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PREFACE

Skill Shortages Australia is a six monthly publication that reports on the results of ongoing skill shortage research undertaken by the Department of Employment (and its predecessors) through its national and state/territory offices. It is current at the end of June 2014.

As part of the department's skill shortage research programme in 2013-14, the labour market for more than 100 occupations was assessed through contact with more than 5100 employers and recruitment agents using the Survey of Employers who have Recently Advertised (SERA), consultation with key industry and occupational associations and consideration of a range of other data sources.

This edition of *Skill Shortages Australia* provides an overview of the department's research and contextual information about the Australian labour market. The department's state and territory skill shortage lists, occupation cluster reports and individual occupational reports complement this publication. Links are included throughout the report to more detailed analysis.

The skill shortage research programme has been undertaken continuously for more than three decades. While some occupational labour markets are cyclical, responding relatively quickly to changes in economic conditions, for some skilled occupations shortages have been relatively persistent, even during periods in which the economy has been slowing.

Ratings of shortage reflect employers' recruitment experience for average experienced workers (noting that the level of experience varies across occupations, but generally suggests around 3 to 5 years). Definitions of the ratings can be found in the technical notes.

Skill shortages can coexist with relatively high levels of unemployment and sometimes shortages are restricted to occupations requiring experienced workers or those which need specialist skills. Shortages can result from a number of factors including low levels of training, high levels of wastage, changes in technology, increasing demand for new skills within an occupation and locational mismatch, where workers who have the skills are not in close proximity to the employers seeking those skills.

Further information about the methodology as well as lists of skill shortages are published at employment.gov.au/skillshortages.

EXECUTIVE SUMMARY

- *Employers continue to recruit skilled workers without marked difficulty, and the number of occupations in shortage is at an historical low[1].*
- *In 2013-14, there were generally large fields of applicants vying for skilled jobs and employers filled a high proportion of their vacancies.*
    - *There is now little disparity between employers' recruitment experiences across the states and territories due, in part, to the slowing activity in the resources states.*
    - *Employers in regional locations still have more difficulty recruiting skilled workers than those in metropolitan areas, but most fill their vacancies readily, and the gap has narrowed.*
- *Shortages are more evident for trades (with 18 in shortage) than for professions (5).*
    - *University graduate employment outcomes have weakened in recent years and labour markets for professionals are generally more than adequately supplied.*
    - *While shortages of trades workers have abated in the past few years, this easing has not been to the same extent as that for professionals.*
    - *Vacancy levels have increased more strongly over the past year for technicians and trades workers than they have for professionals. Vacancies increased by 9.5 per cent for professionals but increased by 17.1 per cent for technicians and trades workers over the year to June 2014. Nonetheless, employment growth for professionals continues to outstrip that for technicians and trades workers, rising by 1.1 per cent (or 27,100) over the year to May 2014 compared with an increase of 0.7 per cent (or 12,200) for technicians and trades workers.*
- *A significant proportion of surveyed vacancies remained unfilled[2] and the reasons were varied.*
    - *Many of these vacancies attracted multiple qualified applicants but they did not meet employers' precise requirements.*
    - *A number of vacancies attracted applicants who were suitably skilled but employers opted to defer recruitment until they attracted their 'ideal' candidate.*
    - *Some employers and preferred applicants were unable to agree on the terms and conditions of employment.*
    - *Around 4 per cent of employers did not attract any applicants.*

[1] Relates to the current data series which began in 2006-07.

[2] The department measures whether vacancies were filled six weeks after advertising for professions and four weeks for trades.

OVERVIEW

Skill shortages

The Department of Employment's skill shortage research programme, the core of which is a methodology based on a sample Survey of Employers who have Recently Advertised (SERA), has two components which provide different kinds of intelligence about the labour market for skilled workers.

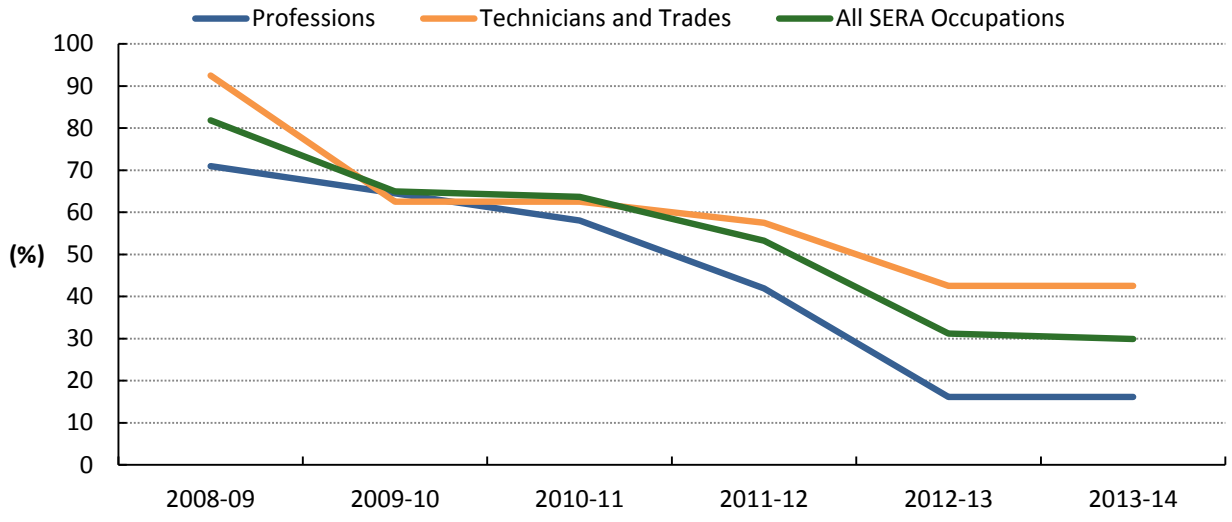
- The first is the quantifiable data about employers' recruitment experiences from the SERA questions, including the proportion of vacancies filled and the average number of applicants and suitable applicants per vacancy. Using these data affords historical comparisons and allows analysis across states and territories, and occupations.
- The second is the qualitative information obtained from the discussions with employers and recruitment professionals, as well as consideration of information and research from external agencies, including industry bodies and educational organisations. While largely anecdotal, consistent commentary about some key issues can be identified across the more than 5100 contacts in 2013-14. For example, reasons for applicants' unsuitability and factors which make it easy or difficult to fill vacancies.

How extensive are skill shortages

Skill shortages are not a feature of the Australian labour market, with fewer occupations in shortage than at any time since the department's series began in 2006-07, but conditions are not markedly different than they were in 2012-13.

- Shortages are very limited both geographically and by occupation, but are more evident for trades (with 18 in shortage) than for professions (5).

Figure 1: Proportion of occupations in shortage, Professions, Technicians and Trades and All SERA Occupations, 2008-09 to 2013-14 (%)



Source: Department of Employment, Skill shortage research programme

Note: Based on the set of around 80 occupations which have been regularly assessed as part of the department's skill shortage research programme between 2008-09 and 2013-14.

Commentary and data from other sources support the view that skill shortages are not currently a key concern for Australian employers. In particular,

- The Australian Chamber of Commerce and Industry's Survey of Investor Confidence[3] does not rank 'availability of suitably qualified workers' in the top 10 constraints on investment. It was continuously one of the top two ranked constraints between January 2004 and December 2008.
- Key findings of the Australian Institute of Management's 2014 National Salary Survey[4] suggest a weakening in demand for labour and forecast sluggish pay increases in the year ahead. Only 43 per cent of large companies said they expected permanent staff numbers to increase in the next 12 months (down from 46 per cent in 2013).
- The Clarius Skills Indicator[5] estimates that, in relation to the 10 occupational categories it specifically assesses, there was a surplus of 34,700 skilled workers at March 2014.
- Graduate Careers Australia figures from the 2013 Graduate Destinations Survey[6] show that employment outcomes for bachelor degree graduates are at their lowest level since 1993.

What the numbers tell us

Statistical results from the SERA point to an easing in the labour market for skilled workers in 2013-14, with employers filling a record[7] proportion of their surveyed vacancies and attracting larger fields of candidates.

There were generally strong fields of applicants vying for skilled jobs in terms of overall size, as well as the numbers of qualified and suitable applicants.

- The number of suitable applicants has not changed markedly over the past few years, but qualitative information from employers suggests they are now more selective, overlooking some applicants who would have been considered suitable in a tighter labour market.
- Almost all employers attract applicants. Just 4 per cent did not receive any interest in their vacancies in 2013-14.

There is now little disparity between employers' recruitment experiences across the states and territories, with slower activity in the resources states and a pickup in activity in some sectors in New South Wales.

- Resource related occupations were the hardest to fill in 2012-13 but are now among the easiest, with large numbers of applicants competing for the available positions.

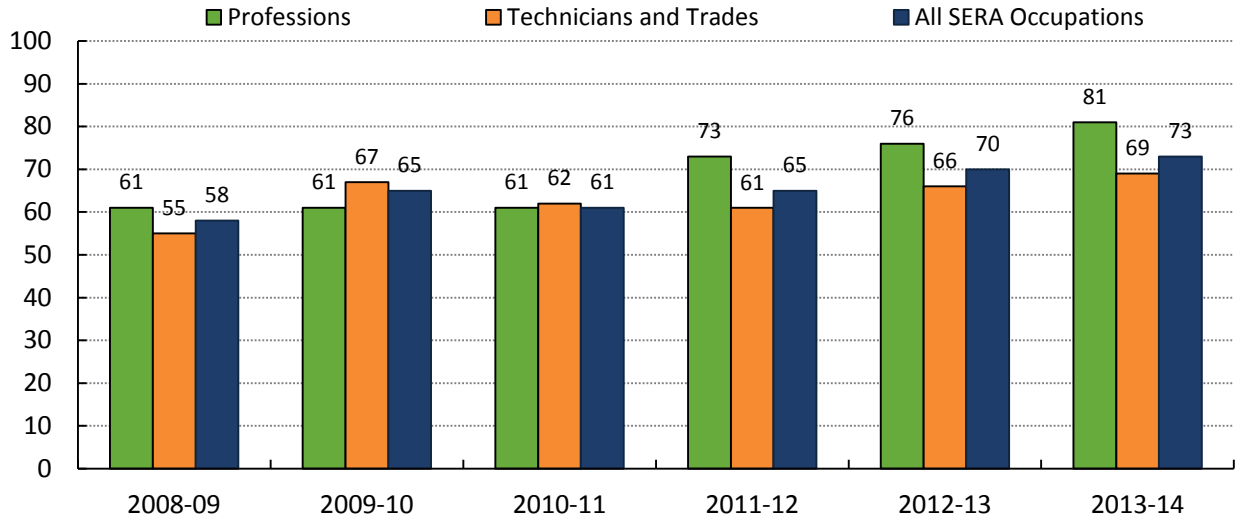
The most notable issue raised by the statistical results of the Survey of Employers who have Recently Advertised is the 20 percentage point rise in the proportion of vacancies filled for professionals since 2010-11 and the very large numbers of applicants and suitable applicants for these vacancies.

[3] Australian Chamber of Commerce and Industry, *Survey of Investor Confidence*, July 2014
[4] Australian Institute of Management, www.aim.com.au/pay-growth-lagging-downward-trend-forecast-continue (accessed 10 June 2014)
[5] Clarius Group, *Clarius Skill Indicator*, March 2014
[6] GCA, *GradStats*, 2013
[7] Relates to the current data series which began in 2006-07.

- By comparison, the proportion of vacancies filled for technicians and trades workers has risen by 7 percentage points since 2010-11. The numbers of applicants and suitable applicants for these positions (although rising over the period) remained considerably lower than for professionals in 2013-14 (11.7 applicants per vacancy on average compared with 19.6 for professionals, and 1.6 suitable applicants compared with 3.0).

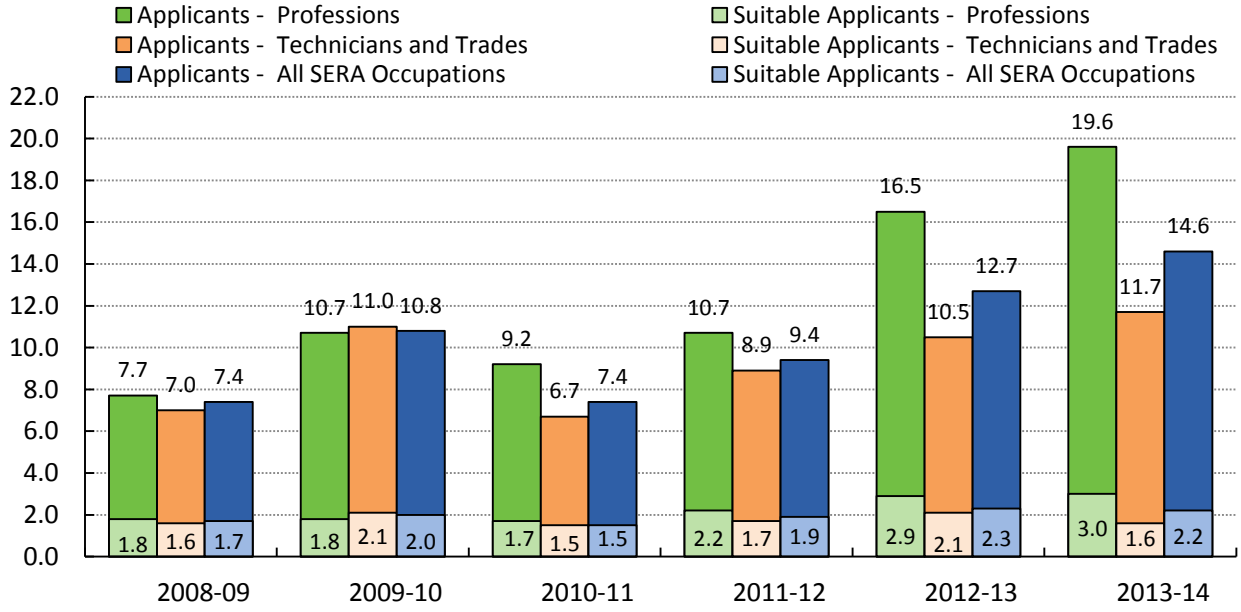
The national, state and territory *Skill Shortage Lists* provide information about occupations for which there are shortages or recruitment difficulties.

Figure 2: Proportion of vacancies filled, Professions, Technicians and Trades and All SERA Occupations, 2008-09 to 2013-14 (%)



Source: Department of Employment, Survey of Employers who have Recently Advertised

Figure 3: Average number of applicants and suitable applicants per vacancy, Professions, Technicians and Trades and All SERA Occupations, 2008-09 to 2013-14 (no.)



Source: Department of Employment, Survey of Employers who have Recently Advertised

More detailed analysis is available in the following chapters: Skill shortages by location and Skill shortages by occupation.

Intelligence from discussions

Employers' comments further highlight the softening in labour market conditions for skilled workers, with

- some vacancies being withdrawn due to low levels of activity or lack of funding
- less urgency to fill vacancies, with a number of employers willing to wait for their 'ideal' candidate
- some leaving vacancies unfilled because they could not reach agreement with preferred candidates on the terms and conditions of employment.

Interestingly, a number of employers noted that they attracted experienced workers for vacancies which were for junior or entry level positions. In past years, shortages have been evident for experienced workers despite some surplus of recent graduates, but the labour market is now more readily supplied across skill and experience levels.

- That said, shortages of workers with particular experience persist in a number of occupational labour markets, and positions requiring extensive experience are generally more difficult to fill.

Demand and supply trends

The following information provides some context for the results of the skill shortage research and assists in understanding the demand and supply influences on the labour market for skilled workers. Further analysis of the labour market is provided in Appendix 1.

Employment

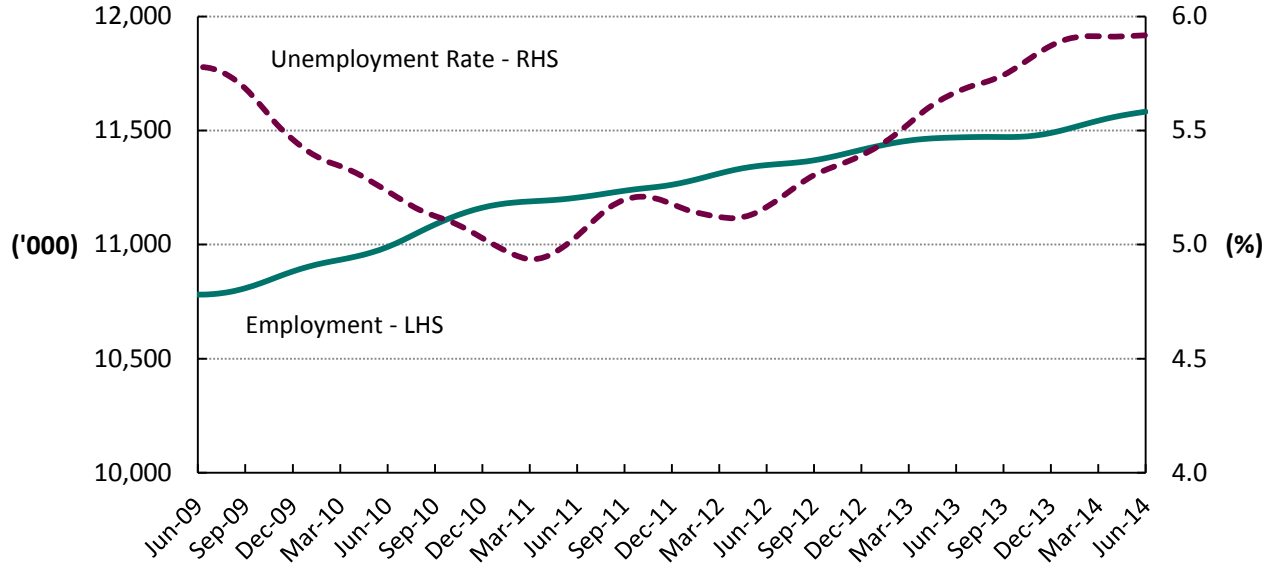
Against the backdrop of below trend global growth, labour market conditions in Australia continued to soften over the year to June 2014. In trend terms[8]

- the pace of growth has slowed considerably, with employment increasing by 1.0 per cent over the year, well below the annual average growth rate over the past decade of 2.0 per cent.
- the unemployment rate rose by 0.2 percentage points to 5.9 per cent [9].
- the participation rate fell by 0.3 percentage points to 64.7 per cent.

A number of forward indicators of labour demand suggest conditions will remain subdued over the short term, with Treasury forecasting modest employment growth of 1.5 per cent over 2014-15, with the unemployment rate edging up to 6.25 per cent by June 2015[10].

[8] ABS, *Labour Force Survey,* June 2014
[9] The unemployment rate in seasonally adjusted terms, which is more commonly cited, rose by 0.3 percentage points over the year, to stand at 6.0 per cent in June 2014.
[10] The Treasury, *Budget papers,* May 2014

Figure 4: Employment ('000) and unemployment rate (%), Australia, June 2009 to June 2014



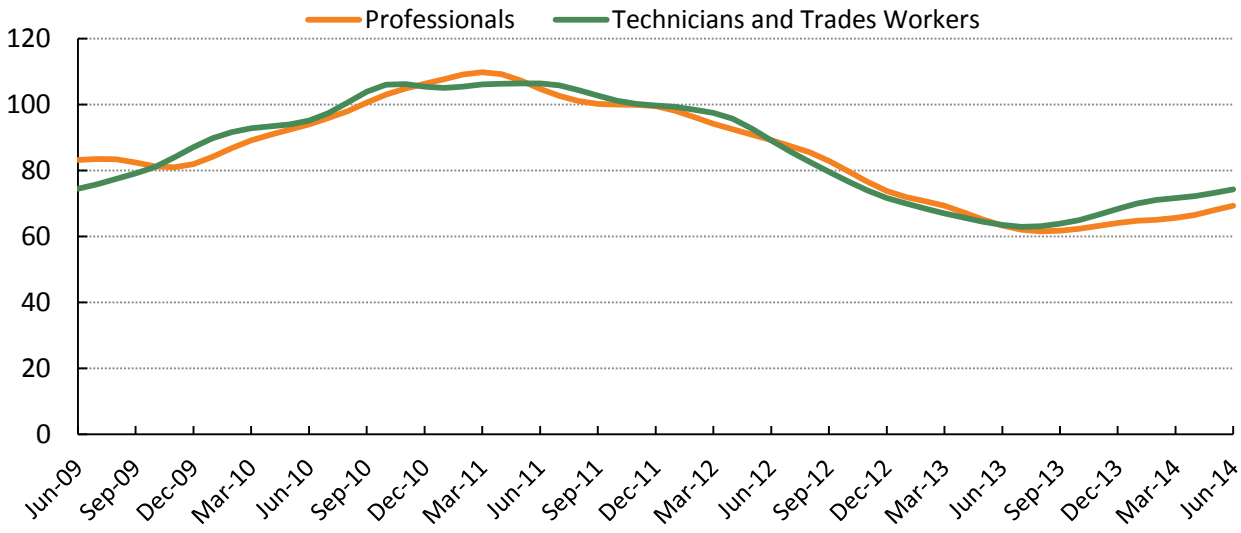
Source: ABS, Labour Force, trend

Vacancies

Although the labour market for skilled workers remains subdued, the Internet Vacancy Index (IVI) for skilled occupations rose by 12.6 per cent over the year to June 2014[11]. That said, it remains 55.1 per cent below the peak recorded in April 2008.

- Vacancy levels increased by 17.1 per cent for technicians and trades workers and by 9.5 per cent for professionals.
- Vacancies rose in 18 of the 20 skilled occupational groups over the year to June 2014.
  - The strongest increases were for construction trades (up by 41.6 per cent) and medical practitioners and nurses (40.4 per cent).
  - Falls were recorded for two groups, engineers (down by 28.4 per cent) and science professionals and veterinarians (20.8 per cent).

Figure 5: Internet Vacancy Index, Professionals and Technicians and Trades Workers, June 2009 to June 2014



Source: Department of Employment, Internet Vacancy Index, trend, January 2006=100

[11] Department of Employment, *Internet Vacancy Index*, June 2014, trend

Training trends

In 2013, there were more than 985,000 domestic students enrolled with a higher education provider[12] and there were 1.85 million domestic students in the vocational education and training system[13].

There was markedly stronger growth in higher education enrolments over the five years to 2013 (up by 27.7 per cent) compared with 11.2 per cent for vocational education and training.

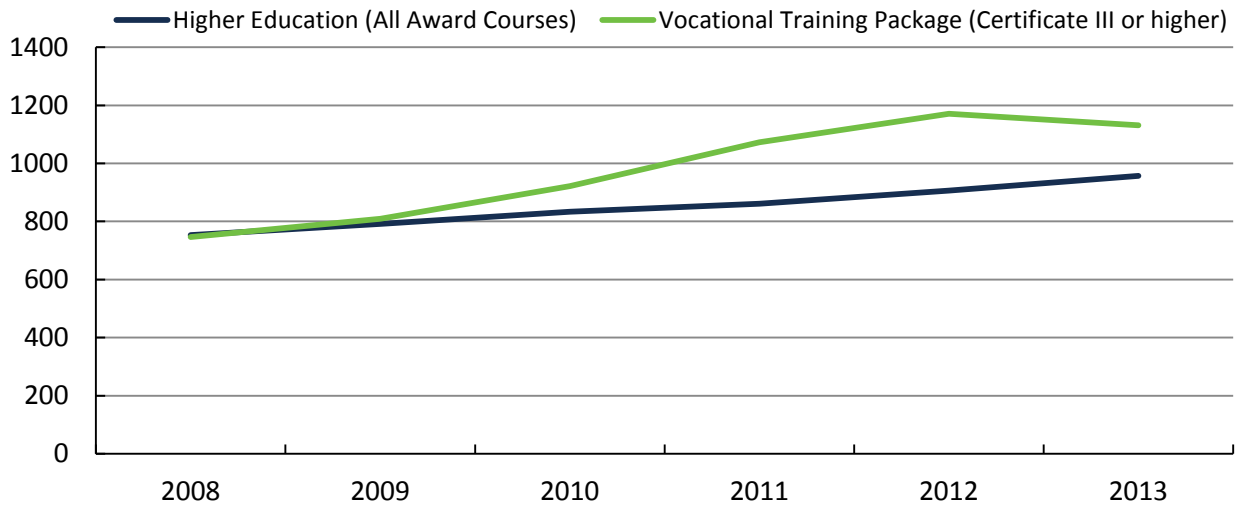
Over the year to 2013, however, the number of students undertaking vocational education has fallen (for almost all qualification levels) while higher education continues to grow strongly.

- In 2013, there were 3.4 per cent fewer domestic students in vocational education and training than in 2012.
- Higher education has continued to expand, with an increase of 5.5 per cent from 2012. There was strong growth at both the undergraduate and postgraduate levels (up by 5.8 per cent and 5.1 per cent, respectively).

Higher education award courses and VET enrolments at the certificate III and higher level provide information about supply to skilled labour markets. Looking at these data, the trends vary across the fields of education between the two training sectors.

- Of note is the strong growth in Health across both training sectors over the five years to 2013. Over the year, however, Health enrolments fell in the VET sector, while they continued to expand in the higher education sector.

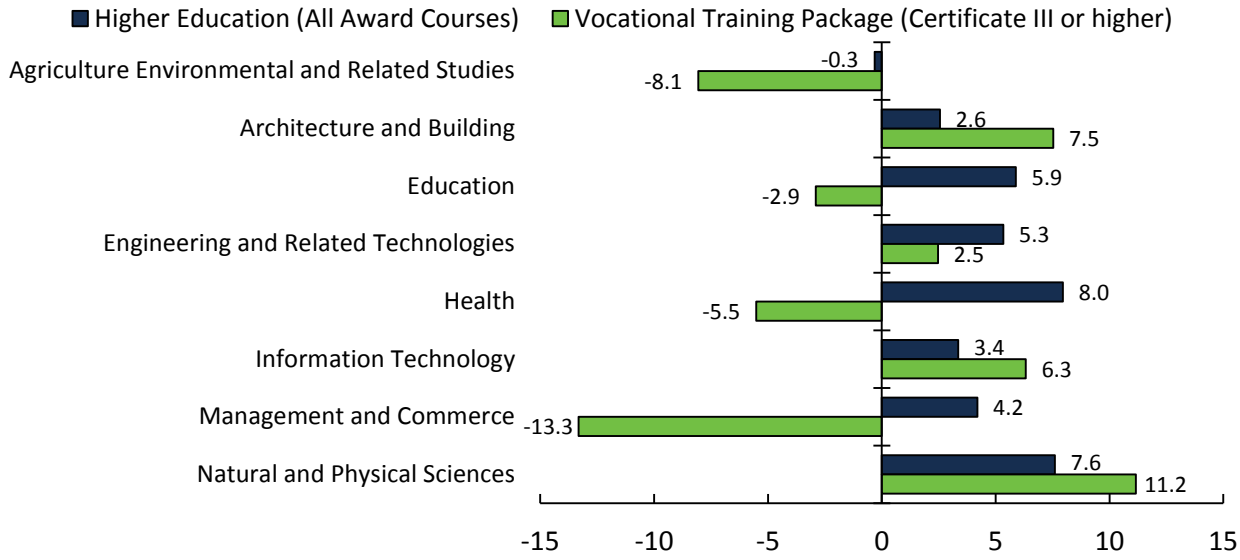
Figure 6: Enrolment numbers, Higher Education and Vocational Education and Training, 2008 to 2013 ('000)



Sources: Department of Education, Higher Education Student Data Collection and NCVER, Students and Courses
Note: Higher education data exclude enabling and non-award courses. Vocational education and training data restricted to those undertaking a training package at certificate III level or higher.

[12] Department of Education, *Higher Education Statistics Data Cube*, 2013
[13] NCVER, *Students and Courses*, 2013 (data are for publicly funded providers only)

Figure 7: Change in enrolments, Selected fields of education, Higher Education and Vocational Education and Training, 2012 to 2013 (%)



Sources: Department of Education, Higher Education Student Data Collection and NCVER, Students and Courses

Note: Higher education data exclude enabling and non-award courses. Vocational education and training data are restricted to those undertaking a training package at certificate III level or higher.

Future tertiary education numbers may be affected by issues currently under consideration.

- A review of the demand driven funding system for education was commissioned by the Australian Government in November 2013. The report[14] makes 19 findings and provides 17 recommendations that are being considered by the government.
- The Australian Government has established a taskforce to work with industry and the training sector to identify opportunities for reform in the vocational education and training sector[15], with state and territory ministers agreeing on a range of objectives for the reform in April 2014[16]. These reforms should see greater emphasis placed on national priorities and qualifications streamlined.

Higher education

While enrolments in higher education provide a stock of students currently studying, it is also important to note commencement and completion numbers as they provide a measure of flow of new domestic supply into the labour market.

Overall, commencements and completions[17] increased steadily over the five years to 2013, up by 34.8 per cent and 22.5 per cent, respectively.

- Over the year to 2013, commencements rose by 5.6 per cent and completions were 6.5 per cent higher.

In line with the increasing demand for health professionals, there has been strong growth in the broad field of Health, with commencements up by 48.6 per cent over the past five years and completions rising by 40.8 per cent.

- Commencements and completions both continued to increase strongly over the year to 2013, up by 8.8 per cent and 10.2 per cent respectively.

[14] *Review of the Demand Driven Funding System*, 2014
[15] Department of Industry, www.vetreform.industry.gov.au/home (last accessed 23 July 2014)
[16] CISC, *Communique for the COAG Industry and Skills Council Meeting - 3 April 2014*
[17] Department of Education, *Higher Education Statistics Data Cube*, 2013

Reflecting the shortages which persisted for engineers until 2012 and the rapid growth of mining as a career destination over much of the past decade, Engineering and Related Technologies recorded strong increases in commencements and completions over the five years to 2013 (up by 37.5 per cent and 27.6 per cent, respectively).

- Commencements continued to grow in 2013, up by 8.9 per cent, the largest rise across all broad fields of education.
- Completions also rose, up by 4.9 per cent in 2013.

Apprenticeships and traineeships

While apprenticeships and traineeships make up a relatively small proportion of the vocational education and training system, they are the main training pathway for trades. Looking at the apprenticeship and traineeship figures[18] for certificate III and higher qualifications (the main entry level for skilled jobs) shows a fall in commencements in 2013 (down by 26.0 per cent), the first since 2009, although completions increased marginally (up by 0.5 per cent).

Importantly, though, commencements for technicians and trades workers at the certificate III and higher qualification level rose by 2.5 per cent.

- Increases were evident for four technicians and trades workers groups (see Figure 8), but were driven by strong growth in commencements for electrotechnology and telecommunications trades workers (up by 32.9 per cent or 4210).
- Also of note was an increase in construction trades training in 2013 (up by 4.9 per cent or 820).
    - This rise does not, however, offset the fall of 7620 commencements (or 31.3 per cent) over the two years to 2012, and construction trades commencements remain at low levels.

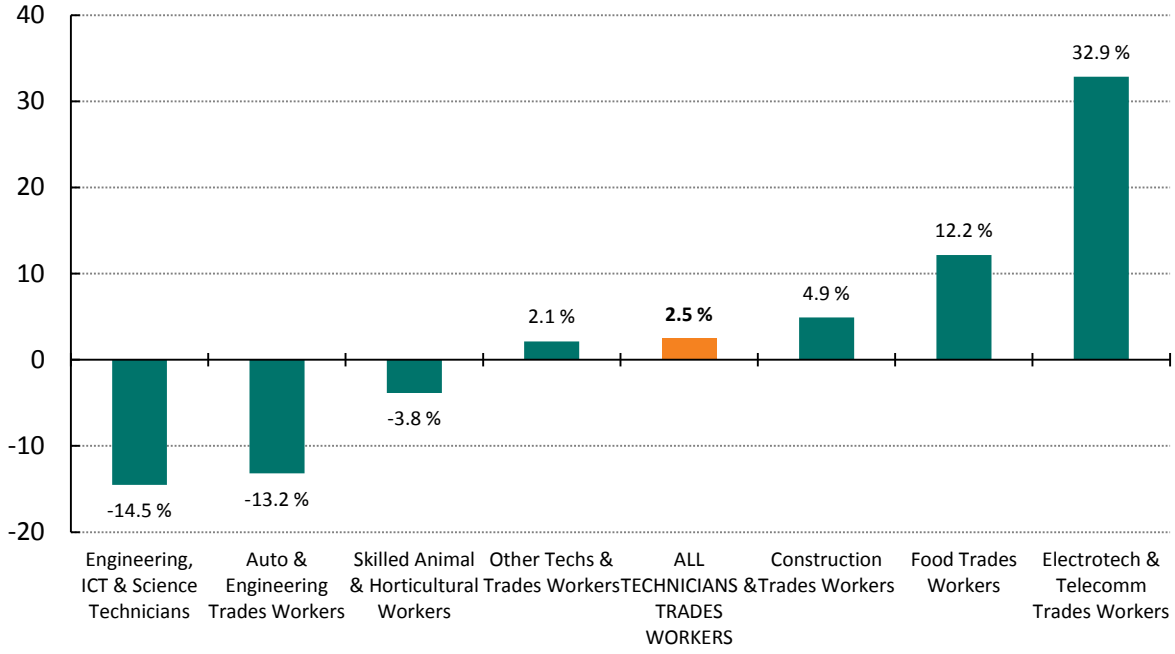
Commencements decreased for three of the technicians and trades workers groups in 2013.

- The largest fall was for engineering, ICT and science technicians (down by 14.5 per cent or 1270).
- Lower commencements were also evident for automotive and engineering trades workers (down by 13.2 per cent or 2830).

Low apprentice and trainee numbers has been raised as a concern by a number of employers surveyed by the department, as well as the Master Builders Australia and the Australian Chamber of Commerce and Industry[19].

[18] NCVER, *Apprentices and Trainees*, 2013, estimates
[19] Weekend Australian, *Training drought sparks skills fear*, 14 June 2014

Figure 8: Change in commencements, Technicians and Trades Workers, Certificate III and higher, 2012 to 2013 (%)



Source: NCVER, Apprentices and Trainees, December 2013, estimates, certificate III or higher VET qualification

More detailed analysis of training trends is provided in each of the national occupational cluster reports.

Graduate employment

Employment outcomes for graduates have weakened over the last five years.

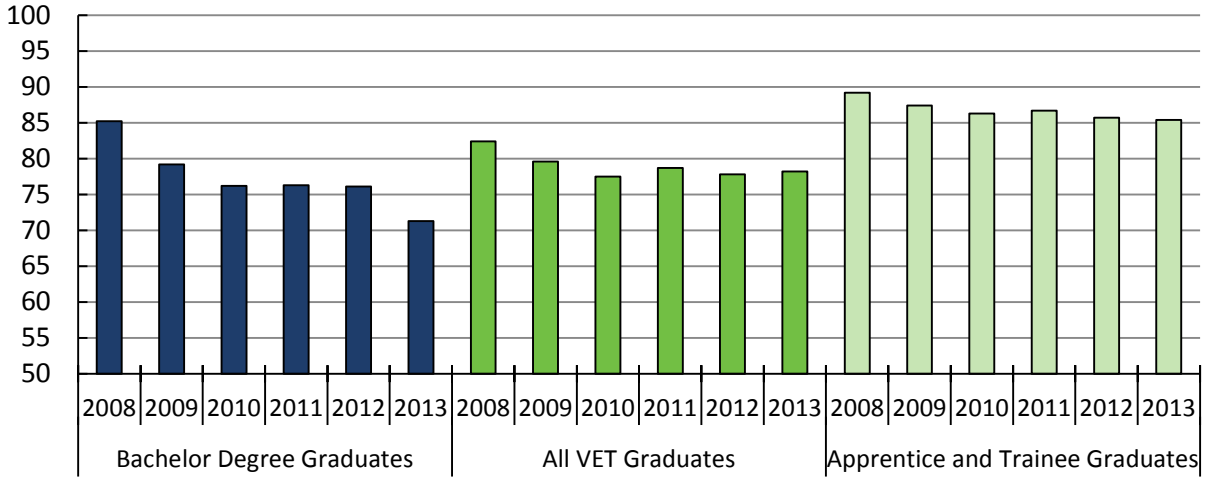
- In 2013, 71.3 per cent of bachelor degree graduates found full-time employment within four months of graduating. This is 13.9 percentage points lower than in 2008[20], and the lowest level since 1993.
- In 2013, 78.2 per cent of all vocational education and training graduates were employed (full-time or part-time) six months after completing their training. The proportion is 4.2 percentage points lower than in 2008[21].
    - About 85.4 per cent of those who undertook their training as part of an apprenticeship or traineeship were employed (full-time or part-time) six months after completing their training, down by 3.8 percentage points since 2008[22].

[20] GCA, *GradStats*, various issues. The figure is as a proportion of those who were available for full-time work and working full-time within four months of graduation

[21] NCVER, *Student Outcomes*, various issues (data combined for two survey periods)

[22] ibid

Figure 9: Proportion of graduates in employment, Bachelor Degree, Vocational Education and Training (VET) and Apprentices and Trainees, 2008 to 2013 (%)



Sources: GCA, GradStats and NCVER, Student Outcomes
Employment outcomes are for bachelor degree graduates four months after completing their studies (working full-time as a proportion of those available for full-time employment) and for all vocational education and training and apprentice and trainee graduates six months after completing their training (working full-time or part-time as a proportion of all graduates).

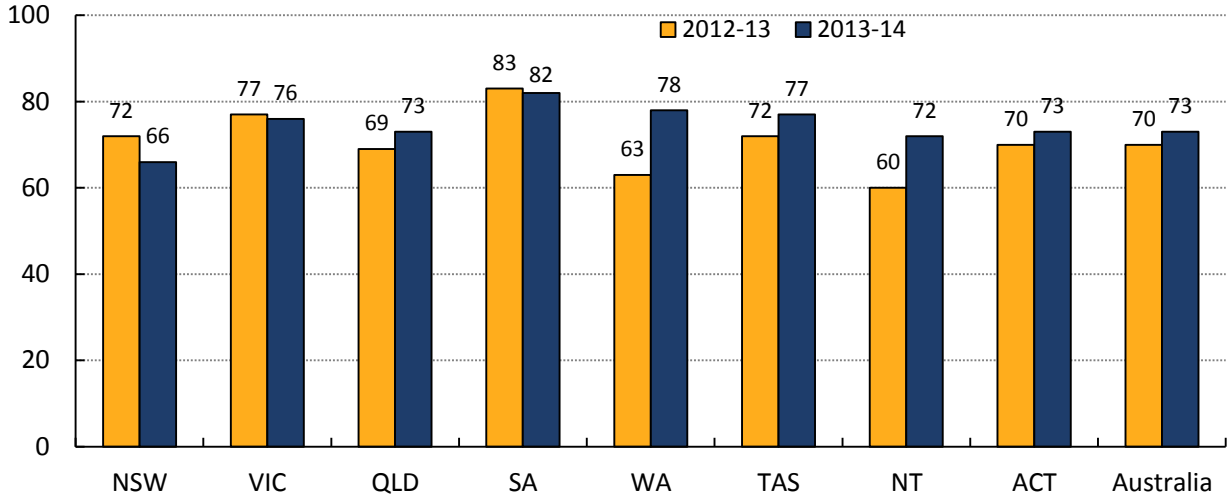
SKILL SHORTAGES BY LOCATION

States and territories

There is now little disparity between employers' ability to fill their vacancies across the states and territories, as resources activity has slowed.

- In 2013-14, the lowest proportion of vacancies was filled in New South Wales (66 per cent), while employers in South Australia had the least difficulty (filling 82 per cent).
    - Of note is the fact that a higher proportion of vacancies was filled in Western Australia (78 per cent) than the national average (73 per cent).

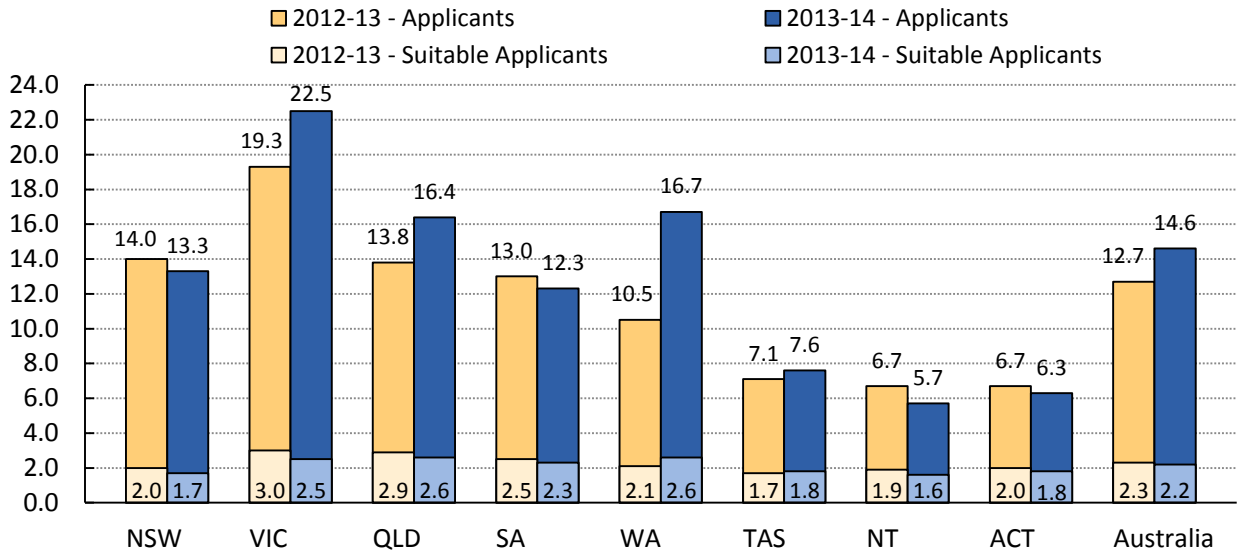
Figure 10: Proportion of vacancies filled by location, States and Territories, 2012-13 and 2013-14 (%)



Source: Department of Employment, Survey of Employers who have Recently Advertised

- Looking over the longer term highlights the marked difference in employers' ability to fill vacancies in the resources states between the peak demand period of 2007-08 and 2013-14.
    - There was a 36 percentage point rise in the proportion of vacancies filled in Queensland between 2007-08 and 2013-14, and a similar rise in Western Australia, compared with the national increase of 24 points. There was almost no change, though, in New South Wales and a relatively small increase in Victoria (16 percentage points).
- Applicant numbers for advertised skilled vacancies are significantly more varied by location, with employers in Victoria attracting particularly large fields.
    - Despite attracting higher numbers of applicants for their vacancies, employers in Victoria had similar numbers of suitable applicants per vacancy to those in states such as Queensland, South Australia and Western Australia.
    - In 2013-14, the lowest number of suitable applicants per vacancy was in the Northern Territory (1.6 per vacancy on average).

Figure 11: Average number of applicants and suitable applicants per vacancy, States and Territories, 2012-13 and 2013-14 (no.)



Source: Department of Employment, Survey of Employers who have Recently Advertised

Metropolitan and regional locations

There is little difference in the proportion of vacancies filled between regional and metropolitan locations[23].

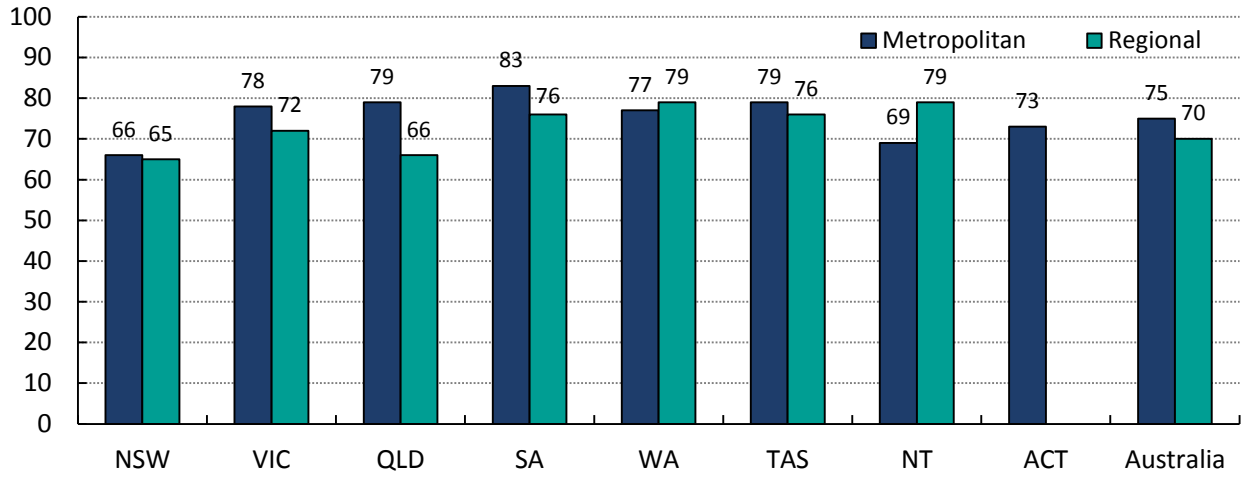
- The gap in the proportion of vacancies filled between the two areas has narrowed over the past year, likely reflecting the greater competition for skilled vacancies and the need for applicants to extend their job search across a broader geographic area.

Overall applicant numbers are markedly higher for skilled jobs in metropolitan locations but there is no appreciable difference in the number of suitable applicants per vacancy.

- Interestingly, there were larger numbers of suitable applicants for each vacancy (on average) in the regional areas of South Australia and Western Australia than there were for vacancies in any other location. This most likely reflects the more advantageous pay and conditions offered in mining locations, particularly in Western Australia, combined with a reduction in opportunities in those areas.

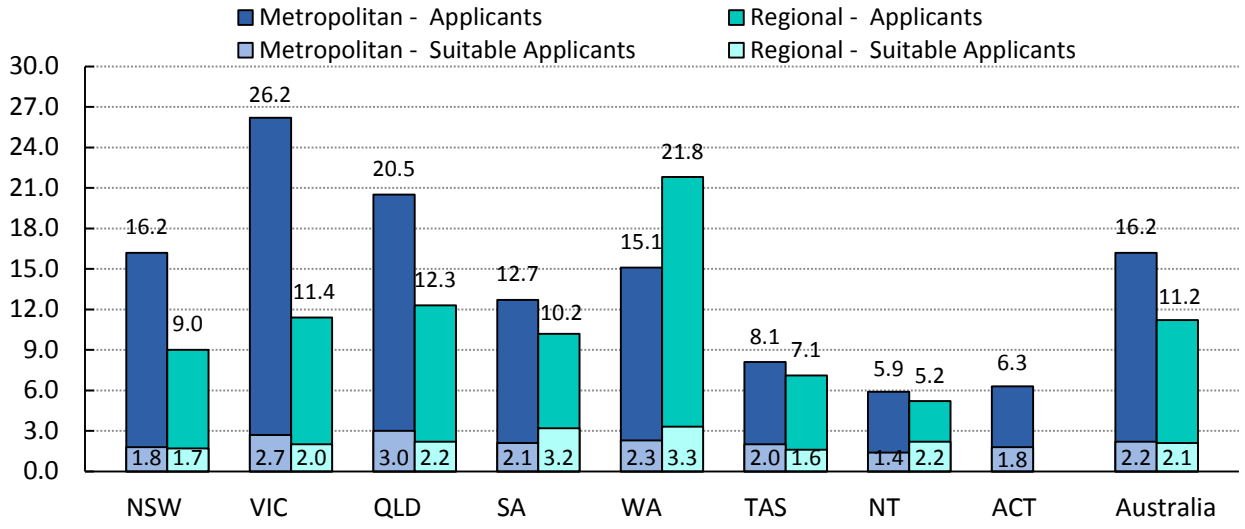
[23] Metropolitan locations are defined as state and territory capital cities, but also include the Gold Coast. All other locations are considered to be regional.

Figure 12: Proportion of vacancies filled, Metropolitan and Regional, 2013-14 (%)



Source: Department of Employment, Survey of Employers who have Recently Advertised

Figure 13: Average number of applicants and suitable applicants per vacancy, Metropolitan and Regional, 2013-14 (no.)



Source: Department of Employment, Survey of Employers who have Recently Advertised

Table 1: Results summary by location for 2013-14

	Proportion of vacancies filled (%)		Average number of applicants (suitable applicants) per vacancy		Annual labour market change
	2013-14	Annual change	2013-14	Annual change	
States and Territories					
New South Wales	66	-6	13.3 (1.7)	-0.7 (-0.3)	↓
Victoria	76	-1	22.5 (2.5)	3.2 (-0.5)	⇔
Queensland	73	4	16.4 (2.6)	2.6 (-0.3)	↑
South Australia	82	-1	12.3 (2.3)	-0.7 (-0.2)	⇔
Western Australia	78	15	16.7 (2.6)	6.2 (0.5)	↑
Tasmania	77	5	7.6 (1.8)	0.5 (0.1)	↑
Northern Territory	72	12	5.7 (1.6)	-1.0 (-0.3)	**M**
Australian Capital Territory	73	3	6.3 (1.8)	-0.4 (-0.2)	⇔
Metropolitan and Regional					
Metropolitan	75	2	16.3 (2.2)	1.7 (-0.3)	⇔
Regional	70	4	11.2 (2.1)	2.5 (0.1)	↑
AUSTRALIA	**73**	**3**	**14.6 (2.2)**	**1.9 (-0.1)**	⇔

Source: Department of Employment, Skill shortage research programme
Key: ↑ = easing labour market ↓ = tightening labour market ⇔ = relatively stable labour market M = mixed indicators

SKILL SHORTAGES BY OCCUPATION

Skill shortages currently exist in an historically low number of occupational labour markets, but there are some marked differences in employers' ability to recruit skilled workers across occupational groups.

Professions

Significantly more jobs have been created for professionals over the past decade (653,700 or 34.5 per cent growth compared with 240,800 or 16.8 per cent for technicians and trades workers). The growth rate for professionals exceeded the all occupations average of 21.6 per cent over this period.

Interestingly, though, there are much larger numbers of applicants and suitable applicants for professional vacancies than there are for technicians and trades worker vacancies, and employers fill higher proportions of their professional vacancies. This suggests that the growth in supply to the professions is outstripping demand.

- Future employment growth is also expected to be greater for professionals[24], with a projected increase of 270,800 or a rise of 10.5 per cent over the five years to November 2018, compared with a rise of 90,300 or 5.3 per cent for technicians and trades workers.
- The Department of Education[25] projects that there will be 784,000 full-time equivalent domestic enrolments in higher education in 2017-18 (up from 696,000 in 2013-14) and 222,000 undergraduate completions (compared with 197,000). It notes also that employment outcomes for graduates are likely to soften further with an expected 69.9 per cent of higher education graduates in full-time employment in 2017-18.

Vacancies for professionals generally attract large fields of applicants and suitable applicants. The largest numbers of applicants in 2013-14 were for professional vacancies in ICT, with smaller but still large numbers for engineering, accounting and resource occupations (Figure 15).

- The smallest numbers of applicants were for vacancies for nurses, health professionals and teachers, but these labour markets are generally adequately supplied with employers usually having their choice of qualified and suitable applicants.

Following persistent shortages in the health, resource and engineering professions, employers now recruit these workers with relative ease. Shortages are evident for only a small number of health-related professions.

- Resource related occupations were the hardest to fill in 2012-13 but are now among the easiest, with large numbers of applicants competing for the available positions.
- Graduate and junior health and nursing positions are filled without difficulty, in part due to an increase in training.

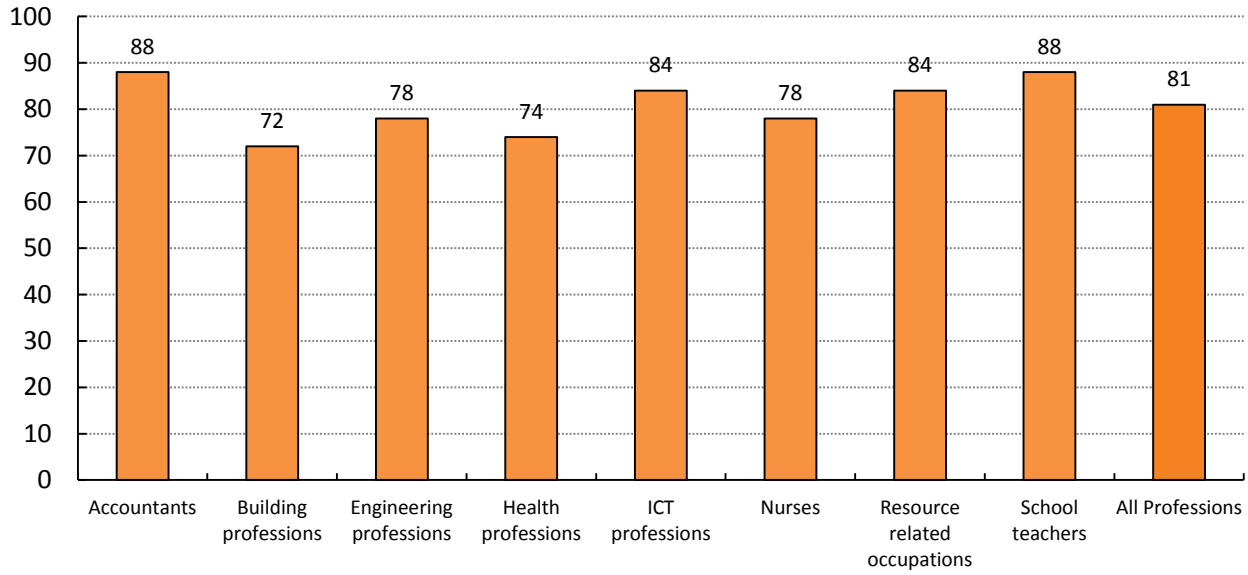
[24] Department of Employment, *Employment Projections* to November 2018

[25] Department of Education Budget Statements, 2014. Note, the proportion of graduates in full-time is those working full-time within four months of completing their degrees as a proportion of those available for work.

Few professional labour markets are in shortage nationally. Shortages are apparent for

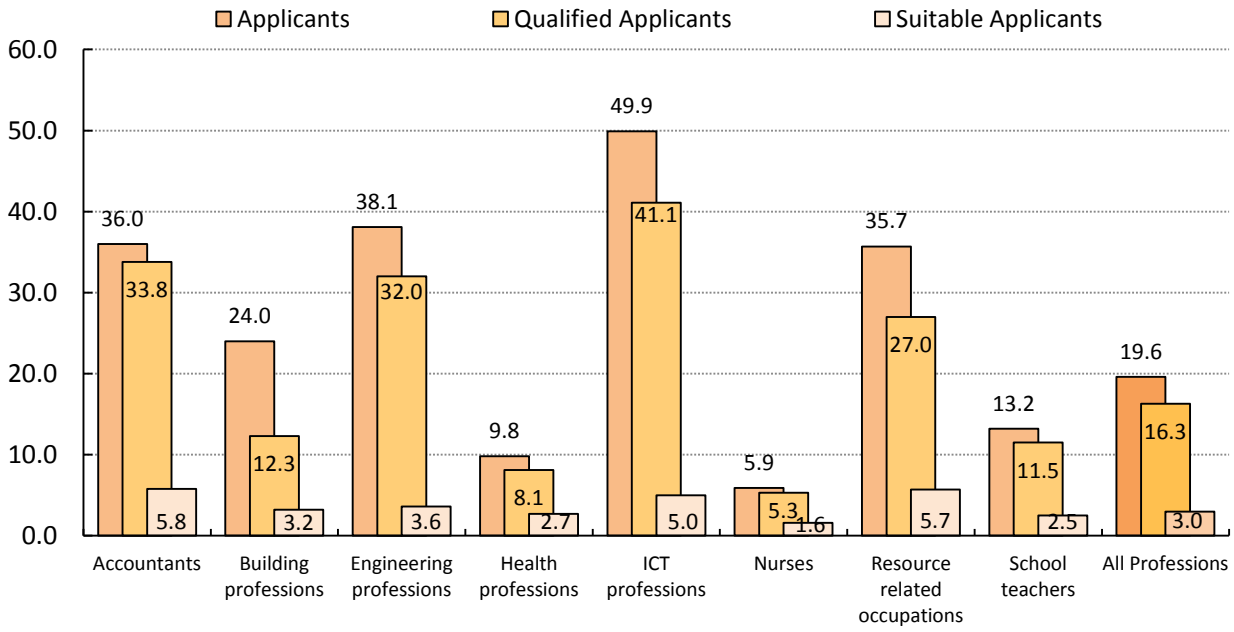
- midwife
- sonographer, physiotherapist
- surveyor
- valuer.

Figure 14: Proportion of vacancies filled by occupational cluster, Professions, 2013-14 (%)



Source: Department of Employment, Survey of Employers who have Recently Advertised
Note: Some clusters include a small number of skilled occupations which are not professions (ANZSCO major group 2).

Figure 15: Average number of applicants, qualified applicants and suitable applicants per vacancy by cluster, Professions, 2013-14 (no.)



Source: Department of Employment, Survey of Employers who have Recently Advertised
Note: Some clusters include a small number of skilled occupations which are not professions (ANZSCO major group 2).

Technicians and trades

The research into the labour market for technicians and trades workers shows there are generally adequate supplies of these workers.

- That said, applicant fields are generally smaller than those for professional vacancies, there are smaller numbers of suitable applicants and shortages are more widespread.

The labour market for technicians and trades workers is currently soft, impacted by subdued demand from Manufacturing and Mining, and in some Construction sectors.

There are mixed conditions, though, across the technicians and trades occupational clusters.

- For example, the labour market eased for engineering trades in 2013-14, but there was some tightening for construction and food trades.

Persistent shortages are apparent for some trade occupations particularly in the automotive trades and food trades.

- Wastage (people leaving the occupation for which they trained) constrains the supply of workers in a number of these trades, and is a contributing factor to long standing shortages.

Shortages in trades labour markets more generally may re-emerge in the medium to long term, when economic and business activity picks up, due to relatively low growth in apprenticeship and traineeship commencements for the trades over recent years.

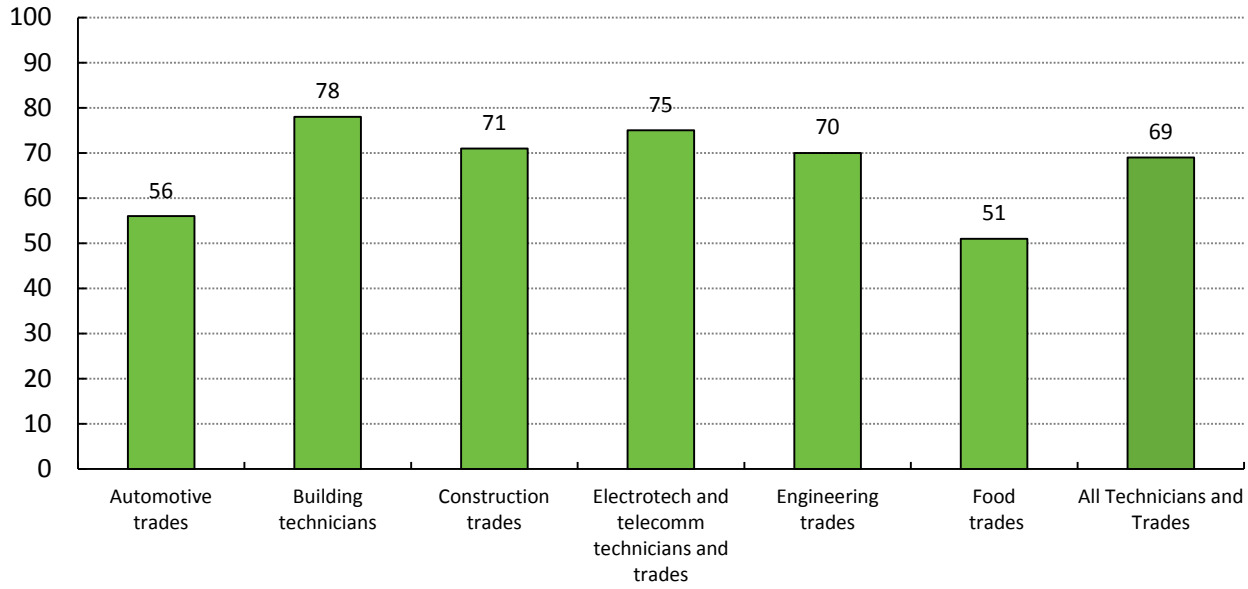
- The department's research indicates that the trades labour market is particularly prone to shortages during times of strong economic growth.
- Stronger activity in the residential Building Construction sector has resulted in shortages re-emerging in a small number of related trades.

Many employers do not consider applicants who have completed short courses to have the level of skill needed for trade vacancies, even when these are at the certificate III level, indicating that an apprenticeship is the strongly preferred training method.

Nationally, shortages are evident for

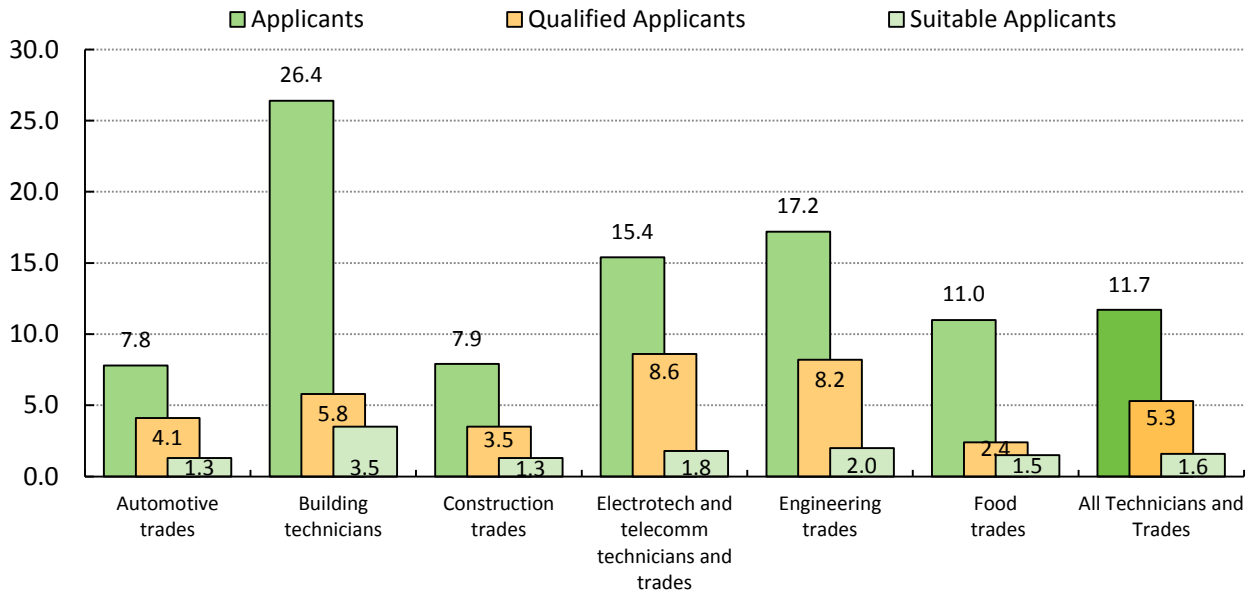
- airconditioning and refrigeration mechanic, electrical linesworker
- arborist, landscape gardener
- automotive electrician, motor mechanic, small engine mechanic, panelbeater
- baker, pastrycook, butcher or smallgoods maker, chef/cook
- construction estimator
- sheetmetal trades worker, locksmith
- stonemason, solid plasterer, roof tiler.

Figure 16: Proportion of vacancies filled by cluster, Technicians and Trades, 2013-14 (%)



Source: Department of Employment, Survey of Employers who have Recently Advertised

Figure 17: Average number of applicants, qualified applicants and suitable applicants per vacancy by occupational cluster, Technicians and Trades, 2013-14 (no.)



Source: Department of Employment, Survey of Employers who have Recently Advertised

Table 2: Results summary by occupation for 2013-14

	Proportion of vacancies filled (%)		Average number of applicants (suitable applicants) per vacancy		Annual labour market change	Number of occupations in national shortage (total assessed)
	2013-14	Annual change	2013-14	Annual change		
Major Group						
Professions	81	5	19.6 (3.0)	3.1 (0.1)	↑	5 (41)
Technicians and Trades	69	3	11.7 (1.6)	1.2 (-0.5)	M	18 (46)
Occupation						
Accountants	88	17	36.0 (5.8)	-4.5 (1.8)	↑	0 (1)
Agriculture and horticulture occupations	75	0	10.4 (1.9)	3.5 (-0.2)	⇔	2 (5)
Automotive trades	56	4	7.8 (1.3)	3.2 (0.2)	↑	4 (5)
Building professions	72	-6	24.0 (3.2)	-6.3 (-0.5)	↓	1 (5)
Building technicians	78	13	26.4 (3.5)	-9.3 (-1.3)	M	1 (3)
Child care occupations	65	4	8.3 (1.4)	2.3 (0.2)	↑	1 (2)
Construction trades	71	-3	7.9 (1.3)	-2.1 (-1.1)	↓	3 (12)
Electrotechnology and telecomm technicians and trades	75	3	15.4 (1.8)	0.8 (-0.6)	⇔	2 (8)
Engineering professions	78	11	38.1 (3.6)	7.6 (0.3)	↑	0 (5)
Engineering trades	70	12	17.2 (2.0)	10.4 (0.5)	↑	2 (8)
Food trades	51	-8	11.0 (1.5)	-0.1 (-0.3)	↓	4 (4)
Hairdressers	54	0	4.2 (1.4)	-0.1 (0.4)	⇔	0 (1)
Health professions	74	4	9.8 (2.7)	1.8 (0.2)	↑	2 (9)
ICT professions	84	0	49.9 (5.0)	18.0 (1.4)	↑	0 (6)
Nurses	78	-1	5.9 (1.6)	0.2 (0.0)	⇔	1 (3)
Resource related occupations	84	30	35.7 (5.7)	15.1 (3.2)	↑	0 (5)
School teachers	88	2	13.2 (2.5)	3.1 (-0.3)	⇔	0 (4)
TOTAL ALL SERA	**73**	**3**	**14.6 (2.2)**	**1.9 (-0.1)**	⇔	**24**

Source: Department of Employment, Skill shortage research programme, some assessed occupations are not included in this table
Key: ↑ = easing labour market ↓ = tightening labour market ⇔ = relatively stable labour market M = mixed indicators

Appendix 1: Labour market by industry and occupation

Employment

Over the year to May 2014[26], employment growth was recorded for

- six of the eight occupation major groups, with Community and Personal Service Workers recording the strongest growth (up by 32,300 or 2.9 per cent)
- 12 of the 19 industry divisions, with Other Services[27] recording the largest increase among the industries (up by 46,800 or 10.3 per cent) and Rental, Hiring and Real Estate Services having the largest percentage rise in employment (up by 13.3 per cent).

Professionals remains the largest employing group (more than 2.5 million as at May 2014), followed by technicians and trades workers (nearly 1.7 million).

At the more detailed level, the largest employing occupation sub-major groups, at May 2014[28] were

- educational professionals (511,500)
- medical practitioners and nurses (385,000)
- automotive and engineering trades (379,600).

Figure 18: Change in employment, Occupation major group, year to May 2014 ('000)

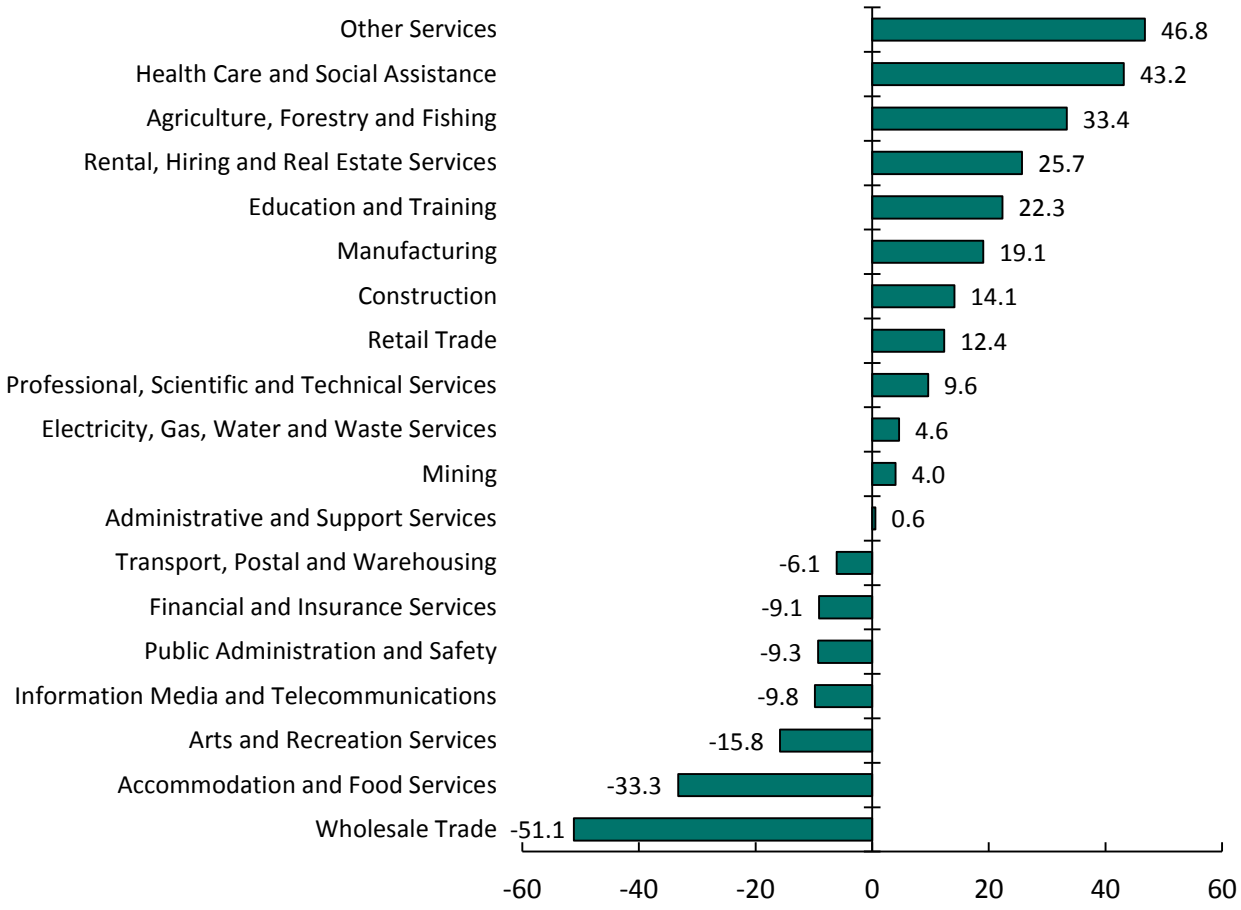
Source: ABS, Labour Force, trend

[26] ABS, *Labour Force, Australia*, *Detailed, Quarterly,* May 2014, Department of Employment trend

[27] Other Services is a diverse industry which includes machinery and automotive repair and maintenance activities and personal care, funeral and religious services.

[28] ibid

Figure 19: Change in employment, Industry division, year to May 2014 ('000)



Source: ABS, Labour Force, trend

Appendix 2: List of skill shortage ratings 2013-14

This Appendix provides a list of the national labour market ratings determined by the Department of Employment through its skill shortage research in 2013-14. It is summary in nature and should be viewed in the context of the more detailed analysis available at employment.gov.au/skill-shortages.

This list combines results for research undertaken at the national and the state and territory level to provide information about shortages which are widespread enough to be considered national. Shortages may not, however, be evident in every state and territory.

Only occupations assessed by the department in 2013-14 are listed, and shortages may be evident in some labour markets for which an assessment has not been made. A rating of 'no shortage' suggests that employers generally recruit without difficulty, however, shortages may be evident in specific locations and some employers may not attract workers who meet their needs. Ratings of shortage reflect employers' recruitment experience for average experienced workers. Shortages may co-exist with relatively high occupational unemployment. A rating of shortage does not mean that an individual will necessarily gain employment in that occupation.

Occupation		Rating	Number of years in shortage, 5 years to 2013-14
Accountants			
2211	Accountants	No shortage	0
Agriculture and horticulture occupations			
121 (part)	Farm Managers	Recruitment difficulty for supervisory roles	0*
2341-11,12	Agricultural Consultant/Scientist	No shortage	3
3612-11	Shearer	No shortage	1
3622-12	Arborist	Shortage	5
3622-13	Landscape Gardener	Shortage	3
Automotive trades			
3211-11	Automotive Electrician	Shortage	5
3212 (part)	Motor Mechanics	Shortage	5
3212-14	Small Engine Mechanic	Shortage	1*
3241-11	Panelbeater	Shortage	5
3243-11	Vehicle Painter	No shortage	4
Building professions			
1331-11	Construction Project Manager	No shortage	1
2321-11	Architect	No shortage	0
2322-12	Surveyor	Shortage	4
2326-11	Urban and Regional Planner	No shortage	0
Building technicians			
3121-11	Architectural Draftsperson	No shortage	0
3121-12	Building Associate	No shortage	0
3121-14	Construction Estimator	Shortage	3
Child care occupations			
1341-11	Child Care Centre Manager	No shortage	3
4211-11	Child Care Worker	Shortage	5

* Occupation has not been assessed continuously over the five years

Occupation		Rating	Number of years in shortage, 5 years to 2013-14
Construction trades			
3311-11	Bricklayer	No shortage	1
3311-12	Stonemason	Shortage	4
3312	Carpenters and Joiners	No shortage	0
3321-11	Floor Finisher	Recruitment difficulty for timber floor installers and sanders	1
3322-11	Painting Trades Worker	No shortage	0
3331-11	Glazier	Regional shortage	2
3332-11	Fibrous Plasterer	No shortage	0
3332-12	Solid Plasterer	Shortage	1
3333-11	Roof Tiler	Shortage	5
3334-11	Wall and Floor Tiler	No shortage	0
3341	Plumbers	No shortage	2
3941-11	Cabinetmaker	No shortage	2
Electrotechnology and telecommunications trades and technicians			
3411-11	Electrician (General)	No shortage	1
3411-13	Lift Mechanic	No shortage	1*
3421-11	Airconditioning and Refrigeration Mechanic	Shortage	5
3422-11	Electrical Linesworker	Shortage	4*
3423-13	Electronic Equipment Trades Worker	No shortage	3
3423-14,15	Electronic Instrument Trades Workers	No shortage	2*
3132-11	Radiocommunications Technician	No shortage	1*
3132-14	Telecommunications Technical Officer or Technologist	No shortage	0*
3424	Telecommunications Trades Workers	No shortage	0*
Engineering professions and technicians			
2332 (part)	Civil Engineering Professionals (excluding Quantity Surveyor)	No shortage	3
2333-11	Electrical Engineer	No shortage	3
2335-12	Mechanical Engineer	No shortage	3
2336-11	Mining Engineer (excluding Petroleum)	No shortage	4
2336-12	Petroleum Engineer	No shortage	4
3122	Civil Engineering Draftspersons and Technicians	No shortage	3

* Occupation has not been assessed continuously over the five years

Occupation		Rating	Number of years in shortage, 5 years to 2013-14
Engineering trades			
3222-11	Sheetmetal Trades Worker	Shortage	5
3223-11	Metal Fabricator	No shortage	1
3223-13	Welder (First Class)	No shortage	0
3231-11	Aircraft Maintenance Engineer (Avionics)	No shortage	2
3231-12	Aircraft Maintenance Engineer (Mechanical)	No shortage	1
3232 (part)	Fitters	No shortage	1
3232-14	Metal Machinist (First Class)	No shortage	3
3233-13	Locksmith	Shortage	4*
Food trades			
3511-11	Baker	Shortage	5
3511-12	Pastrycook	Shortage	4
3512-11	Butcher or Smallgoods Maker	Shortage	5
3513-11, 3514-11	Chef/Cook[29]	Shortage	5
Hairdressers			
3911-11	Hairdresser	Metropolitan shortage	4
Health professions			
2346-11	Medical Laboratory Scientist	No shortage	0
2512-11	Medical Diagnostic Radiographer	No shortage	1
2512-12	Medical Radiation Therapist	No shortage	1
2512-14	Sonographer	Shortage	5
2515-11,13	Hospital and Retail Pharmacist	No shortage	0
2523-12	Dentist	No shortage	0
2524-11	Occupational Therapist	No shortage	0
2525-11	Physiotherapist	Shortage	4
2527-12	Speech Pathologist	No shortage	1
ICT professions			
2611-11	ICT Business Analyst	No shortage	0*
2611-12	Systems Analyst	No shortage	0*
2613-11,12	Analyst and Developer Programmers	No shortage	0*
2613-13	Software Engineer	Recruitment difficulty for those with high level security clearances	0*
2631-11	Computer Network and Systems Engineer	No shortage	0*
Nurses			
2541-11	Midwife	Shortage	4
2544	Registered Nurses	No shortage	2
4114-11	Enrolled Nurse	No shortage	3

* Occupation has not been assessed continuously over the five years

[29] Chef/Cook assessed as a single labour market as surveyed vacancies often use the terms interchangeably.

Occupation		Rating	Number of years in shortage, 5 years to 2013-14
Resources related occupations			
1335-13	Production Manager (Mining)	No shortage	4
2336-11	Mining Engineer (excluding Petroleum)	No shortage	4
2336-12	Petroleum Engineer	No shortage	4
2344	Geologists and Geophysicist	No shortage	3
7122-11	Driller	No shortage	1*
School teachers			
2411-11	Early Childhood (Pre-Primary School) Teacher	No shortage	3
2412-13	Primary School Teacher	No shortage	0
2414-11	Secondary School Teacher	No shortage	0
2415-11	Special Needs Teacher	No shortage	0
Other occupations			
1342-12	Nursing Clinical Director	No shortage	0*
2212-13	External Auditor	Recruitment difficulty for positions in mid-size accounting firms for chartered accountants with a minimum of four years experience	0*
2245-12	Valuer	Shortage	1*
2342-11	Chemist	No shortage	0*
2347-11	Veterinarian	No shortage	1*
2493-11	Teacher of English to Speakers of Other Languages	No shortage	0*
2513-11	Environmental Health Officer	No shortage	0*
2513-12	Occupational Health and Safety Adviser	No shortage	0*
2723	Psychologists	No shortage	2*

* Occupation has not been assessed continuously over the five years

Appendix 3: Technical notes

Occupations in the Department of Employment's skill shortage research are defined according to the Australian and New Zealand Standard Classification of Occupations (ANZSCO). However, the clustering of occupations used in the reporting of the skill shortage research results are not necessarily aligned with ANZSCO groups.

The data included in this report are based on the results of the Survey of Employers who have Recently Advertised (SERA), which is part of the Department of Employment's Skill Shortage Research programme. The programme assesses the labour market for more than 100 skilled occupations, focusing mainly on professions and trades, but also including a small number of management, technicians and other occupations.

The department measures whether vacancies are filled six weeks after advertising for professions and technicians and four weeks for other occupations. The results presented are averages across a large number of employer contacts and it is important to note that employers' recruitment experiences can vary widely, even within an individual occupation in similar locations. Employers' requirements can be highly specific and candidates for positions may be regarded as unsuitable even if they hold relevant, formal qualifications. In addition, advertised vacancies can remain unfilled despite attracting suitable applicants as applicants may not take up offers of employment for a variety of reasons.

The Department of Employment assigns skill shortage ratings to occupations based on the results of SERA, as well as consideration of a range of labour market indicators. Ratings are for Australia as a whole, unless it is indicated that they apply to metropolitan or regional areas only.

Occupations are assigned the following ratings:

- **Shortage**: Skill shortages exist when employers are unable to fill or have considerable difficulty filling vacancies for an occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.
- **Recruitment Difficulty**: Recruitment difficulties occur when some employers have difficulty filling vacancies for an occupation. There may be an adequate overall supply of skilled workers but some employers are unable to attract and recruit sufficient, suitable workers for reasons which include: specific experience or specialist skill requirements of the vacancy; differences in hours of work required by the employer and those sought by applicants; or transport issues.
- **No Shortage**: Research has not identified widespread significant difficulty filling vacancies. This does not mean individual employers in some locations or those seeking specialised skills will readily fill their vacancies.

There have been minor revisions to historical SERA data. Information about the SERA methodology, as well as analysis of occupational labour markets and reports and lists of skill shortages, is available at employment.gov.au/skill-shortages.

Appendix 4: Key data sources

Australian Bureau of Statistics, *Labour Force, Australia, Detailed – Electronic Delivery, Australia*, May 2014 (some data are Department of Employment trend)

Australian Bureau of Statistics, *Labour Force, Australia*, June 2014

Department of Employment, *Internet Vacancy Index*, June 2014

Department of Employment, *Employment Projections to November 2018*, 2014

Department of Education, *Higher Education Statistics Data Cube*, 2013

Graduate Careers Australia, *GradStats*, various issues

National Centre for Vocational Education Research, *Apprentices and Trainees*, various issues (some time series data extracted through VOCSTATS)

National Centre for Vocational Education Research, *Students and Courses*, various issues (some time series data extracted through VOCSTATS)

National Centre for Vocational Education Research, *Student Outcomes*, various issues