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Employment by industry statistics: a quick guide

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Introduction

This guide provides a brief overview of employment by industry and lists some relevant data sources. This is one in a series of statistical quick guides, designed to provide a basic understanding of Australian labour market data. Other guides include [employment](#) and [labour force](#), which are available from the [Parliamentary Library](#) website.

Who are employed people?

The [International Labour Organization \(ILO\)](#) (p.21) describes employed people as those of working age who during a short reference period (e.g. week) engaged in any activity to produce goods or provide services for pay or profit. This includes employed persons “at work” (i.e. at least one hour) and those who were “not at work”, either temporarily, or due to working-time arrangements (e.g. shift roster). The Australian Bureau of Statistics ([ABS](#)) measure of employment is provided in the next segment and additional employment concepts and measures are available from the quick guide on [Employment statistics](#).

How is employment measured?

The ABS [Labour Force Survey](#) is designed to produce key estimates of employment (and unemployment) from a sample of approximately 50,000 people.

[Employed persons](#) are those aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in-kind, in a job or business or on a farm, or
- worked for one hour or more without pay in a family business or on a farm, or
- were employees, business owners or self-employed people who had a job but were temporarily not at work.

Note that the *Labour Force Survey* excludes some groups of people, including those living in institutions, members of permanent defence forces, certain diplomatic personnel, and overseas residents. More information is available from the [ABS](#).

Industry

Industry is a commonly used economic classification of employment. Industries are defined by the ABS through the [Australian and New Zealand Standard Industrial Classification \(ANZSIC\), 2006 \(Revision 2.0\)](#) (cat. no. 1292.0). The classification allows for the grouping of businesses that undertake similar activities, enabling integration of like businesses without duplication. A business includes any entity undertaking productive activities, including companies, not-for-profit organisations, government departments and enterprises.

ANZSIC has a hierarchical structure with four levels:

- Division (broadest level, or 1-digit)
- Subdivision (2-digit)
- Group (3-digit) and
- Class (finest level, or 4-digit).

The division level has 19 categories, each identified by a letter (A to S). Subsequent levels are labelled using numbers (two, three or four digits).

Example

Division C	Manufacturing
Subdivision 23	Transport equipment manufacturing
Group 231	Motor vehicle and motor vehicle part manufacturing
Class 2311	Motor vehicle manufacturing

Generally, most labour statistics are released at the division level, to allow some cross-classification by other characteristics, such as sex or a person's state/territory of usual residence. More detailed information on the nature and objectives, units and methods of classification are available from [ANZSIC](#) (see Chapters 2, 3 and 4).

Industry of employment

A person's industry of employment relates to the activities undertaken by the business for which they work. Where a person works in more than one job, the industry classification relates to their main job—the one in which they usually work the most hours. Since the mid-2000s, industry data has been automatically coded to an industry index from a survey participant's responses. Participants are asked to describe what kind of business or service is carried out at the place where they work. Using the previous example of motor vehicle manufacturing, a participant may include activities such as motor car manufacturing, motor vehicle assembling or fuel cell manufacturing. Participants are also asked for the name of their business or employer, to assist with coding when the activity descriptions prove difficult to match. This process however, may result in some inconsistencies, for which the ABS makes no adjustment.

What types of estimates are available?

Each month the ABS releases employment data from the [Labour Force Survey](#). The release includes trend, seasonally adjusted and original estimates of the number of people employed by a range of characteristics. The [quarterly](#) labour force release (February, May, August and November) includes estimates by industry and by occupation. Other data sources for employment by industry will be discussed elsewhere.

Industry of employment data is available in a range of tables (Excel spreadsheets) and data cubes (pivot tables), see the '[Downloads](#)' tab. The industry tables include: sex; state/territory of usual residence; sector (public/private); hours actually worked (all jobs); and underemployment.

An expanded range of variables are available via the data cubes, including:

- age
- greater capital city/balance of state
- labour market region
- status in employment (main job)
- occupation
- hours usually worked (all jobs) and
- unemployment (industry division of last job).

Note: not all of these variables are available in one table and in some cases they are split across multiple tables.

Employment by industry (head count)

Table 1 provides the number of employed people (trend) from the November quarter 2016 to the same quarter in 2017. For each industry, the percentage change reflects the difference in the number of employed people between the two periods.

1. Snapshot of employment by industry—quarterly, 2016 to 2017(a)(b)

Industry division of employment(b)	Employed people					Change in employed Nov-16 to Nov-17 (%)
	Nov-16 ('000)	Feb-17 ('000)	May-17 ('000)	Aug-17 ('000)	Nov-17 ('000)	
Agriculture, Forestry and Fishing	294.6	294.8	306.6	317.4	324.5	10.1
Mining	223.4	224.2	221.0	217.7	216.5	-3.1
Manufacturing	927.1	924.0	908.5	893.8	885.5	-4.5
Electricity, Gas, Water and Waste Services	130.1	128.0	128.1	131.1	136.7	5.0
Construction	1,075.6	1,095.1	1,121.5	1,145.9	1,167.2	8.5
Wholesale Trade	378.8	383.5	386.8	383.9	376.7	-0.5
Retail Trade	1,226.9	1,229.9	1,245.7	1,266.0	1,286.9	4.9
Accommodation and Food Services	855.7	866.2	879.9	890.6	896.1	4.7
Transport, Postal and Warehousing	606.6	611.7	623.5	636.3	646.8	6.6
Information Media and Telecommunications	210.3	213.9	215.0	215.4	215.0	2.2
Financial and Insurance Services	435.8	436.3	434.3	428.4	420.7	-3.5
Rental, Hiring and Real Estate Services	218.2	216.3	215.0	216.2	218.7	0.2
Professional, Scientific and Technical Services	1,031.0	1,028.0	1,024.4	1,030.0	1,033.0	0.2
Administrative and Support Services	433.2	422.7	409.5	403.4	401.2	-7.4
Public Administration and Safety	789.0	794.9	783.7	763.1	740.5	-6.1
Education and Training	971.0	979.5	990.2	1,006.1	1,024.3	5.5
Health Care and Social Assistance	1,540.1	1,563.2	1,602.9	1,637.6	1,663.9	8.0
Arts and Recreation Services	215.2	214.0	223.7	237.1	248.3	15.4
Other Services	480.0	482.3	494.4	510.6	524.5	9.3
Total employed	12,025.5	12,096.8	12,207.4	12,321.2	12,420.6	3.3

(a) Quarterly trend estimates. Based on a person's main job (where more than one job was held).

(b) Based on the [Australian and New Zealand Standard Industry Classification \(ANZSIC\), 2006 \(R2.0\)](#), cat. no 1292.0.

Source: ABS, [Labour force, detailed, quarterly, Nov 2017](#), cat. no. 6291.0.55.003

Share of employment (per cent)

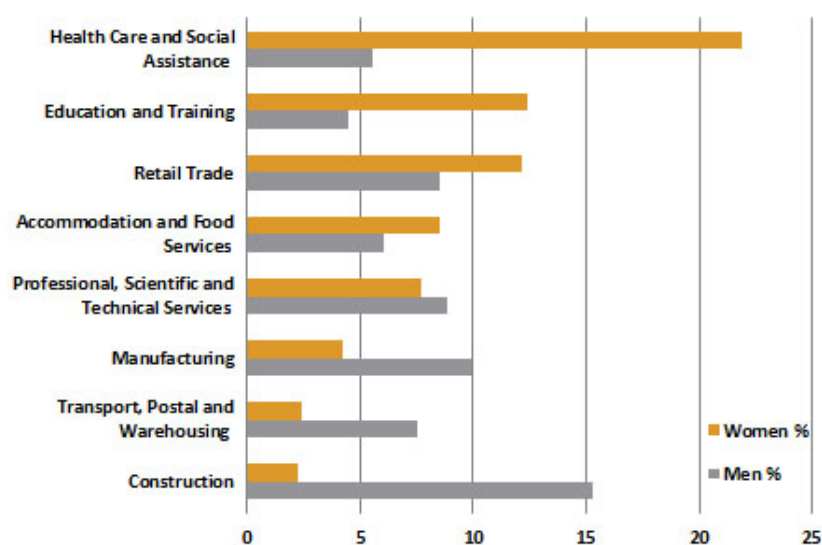
Table 2 provides the number of employed people as a share of total employment for each industry division. The calculations are based on Table 1 and reflect the same period, November 2016 to November 2017.

2. Share of employed people by industry—quarterly, 2016 to 2017(a)(b)

Industry division of employment(b)	Proportion of total employed				
	Nov-16 (%)	Feb-17 (%)	May-17 (%)	Aug-17 (%)	Nov-17 (%)
Agriculture, Forestry and Fishing	2.5	2.4	2.5	2.6	2.6
Mining	1.9	1.9	1.8	1.8	1.7
Manufacturing	7.7	7.6	7.4	7.3	7.1
Electricity, Gas, Water and Waste Services	1.1	1.1	1.0	1.1	1.1
Construction	8.9	9.1	9.2	9.3	9.4
Wholesale Trade	3.1	3.2	3.2	3.1	3.0
Retail Trade	10.2	10.2	10.2	10.3	10.4
Accommodation and Food Services	7.1	7.2	7.2	7.2	7.2
Transport, Postal and Warehousing	5.0	5.1	5.1	5.2	5.2
Information Media and Telecommunications	1.7	1.8	1.8	1.7	1.7
Financial and Insurance Services	3.6	3.6	3.6	3.5	3.4
Rental, Hiring and Real Estate Services	1.8	1.8	1.8	1.8	1.8
Professional, Scientific and Technical Services	8.6	8.5	8.4	8.4	8.3
Administrative and Support Services	3.6	3.5	3.4	3.3	3.2
Public Administration and Safety	6.6	6.6	6.4	6.2	6.0
Education and Training	8.1	8.1	8.1	8.2	8.2
Health Care and Social Assistance	12.8	12.9	13.1	13.3	13.4
Arts and Recreation Services	1.8	1.8	1.8	1.9	2.0
Other Services	4.0	4.0	4.1	4.1	4.2
Total employed	100.0	100.0	100.0	100.0	100.0

See Table 1 for notes and source information.

3. Men's and women's top five industry shares, with comparison data—2017(a)(b)(c)



(a) Annual average of four quarters of original data, February to November.

(b) Industry employment as a proportion of total male or total female employment.

(c) Only two industries were in the 'top five' for both sexes.

Source: ABS, [Labour force, detailed, quarterly, Nov 2017](#), cat. no. 6291.0.55.003

Additional ABS data sources

The ABS produces a range of supplementary labour estimates through a series of thematic releases. The most relevant of these are briefly described below.

[Characteristics of employment, August 2017](#), cat. no. 6333.0

This release contains estimates of employed people by a range of characteristics. Tables that include industry (division) mostly relate to employees (main job). Some of the variables included are:

- sex
- weekly/hourly earnings (main job)
- level of highest non-school qualification
- status in employment (whether has leave entitlements)
- form of employment (employees, independent contractors and other business owners) and
- skill level.

More detailed information may also be available through the survey's microdata release. From 2014 this survey replaced several earlier surveys, including: [Employee earnings, benefits and trade union membership](#); [Forms of employment](#); [Working time arrangements](#); [Labour mobility](#); and [Locations of work](#).

[Employee earnings and hours, May 2016](#), cat. no. 6306.0

This release contains a range of earnings estimates by various employee characteristics. Tables that include industry generally include an overall theme (rate of pay, age groups, method of setting pay and distribution of earnings) by the number of employees, average weekly total cash earnings and average age. For non-managerial employees, the industry tables also include average weekly hours paid for and average hourly total cash earnings. For full-time non-managerial employees paid at the adult rate, estimates by industry subdivision are available for weekly and hourly earnings by sex.

[Average weekly earnings, Nov 2017](#), cat. no. 6302.0

This release contains limited data on employees by industry, including: full-time adult ordinary time earnings, full-time adult total earnings and total earnings, each by sex.

Economic indicators

The ABS also produces a range of products to provide economic indicators of business activity. The most relevant is [Australian Industry, 2015-16](#) (cat. no. 8155.0). This release includes estimates of employment and business activities, such as income, expenses, operating profit before tax, depreciation, and industry added value. Table 1 provides time series information on each industry division from 2006–07 (note that some data sets start later than this). Table 2 provides the same details by industry subdivision. There are also several special releases, covering Manufacturing, Mining, and Professional, scientific and technical services.

Tourism sector

'Tourism' is not an industry in the conventional sense, in that it does not fit neatly into a specific classification within ANZSIC. Whether the production is included in the scope of tourism (or not) depends on the characteristics of the consumer. For example, expenditure on a restaurant meal by a visitor contributes to tourism's share of the economy, whereas expenditure by a local resident at the same restaurant does not. More information surrounding the concept of 'tourism', and the components included within the sector, is provided in the 2012 ABS Year Book article, [Tourism industry](#) (cat. no. 1301.0).

Estimates of employment are provided in the annual release, [Australian National Accounts: Tourism Satellite Account](#) (cat. no. 5249.0). However, the ABS advises that the intent of the collection is to provide information on the contribution of the 'industry' to the overall production of goods and services in the economy (e.g. GDP measured by gross value added) and that estimates of employment in the sector are merely a by-product of this process.

Other data sources

Workplace Gender Equality Agency data set

The Workplace Gender Equality Agency (WGEA) data set draws on reports submitted by employers, covering four million employees across Australia. In 2016–17 the data represented approximately **40% of the total labour force**. A key strength of the data set is that information on all people employed by a business is included. A limitation of the data is that it only represents non-public sector employers with 100 or more employees who are required to report under the *Workplace Gender Equality Act 2012*. It therefore excludes the public sector, small organisations and many medium sized organisations. The [Data Explorer](#) is an interactive website that provides a platform for the data to be interpreted through key themes, including **industry** and gender equality. [Summary information](#) explains the concepts used and assists in interpreting the data.

Department of Jobs and Small Business

The Department publishes a number of industry reports through their [Labour Market Information Portal](#), see 'Gain insights' > '[Industry information](#)'. The reports provide a range of ABS and Departmental data. For example, 'Manufacturing' provides summary employment data, including the full-time share of employment, average full-time hours, gender split, growth and projected growth. The report also provides the 'Top 10 occupations' for the industry and links to supporting information (e.g. vacancy report). The Department's [Job outlook](#) portal provides industry divisions by detailed (unit group) [occupations](#). For example, Manufacturing includes the following types of jobs: Aircraft maintenance engineers, Cabinetmakers, Chemists and food and wine scientists, Clothing trades workers, Forklift drivers, Printers, Technical sales representatives, as well as many others.

The Department provides employment data for smaller geographical areas, including ABS Labour force regions (Statistical Area Level 4, SA4) and Employment regions (Centrelink framework), through the [Labour Market Information Portal](#). The dashboard summary provides key indicators: working age population (15–64 years); employment rate (15–64 years); participation rate (15+ years); unemployment rate (15+ years); and youth unemployment rate (15+ years). Note: the rates for people aged 15 plus align with ABS labour force releases. For each region there are also charts and maps, downloadable summary data (Excel), industry and occupation data.

Australian Computer Society – ICT workers

Since 2015, the Australian Computer Society (ACS) has published an annual snapshot of the digital economy and workforce in the report, [Australia's digital pulse](#). From 2009 to 2013, the ACS published similar information in [Australian ICT Statistical Compendium](#). Included in the reports are estimates of employment (ABS data), workforce skills, ICT workers by industry, ICT job advertisements, worker mobility, diversity of ICT workers, future demand for ICT workers, university students enrolled in ICT (and their characteristics) and migration of ICT workers (including temporary skilled migrants). The report also includes a range of business indicators, such as the contribution of digital technologies to GDP, trade and investment in ICT, spending on R&D, innovation and start-ups.

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