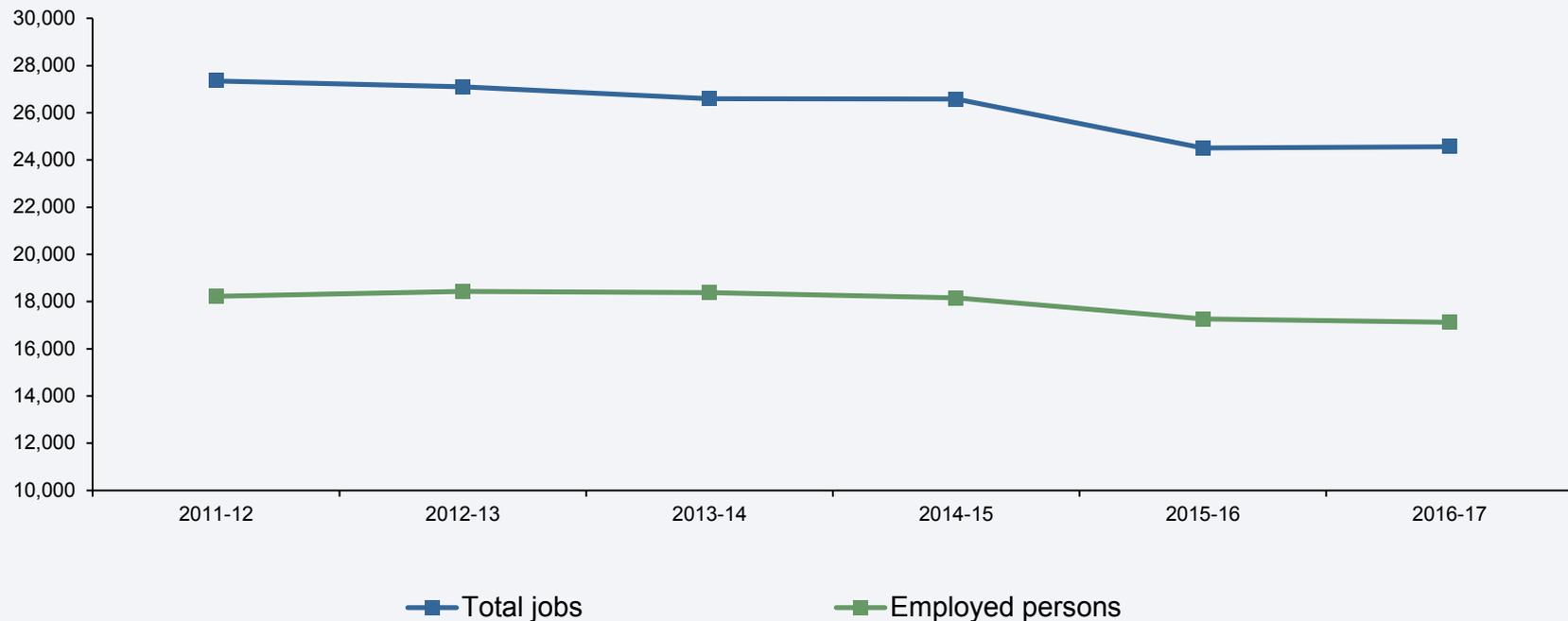
*Totals may differ from the sum of their components due to missing information and perturbation.
 © Commonwealth of Australia 2019

Some headline stats for Bunbury LGA for 2016-17

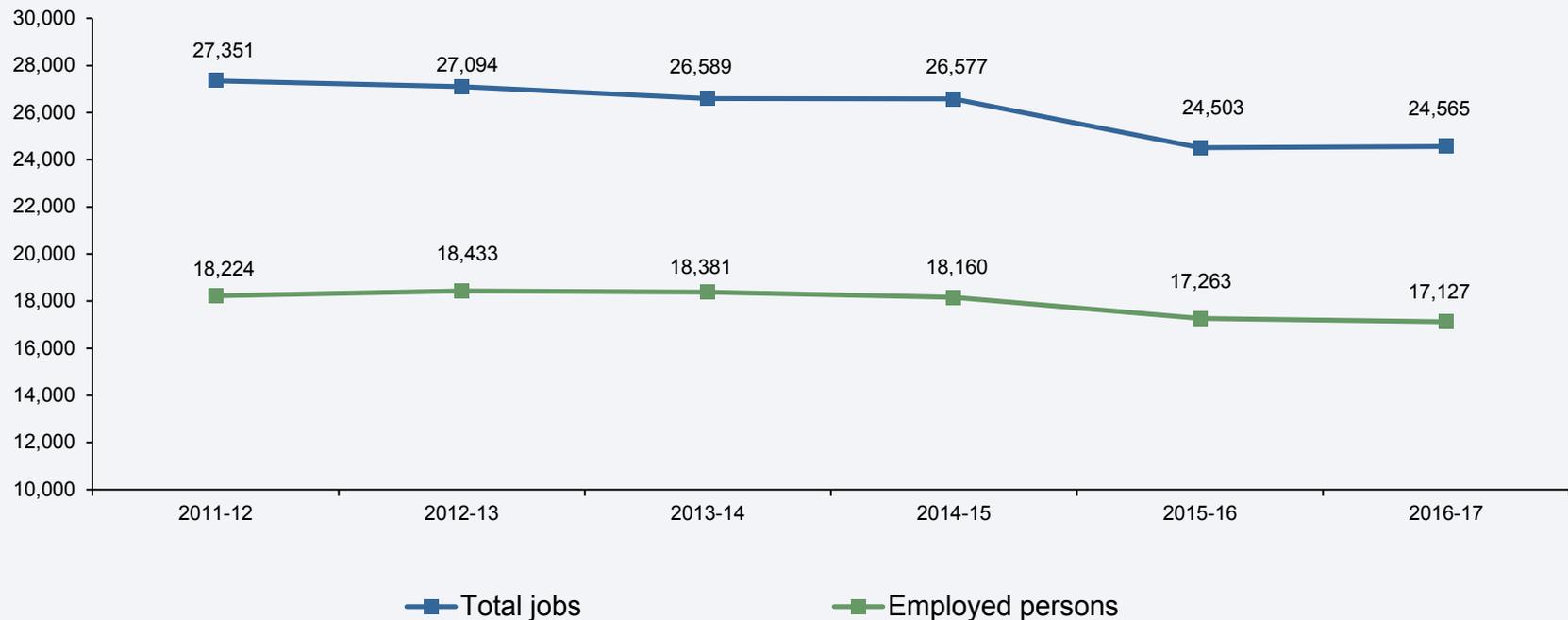
Number of jobs	24,565	
Private sector entities	83.8	%
Public sector entities	16.2	%
Employment size		
Fewer than 5 employees	12.3	%
5–19 employees	16.3	%
20–199 employees	26.1	%
200 or more employees	45.2	%

Employed Persons	17,127
Males	52.9 %
Females	47.1 %
Employees	87.0 %
Owner Managers of Unincorporated Enterprises	13.0 %
Average age of employed persons	41.8 Yrs
Multiple Job Holders	16.2 %
Single Jobs Holders	83.8 %

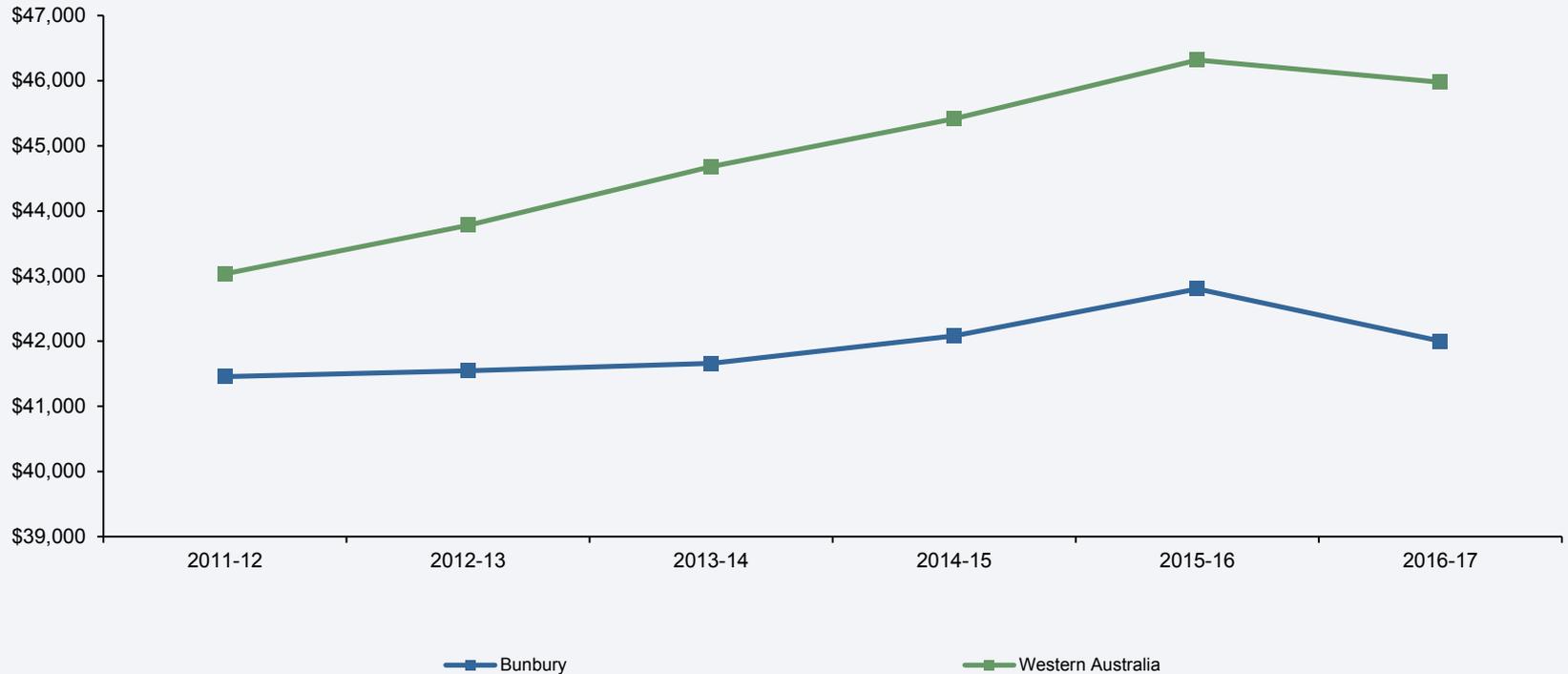
Jobs and employed persons in Bunbury



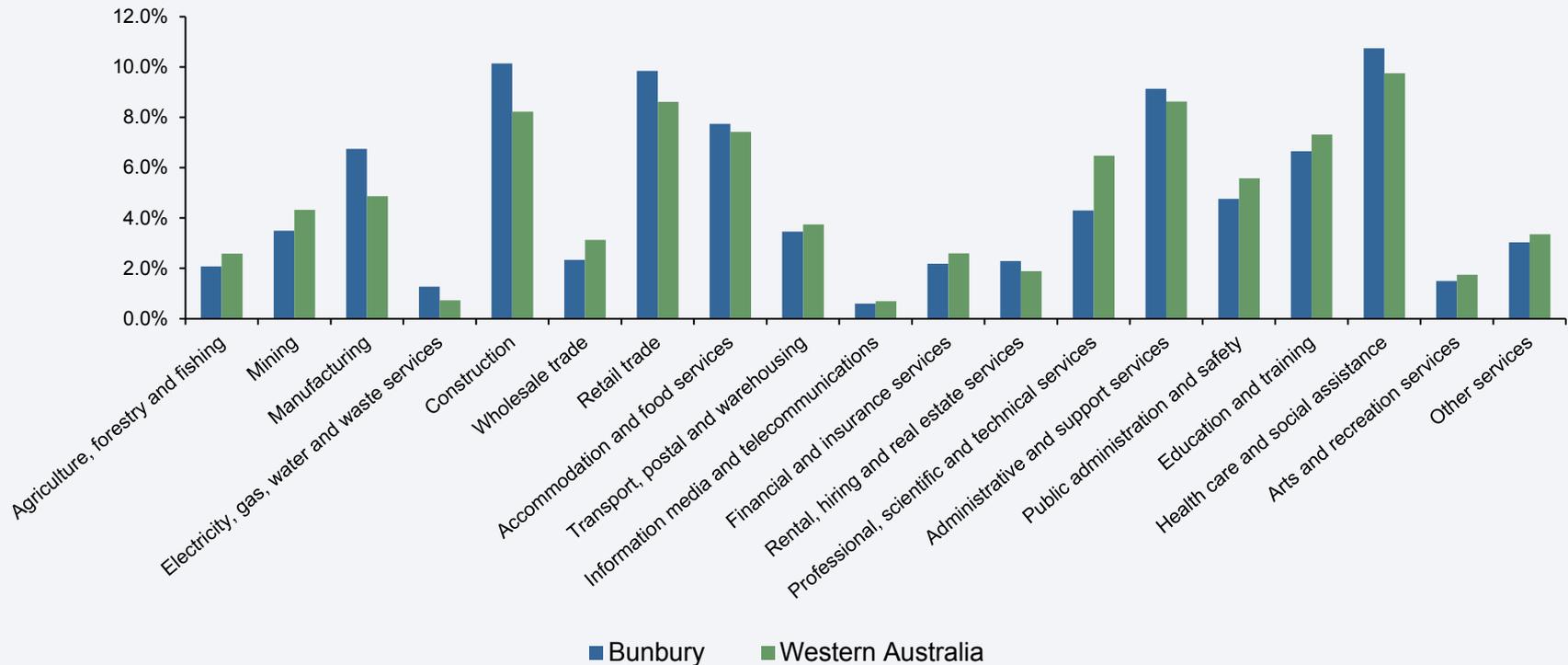
Jobs and employed persons in Bunbury



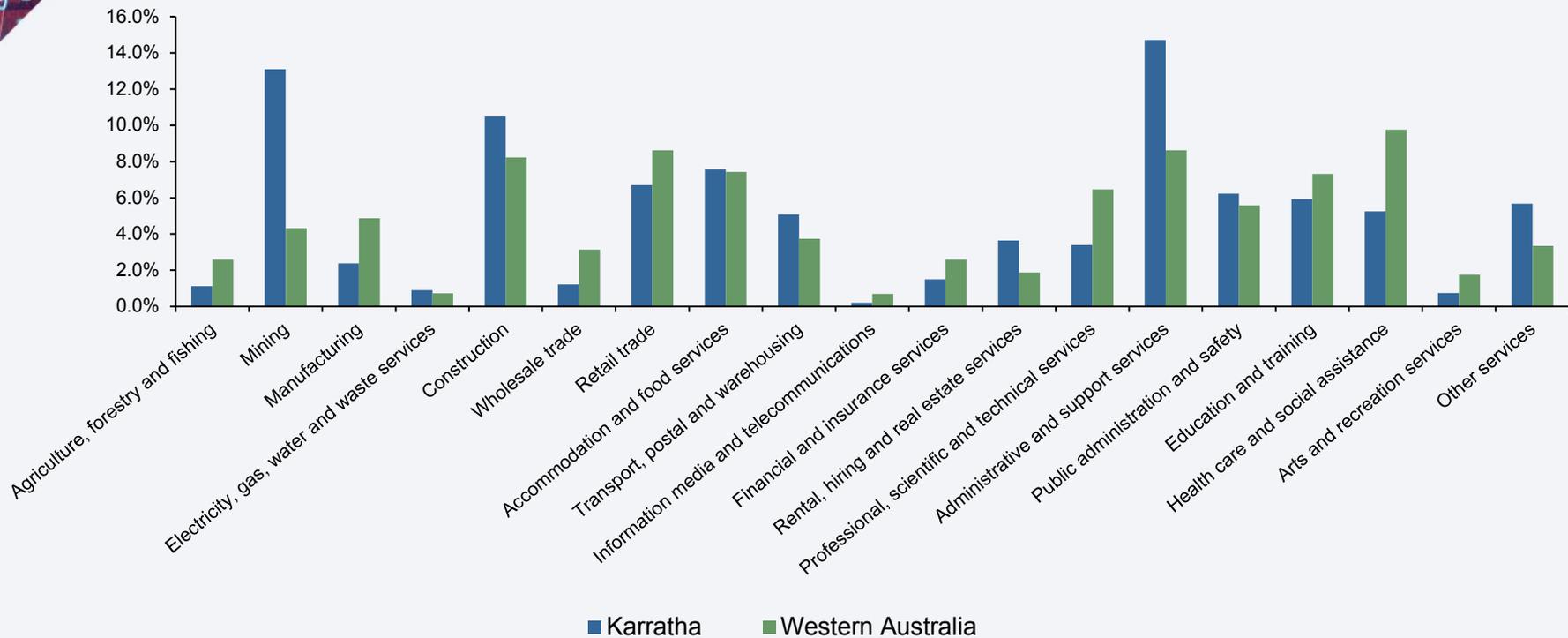
Median employment income per job



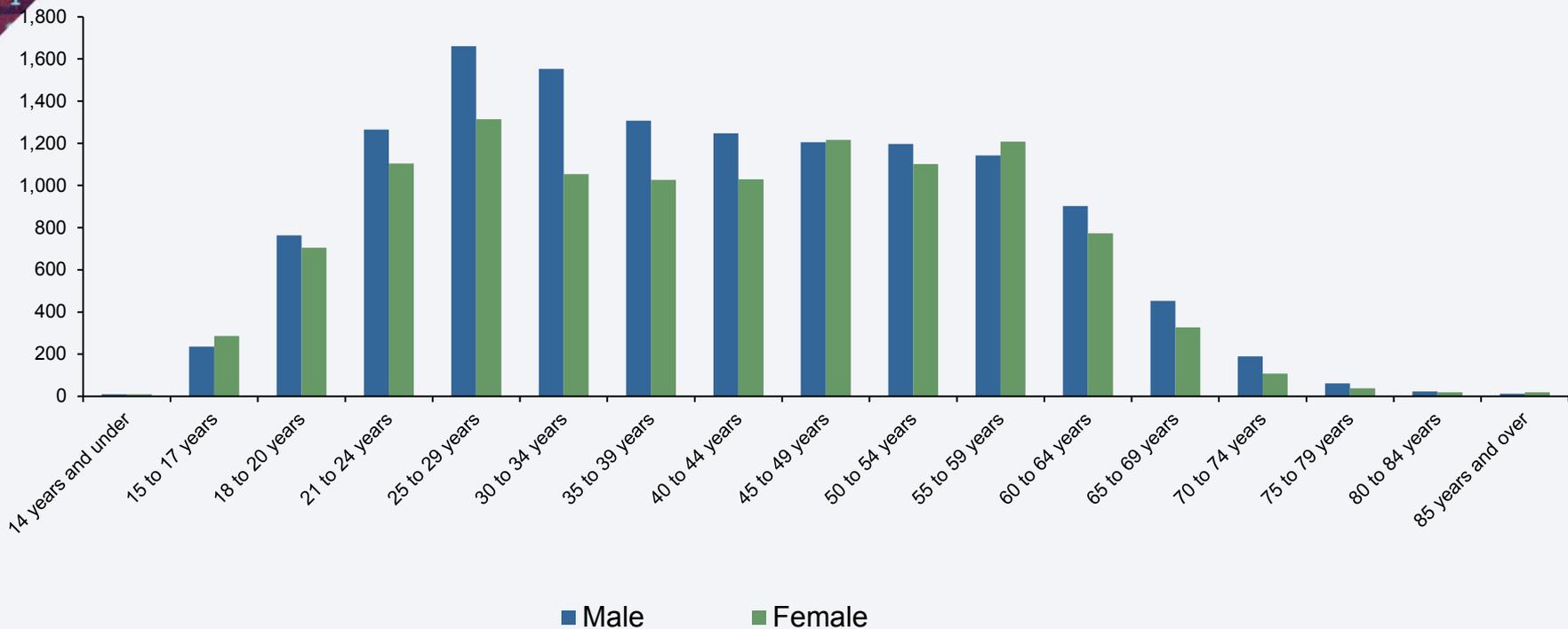
Distribution of employment, 2016-17



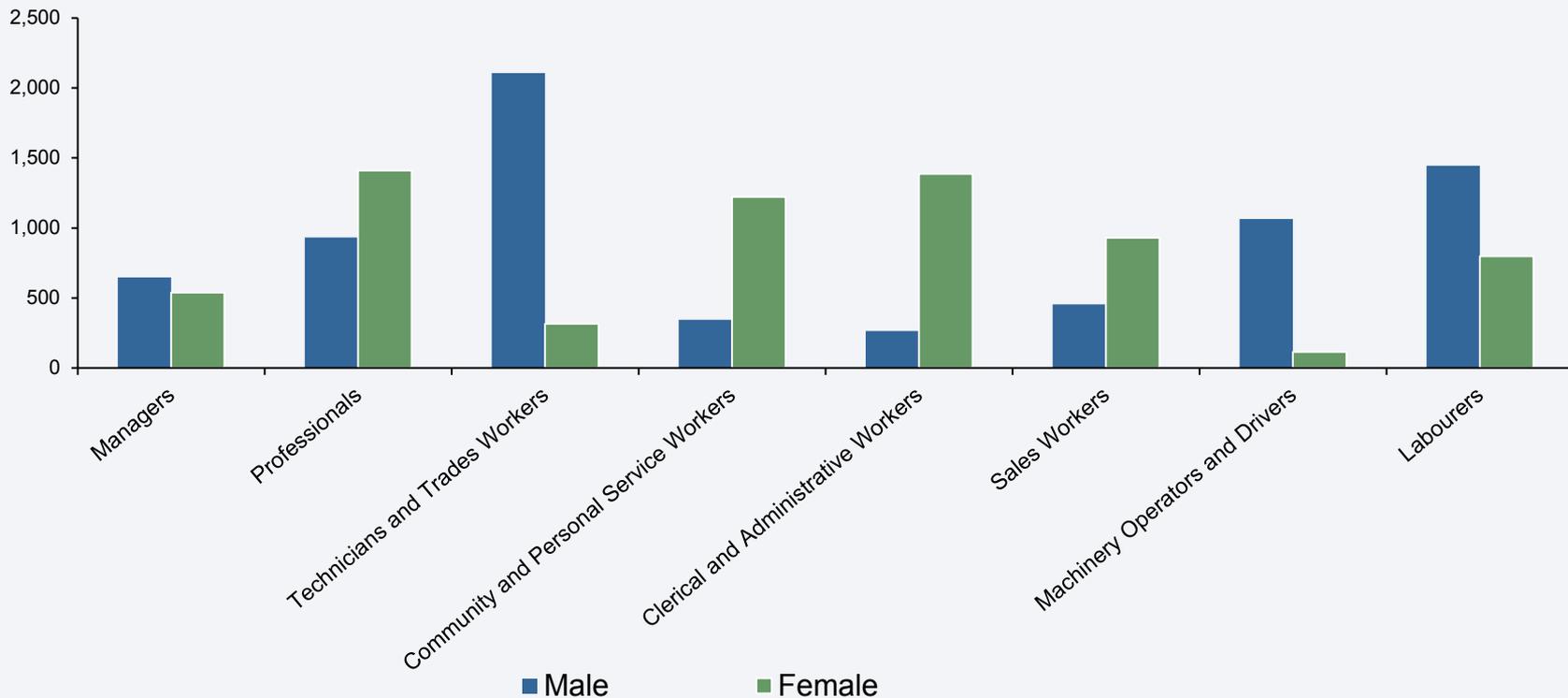
Distribution of employment, 2016-17



Jobs by age and sex in Bunbury, 2016-17



Occupations by sex in Bunbury, 2016-17



New statistics: *Labour Account*

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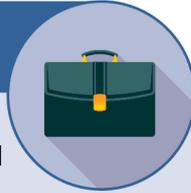


The Labour Account

- We have been releasing a Labour Account since 2017 and are one of only four countries to develop one.
- Our framework brings together a broad range of labour market and related data into a coherent account framework and is the most comprehensive.
- It comes out less than a week after the quarterly National Accounts.
- The time series has recently been extended back from 9 years to 25 years, taking it back to September 1994. This paves the way for using these data to further improve Australia's productivity statistics.

Labour Account: The four quadrants

Jobs



- The **Jobs** quadrant provides data on the number of filled and vacant jobs
- **For the first time**, data are available on main and secondary jobs by industry over time.

People



- The **Persons** quadrant provides data on Persons employed, persons looking and available for employment and persons with potential for further employment.
- **For the first time**, data are available in a time series of employed persons in all jobs by industry.

Time



- The **Labour Volume** quadrant provides data on the relationship between hours of labour supplied by individuals, and hours of labour used by businesses.
- **For the first time**, hours worked will be reallocated to industry of main and secondary jobs.

Income & Costs



- The **Labour Payments** quadrant provides data on the relationship between total labour costs by businesses and total labour income of workers.

Labour Account: How is it produced?

- ▶ Basically, the ABS confronts business survey sources and household survey sources to produce a best estimate of jobs in the Australian labour market, by industry.
- ▶ The other three quadrants are similarly compiled using business and household sources, though they leverage off the balanced jobs quadrant (rather than requiring balancing decisions in these quadrants).

Labour Account: Why did we develop it?

- ▶ ABS produces a very broad range of labour market information – which generates questions around coherence.
- ▶ Longstanding user questions around considerable differences in industry employment estimates for some divisions.
- ▶ Productivity statistics could be improved if hours worked by industry could be improved, to be more coherent with production estimates.
- ▶ Increasing demand for a pure jobs measure for the labour market.

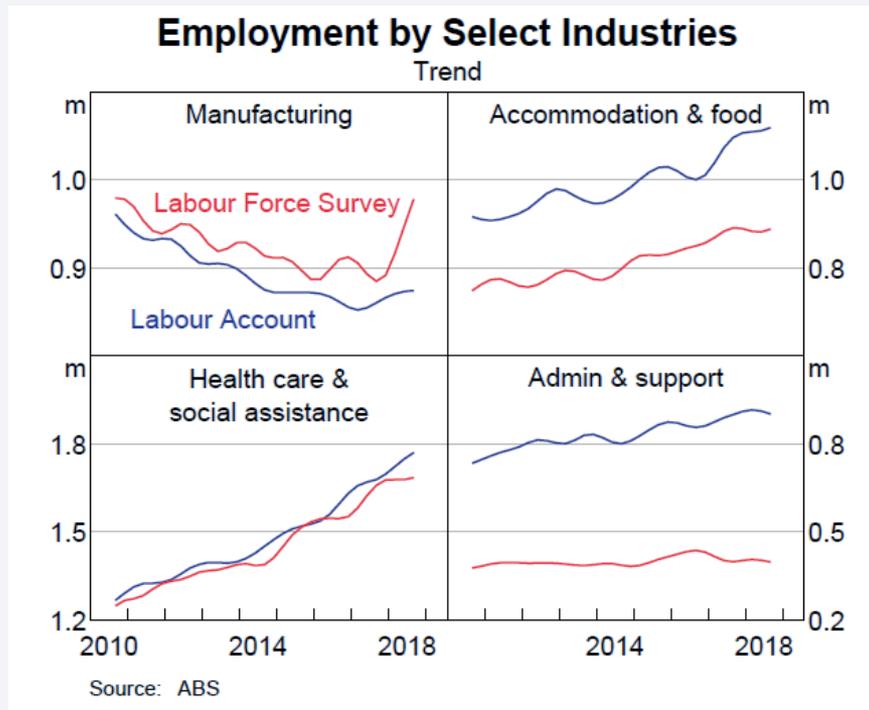
RBA in the Statement on Monetary Policy

“While the LFS will remain the best and most timely indicator of overall labour market developments (including employment growth and the unemployment rate), the ABS suggests that the Labour Account is likely to become the primary source of industry employment information.”

“The Labour Account's industry employment numbers have a number of potential advantages of over those in the LFS. The industry classification in the Labour Account aligns better with the measurement of industry value-added in the national accounts, and so the Labour Account should contribute to better estimates of industry productivity growth.”

“The Labour Account also takes a more comprehensive approach to estimating the amount of labour employed in each industry, for instance by including the employment of non-resident visa holders.”

RBA in the SMP (cont.)

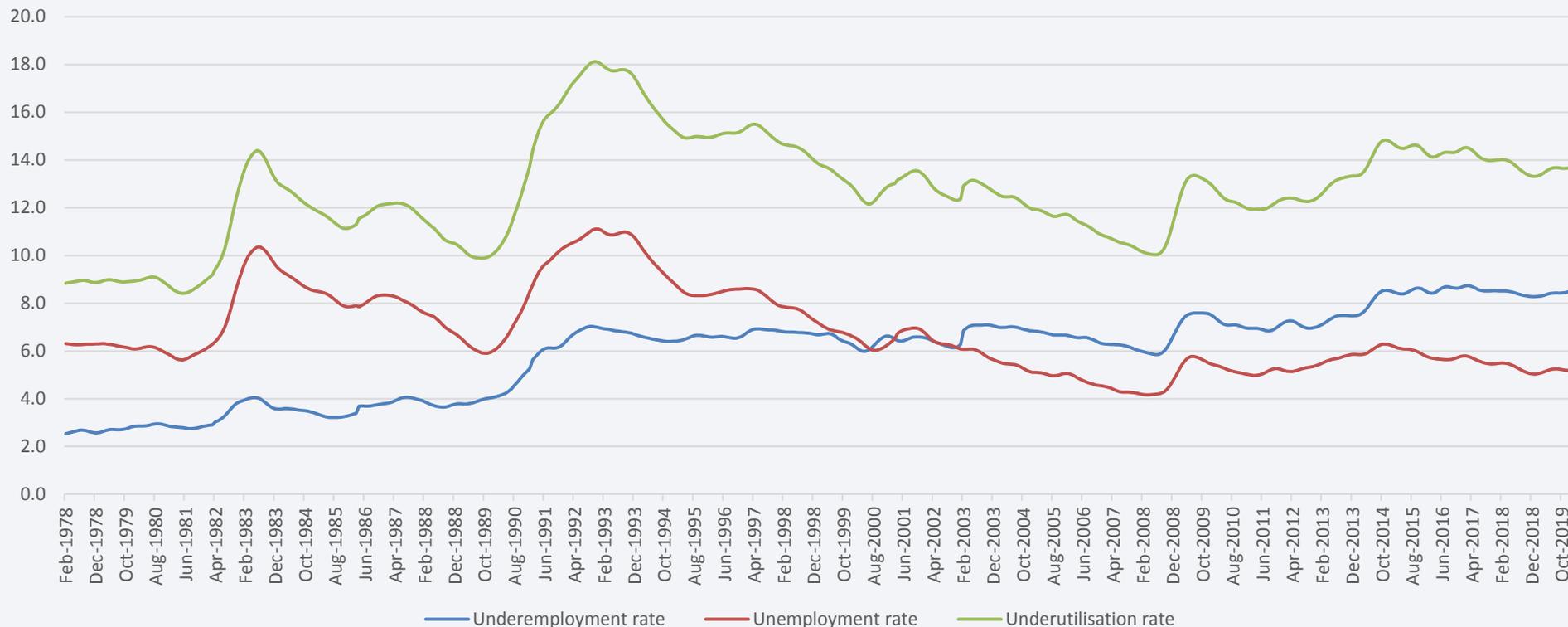


Topic in focus: Underemployment

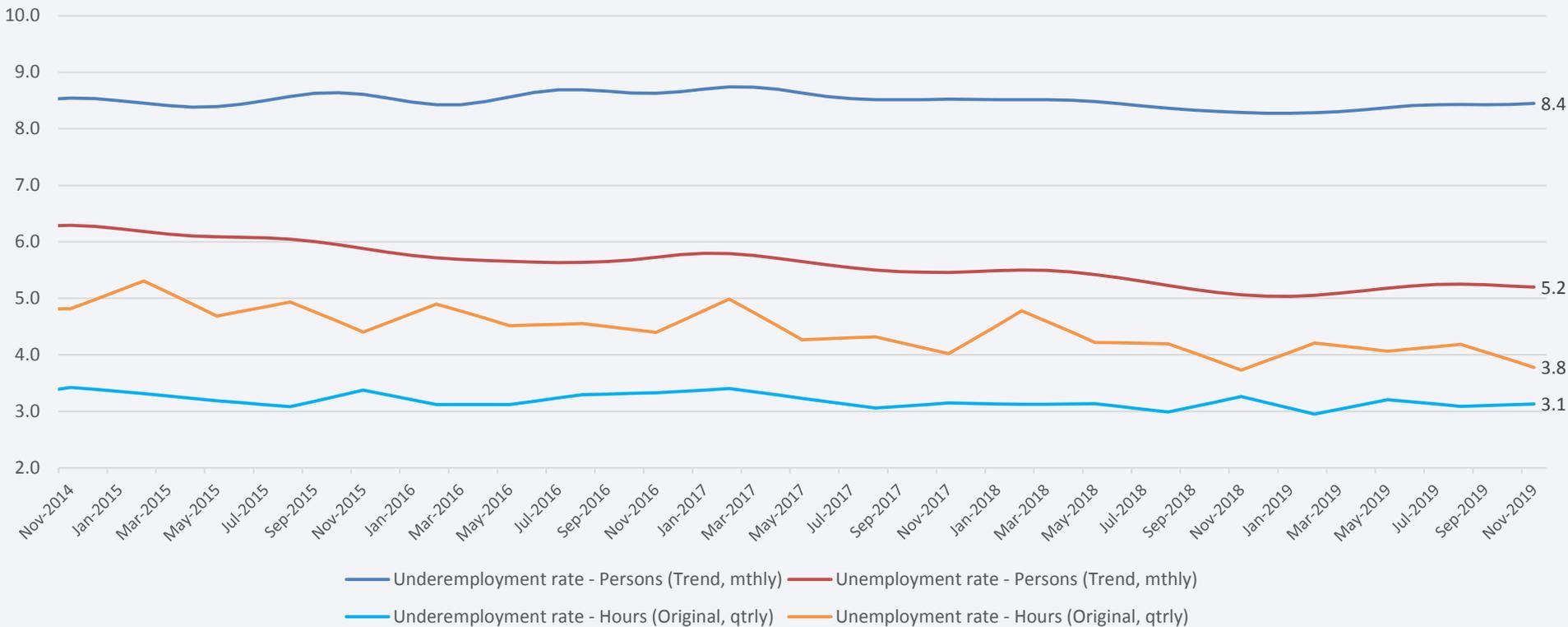
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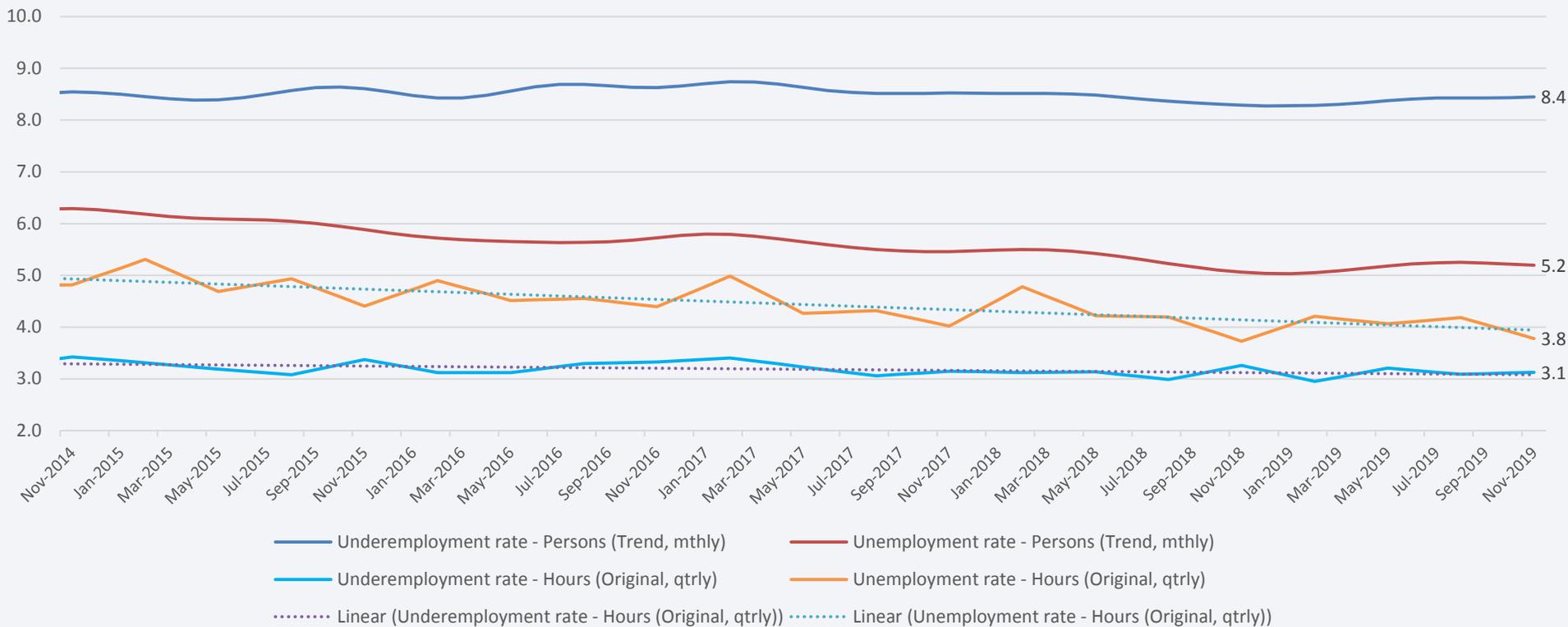
Unemployment, underemployment and underutilisation



Volume measures of labour underutilisation



Volume measures of labour underutilisation



Topic in focus: 1 hour per week

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- ▶ The ABS produces an extensive range of labour market statistics, among them employment, unemployment, underemployment and underutilisation.
- ▶ For the measure of employment, people are classified as employed if they worked one hour or more.
- ▶ While on face value one hour may seem like a low threshold, it is important in counting everyone who is involved in production activities in the economy.
- ▶ This is in line with well-respected and regularly reviewed [international guidelines](#).
- ▶ It is, however, a measure of who is employed and not a measure of how fully employed people are, which is covered by other measures (eg. underemployment).

How many people work one hour?

**TABLE 1. EMPLOYED PERSONS USUALLY
WORKING LESS THAN 30 HOURS, 2018
AVERAGE (ORIGINAL DATA)**

Usual hours worked per week	Employment	Share of total employment (%)
1	14,500	0.1
2-3	85,900	0.7
4-6	250,900	2.0
7-9	244,600	1.9
10-19	1,083,300	8.6
20-29	1,529,900	12.2

Does it make much of a difference?

**TABLE 2. ILLUSTRATIVE ESTIMATES USING
DIFFERENT THRESHOLDS, 2018 AVERAGE
(ORIGINAL DATA)**

Threshold (hours worked per week)	Employment	Employment to population ratio (%)
1	12,600,000	62.2
4	12,500,000	61.7
7	12,200,000	60.4

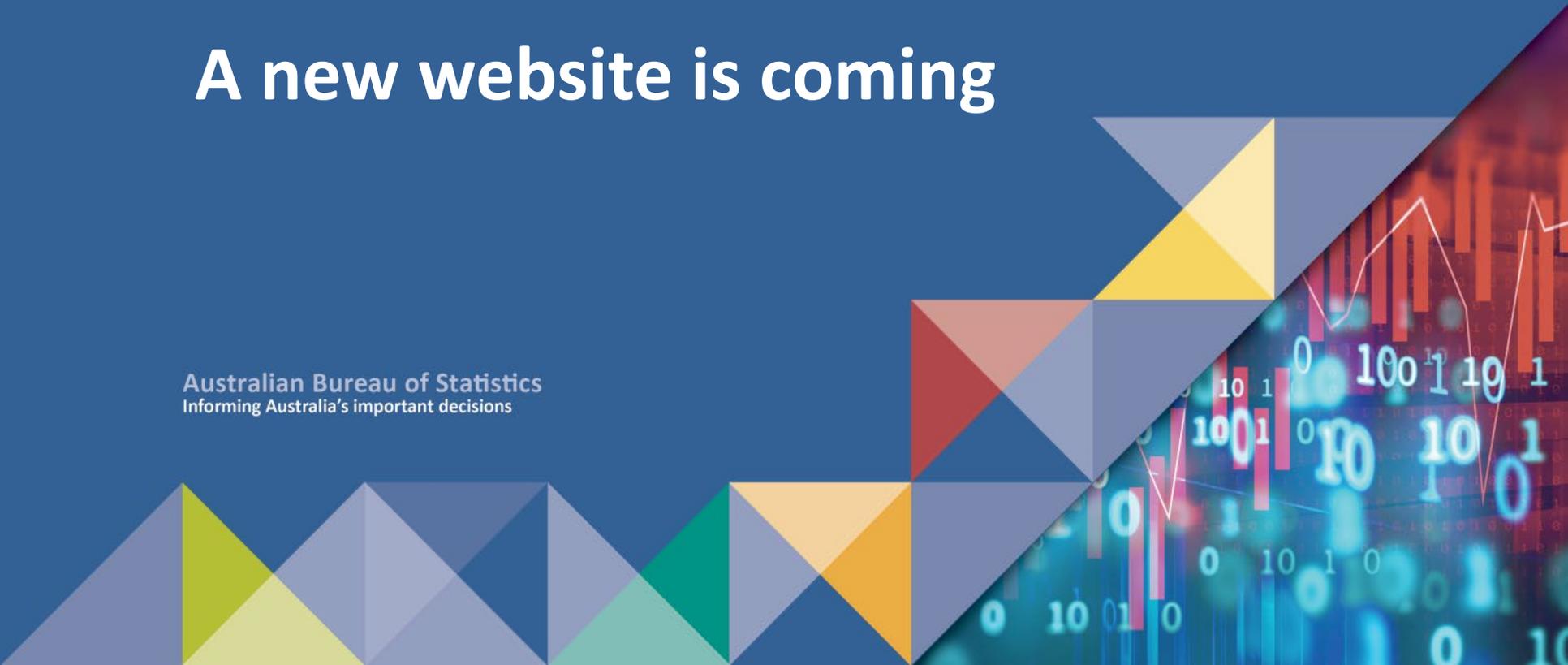
Are they all underemployed?

**TABLE 3. UNDEREMPLOYMENT FOR PERSONS
USUALLY WORKING LESS THAN 10 HOURS,
2018 AVERAGE (ORIGINAL DATA)**

Usual hours worked per week	Underemployment ratio (%)
1	32.4
2-3	36.7
4-6	34.1
7-9	30.1

A new website is coming

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✓ Latest release

[Data downloads](#)

Labour force

Estimates of employment, unemployment, underemployment, participation and hours worked

Reference period July 2019

Released 15/08/2019

Next release August 2019

[Previous releases](#)

Key statistics

Trend estimates for July 2019:

- Unemployment rate increased to 5.3%
- Participation rate increased to 66.1%
- Employment increased to 12,915,200
- Underemployment rate remained steady at 8.4%
- Employment to population ratio remained steady at 62.6%

	June 2019	July 2019	Monthly change	Yearly change	
Trend	Employed persons	12,895,200	0.3%	2.7%	
	Unemployed persons	790,000	0.1%	1.6%	
	Unemployment rate	5.2%	5.3%	0.0 pts	0.0 pts
	Underemployment rate	8.4%	8.4%	0.0 pts	0.0 pts
	Participation rate	66.0%	66.1%	0.1 pts	0.4 pts
Seasonally adjusted	Weekly hours worked in all jobs	1,706	1,776	0.0%	1.8%
	Employed persons	12,862,200	12,908,200	0.3%	2.6%
	Unemployed persons	712,000	712,000	0.0%	2.0%
	Unemployment rate	5.2%	5.2%	0.0 pts	0.0 pts
	Participation rate	66.0%	66.1%	0.1 pts	0.3 pts

All data are Trend unless otherwise stated. The trend series smooths the more volatile seasonally adjusted estimates and gives the best measure of the underlying behaviour of the labour market.

Estimates of changes are calculated using un-rounded level estimates, and may be different from, but are more accurate than, movements obtained from the rounded level estimates.

Unemployment

In July 2019:

- the unemployment rate increased by less than 0.1 pts to 5.3%, the same level as a year ago
- unemployed people increased by 6,000 to 790,000, and increased by 11,500 over the year to July 2019
- for 15 to 24 year olds, the unemployment rate remained steady at 13.0%, an increase of 0.7 pts since July last year

In seasonally adjusted terms, in July 2019:

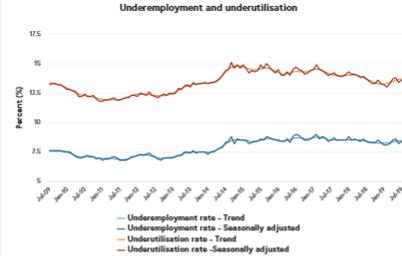
- the unemployment rate remained steady at 5.2%, the same level as a year ago
- unemployed people increased by 800 to 712,000, and increased by 14,000 over the year to July 2019
- for 15 to 24 year olds, the unemployment rate remained steady at 11.9%, an increase of 0.8 pts since July last year

[Graph](#) [Table](#)

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[Graph](#) [Table](#)

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States and territories

Trend estimates

[Download table](#)

	Australia	NSW	VIC	QLD	SA	WA	TAS
Employed persons	12,915,200	4,152,000	3,403,000	2,533,000	854,300	1,964,000	248,000
Employed persons - monthly change	0.2%	0.3%	0.1%	0.2%	0.0%	0.3%	0.1%
Employment to population ratio	62.6%	63.0%	63.0%	61.8%	59.5%	64.3%	56.2%
Employment to population ratio - monthly change	0.0 pts	0.1 pts	-0.0 pts	0.0 pts	-0.0 pts	0.1 pts	-0.0 pts
Unemployment rate	5.3%	4.5%	4.8%	6.4%	6.3%	5.9%	6.7%
Unemployment rate - monthly change	0.1 pts	0.0 pts	0.0 pts	0.1 pts	0.2 pts	0.0 pts	0.0 pts
Underemployment rate	8.4%	7.8%	8.5%	8.6%	9.0%	9.3%	10.4%
Underemployment rate - monthly change	0.0 pts	0.1 pts	-0.0 pts	-0.1 pts	0.1 pts	0.2 pts	0.0 pts
Participation rate	66.1%	66.0%	66.1%	66.0%	63.4%	68.3%	60.3%
Participation rate - monthly change	0.1 pts	0.1 pts	-0.0 pts	0.1 pts	0.0 pts	0.1 pts	-0.0 pts

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Key labour market indicators

An overview of key labour market statistics

All data is trend data unless stated otherwise.

Headline labour market indicators

Indicator	Period	Value	Change previous month	Change same period last year
Employed persons	Sep 2019	12,942,800	▲ 20,300	▲ 2.4%
Employment to population ratio	Sep 2019	62.7%	⊖ 0.0 pts	▲ 0.5 pts
Unemployment rate	Sep 2019	5.3%	⊖ 0.0 pts	▲ 0.1 pts
Filled jobs	June Qtr 2019	14.2 million	▲ 0.6% (q)	▲ 2.6%
Job vacancies	Aug 2019	234,500	▼ -1.3% (q)	▼ -1.4%
Average weekly hours worked	Sep 2019	32.9 hrs	▲ 0.0 hrs	▼ -0.3 hrs
Average weekly cash earnings - Original	May 2019	\$1,575.60	▲ 1.9% (m)	▲ 2.6%

(q) Change previous quarter

(m) Change over 6 months

Employment

Indicator	Period	Value	Change previous month	Change same period last year
Employed persons	Sep 2019	12,942,800	▲ 20,300	▲ 2.4%
Employment to population ratio	Sep 2019	62.7%	⊖ 0.0 pts	▲ 0.5 pts
Participation rate	Sep 2019	66.2%	⊖ 0.0 pts	▲ 0.6 pts
Employed full time - Males	Sep 2019	81.0%	⊖ 0.0 pts	▼ -0.5 pts
Employed full time - Females	Sep 2019	54.1%	⊖ 0.0 pts	▲ 0.3 pts
Self-employed of all employed - Original	Sep 2019	16.6%	▼ -0.3 pts	▲ 0.5 pts
Average age of retirement - Original	2016-17	55.3 years	na	▲ 0.9 years (5)

(5) Change over 7 years

Unemployment, underemployment and joblessness

Indicator	Period	Value	Change previous month	Change same period last year
Unemployed persons	Sep 2019	780,000	▲ 1,600	▲ 4.7%
Unemployment rate	Sep 2019	5.3%	⊖ 0.0 pts	▲ 0.1 pts
Underemployment rate	Sep 2019	6.4%	⊖ 0.0 pts	▲ 0.1 pts
Underutilisation rate	Sep 2019	13.7%	⊖ 0.0 pts	▲ 0.2 pts
Underutilisation rate (Hours) - Original	Aug 2019	4.2%	▲ 0.1 pts (w)	⊖ 0.0 pts
Median duration of job search⁽¹⁾ - Original	Sep 2019	18 weeks	⊖ 0 weeks	▼ -3 weeks



Questions?