FORECASTS OF LABOUR AND SKILLS REQUIREMENTS IN THE SERVICE INDUSTRIES, 2010-15

REPORT PREPARED FOR SERVICES SKILLS AUSTRALIA BY
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Foreword

It is with pleasure that I present the report *Forecasts of Labour and Skill Requirements for the Service Industries 2010-2015*. This report, commissioned from Monash University's Centre for Economics in Education and Training (CEET) is part one of a two-part project. Together with the second report, *Productivity in the Service Industries*, it is part of a growing body of work that Service Skills Australia (SSA) is developing to contribute to and support the development of the service industries workforce.

The *Labour Forecast* report puts forward a set of 'baseline' forecasts for qualification requirements for the service industries based on employment needs. The forecasts are not based on "best or worst case economic scenarios" but on the assessment of the future economic conditions in Australia made in the third quarter of 2009.

The forecasts draw attention to the unique characteristics of the service industries workforce and highlight that skill and employment needs are based on a complex interaction of industry growth, replacement of workers and the ongoing trends in "skills deepening".

The forecasts do not propose what strategies should be applied to address the training needs of the service industries workforce. Rather they provide the board of SSA with robust quantitative data to commence evidence-based discussions on the needs of the industry that is keen to take greater ownership of the skills development of its workforce.

The forecasts should be reviewed and discussed with an eye on the broader level of activity and work that is being undertaken in the service industries—both with the Industry Skills Council (ISC) and more broadly in industry.

Service Skills Australia would like to thank CEET for their efforts and collaboration with the ISC to produce this report and, in particular, the work and time of Dr Chandra Shah and Michael Long.

Kit McMahon

General Manager

November 2010

Executive summary

This report provides Services Skills Australia (SSA) with an assessment of the labour and skills requirements in service industries from 2010 to 2015. It is prepared by the Centre for the Economics of Education and Training (CEET), Monash University.

The report provides baseline information on the minimum skill requirements to achieve a specific qualification profile for the service industries' workforce in 2015.

The qualification profile in 2015 is derived from forecasts of the industrial and occupational structure of the workforce and continuation of current trends in qualifications. It is important that this information is validated with stakeholders, fine-tuned with information from other sources, such as employer surveys, and regularly updated.

Context

The Australian Government's interest in developing policies on skills and workforce development is ongoing and stems from a desire to sustain economic growth and to ensure Australia continues to remain globally competitive.

Appropriate investment in education and training generally means a workforce with a better mix of skills leading to potentially higher productivity, higher labour force participation, lower unemployment and increased incomes and living standards.

Statistical analyses show that an individual's education has a significant positive effect on their earnings and likelihood of employment. Even the lowest level qualifications (certificate I/II) seem to be important in keeping people attached to the labour market.

Sound development of policies on education and training requires up-to-date information on economic changes and their influence on the future demand for skills. Such information is also of interest to other stakeholders in the labour and education and training markets, including individuals making choices about careers and courses and education and training providers planning course offerings.

What part of the workforce is covered by SSA?

SSA holds responsibility for the training and workforce development needs at the sub-professional level in the following sectors:

- wholesale, retail and personal services (WRAPS) (includes retail, wholesale, beauty, floristry, funeral services and community pharmacy)
- tourism and hospitality (includes travel, tours, meetings and events, accommodation, caravans, restaurants and catering)
- sport and recreation (includes sport, fitness, community recreation and outdoor recreation).

These sectors are defined by a set of occupations, training for which is predominantly delivered using one of the ten training packages that SSA has responsibility for.

Factors affecting demand for labour and skills

The skill and qualification levels of Australia's population have generally been rising. Jobs requiring higher level skills have increased faster than those requiring lower level skills.

The total increase in the number of people employed in service industries who hold qualifications is a result of:

- growth in employment
- skills deepening (see definition below).

Additional people with qualifications are also required to replace those who leave due to occupational turnover.

Employment growth

Employment growth generally leads to an increase in the demand for skills. In the last decade employment in Australia has been increasing at more than two per cent per year. Australia's growing population, both because of an increase in the fertility rate and high levels of immigration, is a factor pushing up employment growth now and in the future as is increasing participation in the labour force by women and older workers.

Population increases and ageing means the demand for services in the funeral industry will grow and thus lead to an expansion in employment in the funeral industry sector.

The growing realisation of the importance of exercise for healthy living is increasing the demand for certain types of sport and recreation services, and perhaps in the increase in employment of fitness instructors, sport coaches, personal trainers, sport and gym managers, etc.

The ageing of the population, increases in life expectancy and new roles in disease management and preventative health being taken up by community pharmacists are increasing the demand for services provided by community pharmacies. This has the potential to increase employment of pharmacy assistants.

Exposure to international competition and new technologies, including the internet, and consolidation of businesses are affecting the distribution and level of employment across a wide range of industries. Unlike jobs in low-skill manufacturing industries, jobs in service industries are generally less vulnerable to global competition, although tourism is an exception. Internet shopping is providing a borderless shopping environment and is affecting consumer habits. Changed arrangements for supermarket sale points that allow customers to scan their own purchases may affect employment and skills needs for checkout operators. All these changes are affecting skills and jobs in the retail and tourist industries.

Skills deepening

Within many occupations, the number of people with qualifications has increased faster than total employment. This is referred to as skills deepening. It is the result of a number of factors:

- An overall rise in the level of skill and qualification requirements within occupations due to technological and organisational changes.
- The significant returns to training in the labour market for those who invest in education, as well as reforms to education systems broadening access.
- Removing skills gaps, where workers have been under-skilled for the occupation in which they are employed.

Replacement needs

The actual number of people with qualifications required and the amount of training that will be undertaken will be greater than needed to meet the *increase* in the numbers of people with qualifications due to growth and skills deepening.

The additional requirements are from the need to replace those who leave occupations. While in some occupations (e.g. funeral directors) the main reasons for replacement are events such as death, ill-health or retirements, in other occupations (e.g. sales assistants) it is outflows to other occupations.

Factors affecting supply of labour and skills

The supply of people with skills for service industries will largely be a function of the:

- number of people completing qualifications
- net migration to Australia of people with qualifications.

The two main factors that will affect the number of people completing VET qualifications in the future are the participation rate in VET and the size of the working age population.

Australia's population of people aged 15–64 years is projected to increase by just over a million people from 2009 to 2015. At the same time the size of the cohort aged 15–19 years is projected to remain more or less constant.

This means that if the current participation rates persist, then the number of people aged 15–19 years in VET will remain constant but the number aged 20–64 years will increase.

The continuation of the participation rate in VET will depend on the investment governments, individuals and employers make in VET and the 'productivity' of the system. However to increase the participation rate, which is the aim of current government policy, will require additional public investment.

The supply of qualifications is also affected by the willingness of employers to take on apprentices, which in turn depends on the state of the economy. It can also be increased by improving the completion rates of VET courses which are relatively low compared to completion of undergraduate courses.

Net overseas migration of people aged 15–64 years who hold VET qualifications depends on the annual quotas the government establishes for each migration programme, the number of resident Australians leaving the country to live abroad and the proportion among them who hold VET qualifications. In recent years only a minority of settler or long-term arrivals to Australia held VET qualifications, although an increasing number on temporary visa holders do hold such qualifications. Not all qualifications that migrants hold are recognised in Australia though.

Profile of the service industries' workforce

About 1.9 million people were employed in service industries in 2009, which is 17.4 per cent of all workers in Australia.[1]

From 2001 to 2009, employment in these industries grew by 1.7 per cent per year compared to the average growth rate of 2.2 per cent across all sectors of the economy.

Consistent with the general trend, the proportion holding qualifications[2] has also been rising among workers in service industries.

WRAPS

WRAPS is the largest of the three sectors that make up service industries. It employed about 1.14 million workers in 2009. This represents 61 per cent of the total employment in service industries.

Employment in the sector increased by 113,000, or by 1.3 per cent per year, from 2001 to 2009.

In 2009, 77 per cent of all workers in the sector were in just four occupations—retail manager (general) (18.8 per cent), hairdresser (4.9 per cent), sales assistant (general) (41.8 per cent) and checkout operator (11.6 per cent).

Sales assistants' share of employment in the sector has been declining. In contrast, checkout operators' share has been increasing. These two occupations are closely related and to a certain extent a job in one occupation can be substituted by a job in the other. It is more likely however that the diverging trends in the two occupations reflect the ongoing trend of consolidation of businesses in the retail industry.

The employment in the sector is highly feminised, with 64 per cent female workers in 2009. The last decade has seen feminisation actually increase. Among all occupations in the sector, only retail manager employed more males than females.

The sector employs a large number of young people (15–19 year-olds). In 2009, 22 per cent were in this age group, and in some occupations the percentage was much higher—32 percent among sale assistants and 46 per cent among checkout operators. The proportion of retail assistants aged 45 years or older has however increased from 17 per cent in 2001 to 20 per cent in 2009. Most retail managers are also aged 45 years or older—43 per cent in 2009.

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1 Note that SSA's *Environment Scan for 2010* reports a higher employment level. This is because it used a different scope to that used in this report.

2 The qualification in this report refers to the highest level of the non-school qualification a person has attained. This qualification does not necessarily reflect the full set of skills a person may possess. It also does not capture the extent to which people hold multiple qualifications. In this respect, the qualifications data in this report underestimate the full set of skills of a person. Unfortunately, measurement of skill sets is difficult and as yet there are no standards for measuring them.

About the same numbers of people work full-time as part-time in this sector. Full-time work is more prevalent in some occupations (e.g. retail manager, hairdresser) than in others. Sales assistants and checkout operators predominantly work part-time—69 and 82 per cent, respectively in 2009.

Compared to the rest of the workforce, only a minority of workers in the sector hold qualifications (39 per cent in 2008), but the proportion holding qualifications has been increasing. Retail managers (50 per cent) and hairdressers (76 per cent) were most likely to hold qualifications and retail assistants (28 per cent) and checkout operators (23 per cent) were least likely to hold qualifications.

Tourism and hospitality

Tourism and hospitality employed 674,000 workers in 2009, an increase of 93,000 from 2001. This represents a growth rate of 1.8 per cent per year.

The two largest occupations in the sector are waiter and kitchenhand, each employing more than 100,000 people. Other significant occupations in the sector are chef, cafe or restaurant manager, bar attendant, cook and fast food cook.

The sector also employs more females than males, although the imbalance is less than in WRAPS. In some occupations the gender imbalance is greater. For instance, while chefs and fast food cooks are much more likely to be male, cooks and waiters are much more likely to be female.

This sector also employs a large number of young people—20 per cent in 2009. In some occupations the proportion is much higher—33 per cent among waiters, 60 per cent among fast food cooks and 38 per cent among kitchenhands.

In contrast, 41 per cent of cafe and restaurant managers were aged 45 years or older. One in every four kitchenhands was also in this age group.

Chefs, cooks and fast food cooks all have different age profiles. In 2009, the most common age of chefs was between 25 and 34 years, cooks were generally older (42 per cent were aged 45 years or older) and most fast food cooks were young.

About the same numbers of people work full-time as part-time.

Cafe or restaurant managers and chefs predominantly work full-time. While a majority of cooks still work full-time, the proportion has fallen in recent years. Bar attendants, waiters, kitchenhands and fast food cooks are mostly employed part-time.

In this sector, a minority of workers hold qualifications. In 2008, more than 75 per cent of kitchenhands and fast food cooks did not have any qualifications. On the other hand, 73 per cent of chefs and about half of all cafe and restaurant managers did.

Sport and recreation

In 2009, about 59,000 people were employed in sport and recreation, the smallest of the three service industries sectors. The sector has been growing much faster than the other sectors though—8.7 per cent per year. A large number of people in sector are excluded from the employment figures because they work in a volunteer capacity.

More than half the people in the sector work in just two occupations—fitness instructor and swimming coach. Employment of fitness instructors more than doubled from 2001 to 2009.

The female share of employment in the sector increased from 47 per cent in 2001 to 54 per cent in 2009. The strongest trend in feminisation was among swimming coaches.

The sector employs a large number of young people. In 2009, one in every four swimming coaches was a young person.

Part-time employment has been on the rise in the sector. In 2008, 66 per cent worked part-time compared to 59 per cent in 2002. The change is largely attributable to an increase in the number of part-time swimming coaches.

An increasing proportion of workers in the sector hold qualifications—59 per cent in 2008. The qualifications of many were at the degree or higher level. While 75 per cent of fitness instructors held a qualification (certificate III/IV) in 2008, the proportion of swimming coaches with a qualification was only about 50 per cent.

Forecasts of employment 2010 to 2015

Forecasts of employment by occupation from the MONASH model are combined with recent trends in skills deepening to derive forecasts of qualifications in service industries. Thus the expected changes in the industrial, occupational and skills structure of employment are all factored into derivation of the forecasts.

Employment in Australia is forecast to grow more slowly over the next six years than it did over the last six years—10.2 per cent growth from 2009 to 2015 compared to 14.8 per cent growth from 2003 to 2009. In 2015, employment in Australia is forecast to be about 11.9 million.

Occupation groups with above average growth in employment will be managers, machinery operators and drivers, professionals and technicians and tradespersons; clerical and administrative and sales will have below average growth; and community and personal services and labourers will have about average growth.

An increasing number of people in the workforce are forecast to hold qualifications, and at higher levels. The numbers without qualifications is forecast to remain constant. Consequently, the proportion holding qualifications will increase from 61 per cent in 2009 to 64 per cent in 2015.

Forecasts of employment in service industries

Employment in service industries is forecast to grow relatively more slowly than in other sectors of the economy. In 2015, the sector is forecast to employ 1.94 million people, an increase of 57,000 or 3.1 per cent from the level in 2009.

The possible factors having an impact on growth in these industries are: the effect of the stimulus wearing off; government spending tightening as a result of the policy to bring the budget to surplus; the continuing high value of the Australian dollar; the weakness in areas of the global economy which are the source of traditional inbound tourism; and the tightening credit and investment capital because of the fierce competition from the booming mining sector.

WRAPS

Overall employment in the sector is forecast to increase by 15,000. Not all occupations will grow though. Employment is forecast to decline for retail managers and sales assistants but increase for all other occupations in the sector.

In 2015, 73,000 more people will hold qualifications than they did in 2009, and in the same period the number without any qualifications is forecast to drop by 58,000. The proportion with qualifications will increase from 39 per cent in 2008 to 45 per cent in 2015.

While the number of people holding higher level qualifications is forecast to increase, the number holding lower level qualifications is forecast to decline. In 2015, 12,000 fewer people will hold certificate I/II in this sector.

Tourism and hospitality

Overall employment in the sector is forecast to increase by 37,000. In all occupations, except cook, employment is forecast to grow but by variable amounts.

In 2015, 29,000 more people will hold qualifications than they did in 2009. The number of people without any qualifications is also forecast to increase. The qualifications profile will shift towards higher level qualifications with a decline of 14,000 in the number of certificate I/II. The proportion with qualifications will increase from 43 per cent in 2008 to 46 per cent in 2015.

More chefs are expected to hold qualifications at the diploma or higher level.

Sport and recreation

Employment in this sector is forecast to grow at about the same rate as in the rest of the economy but at a higher rate than in other sectors of service industries. About 6,000 more people will be employed in the sector in 2015 than in 2009.

While strong employment growth is forecast for fitness instructors, the number of swimming coaches employed is expected to be fairly stable.

In 2015, there will be 11,000 more people with qualifications in the sector than in 2009. The number without qualifications will be fewer by 5,000. The proportion with qualifications will increase from 59 per cent in 2008 to 72 per cent in 2015.

Most fitness instructors are expected to hold a qualification in 2015 but only about half of all swimming coaches will.

Qualification requirements 2010 to 2015

Workers with qualifications are constantly required in the workforce. This may be because the workforce is expanding and also because of the need to replace qualified workers who leave. Additional qualified workers may also be required if the qualification profile of the workforce is changing. The appropriate measure for replacement needs is *net replacement*.

Figure E.1 indicates the relative importance of these three factors in determining qualification requirements in different sectors of service industries.

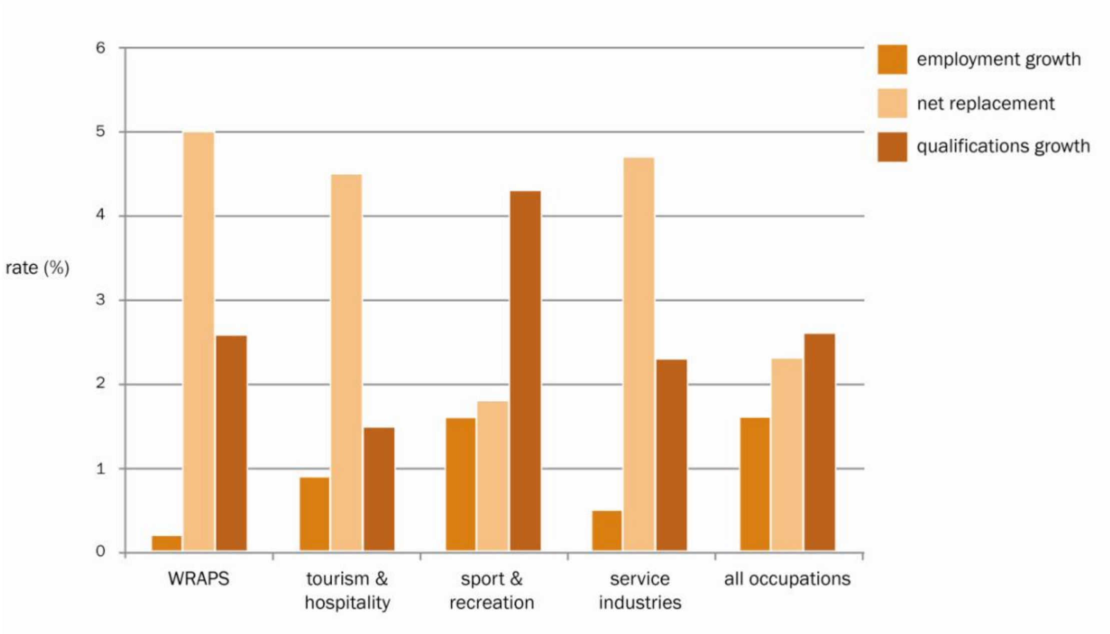

Figure E.1 Average annual rates of employment growth, net replacement and qualifications growth in service industries, Australia, 2009–15 (%)

The requirements for new qualified workers could be met by qualified new entrants or existing workers currently without qualifications acquiring qualifications.

Qualification requirements across all sectors of the economy

Employment in Australia is forecast to grow at 1.6 per cent per year from 2009 to 2015. For the same period the net replacement rate is estimated to be to 2.3 per cent per year. In 2015, 64.4 per cent of the workforce is expected to hold qualifications.

In the scenario described above, qualification requirements for the Australian workforce are estimated to be 2.5 million.

The average annual requirements will be 418,000—153,000 degree or higher level qualifications and 265,000 VET qualifications. Advanced diploma/diplomas will make up a third of all VET qualifications, 56 per cent will be at certificate III/IV and 11 per cent at certificate I/II.

New entrants with qualifications will make up 1.5 million, or 59 per cent, of this total and the remaining 1 million, or 41 per cent, will be existing workers acquiring new qualifications. About 55 per cent of all requirements will be in manager, professional and technician and trade occupations.

Qualification requirements in service industries

Employment in service industries is forecast to grow at 0.5 per cent per year, which is considerably lower than the rate for the rest of the economy. Net replacement rate however is expected to be much higher at 4.7 per cent per year. The high rate reflects the demographic structure of the workforce in service industries, which is generally quite young and female.

The total qualification requirements are estimated to be 387,000, or 64,000 per year. New entrants with qualifications will satisfy 56 per cent of all requirements and 44 per cent will need to be met by existing workers acquiring new qualifications.

Overall 22 percent of requirements will be at the degree or higher level and 78 per cent at the VET level (27 per cent advanced diploma/diploma, 41 per cent certificate III/IV and 10 per cent certificate I/II).

WRAPS

The requirements in WRAPS are estimated to be 231,000, or 38,000 per year. About one in every five will be at the degree or higher level and the rest at the VET level (62,000 advanced diploma/diploma, 97,000 certificate III/IV and 23,000 certificate I/II).

About 15 per cent of all qualification requirements for hairdressers are expected to be at certificate I/II. Note that in many instances the lower level qualifications are a stepping stone to higher level qualifications.

Tourism and hospitality

The requirements in tourism and hospitality are estimated to be 139,000, or 23,000 per year. Of these 31,000 will be at the degree or higher level and 109,000 at the VET level (39,000 advanced diploma/diploma, 53,000 certificate III/IV and 15,000 certificate I/II).

The requirements in chef and fast food cook occupations are estimated to be about 18,000 and 13,000, respectively. While growth is the main factor affecting requirements for qualified chefs, both growth and replacements needs are affecting requirements for qualified fast food cooks. Despite a high rate of turnover in the occupation, requirements for qualified cooks are relatively low (6,000). This is because employment is forecast to decline in the occupation.

Sport and recreation

The requirements in this sector are estimated to be 17,000—5,000 with degree or higher level qualifications and 12,000 with VET qualifications (3,000 advanced diploma/diploma, 8,000 certificate III/IV and 1,000 certificate I/II).

About half of all requirements are in the occupation for fitness instructors.

Table E.1 Summary of qualification requirements in service industries by sector and qualification, Australia, 2010 to 2015

	'000					%				
	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All
	New entrants									
Service industries	53	46	87	31	217	24	21	40	14	100
WRAPS	*30*	*27*	*53*	*19*	*128*	*23*	*21*	*41*	*15*	*100*
Tourism & hospitality	*20*	*18*	*31*	*11*	*80*	*25*	*23*	*39*	*14*	*100*
Sport & recreation	*3*	*1*	*3*	*1*	*9*	*33*	*11*	*33*	*11*	*100*
All occupations	628	231	512	113	1,483	42	16	35	8	100
	Existing workers									
Service industries	31	57	72	10	170	18	34	42	6	100
WRAPS	*18*	*35*	*45*	*4*	*102*	*18*	*34*	*44*	*4*	*100*
Tourism & hospitality	*11*	*21*	*22*	*5*	*60*	*18*	*35*	*37*	*8*	*100*
Sport & recreation	*2*	*1*	*5*	*1*	*8*	*25*	*13*	*63*	*13*	*100*
All occupations	290	284	383	67	1,024	28	28	37	7	100
	Total									
Service industries	84	103	159	41	387	22	27	41	11	100
WRAPS	*48*	*62*	*98*	*23*	*231*	*21*	*27*	*42*	*10*	*100*
Tourism & hospitality	*31*	*39*	*53*	*16*	*139*	*22*	*28*	*38*	*12*	*100*
Sport & recreation	*5*	*2*	*8*	*2*	*17*	*29*	*12*	*47*	*12*	*100*
All occupations	917	515	895	180	2,517	37	21	36	7	100

Concluding comments

This report provides an assessment of the qualifications requirements in service industries in Australia for the period 2010 to 2015. The three most important factors determining future qualifications requirements in the workforce are occupational growth, net replacement needs and changing skills profile over and above that due to occupational restructure.

A large number of jobs in service industries are short-term and do not require high levels of skill as measured by qualifications. These jobs are typically held by young people to whom they often provide their first labour market experience. In this respect the jobs are critical for the development of employability skills in young people. Thus it is important to pay particular attention to the type of training that is provided in these jobs because it will help equip young people with skills to operate effectively in the labour market later on. The training does not necessarily have to be in terms of qualifications, it could be in terms of 'skill sets'.

All models used for this report use the most reliable data that are currently publicly available. However even the most reliable data have limitations as much of it is gathered from sample surveys and it is coded using standard classifications. For instance, data on qualifications are generally about the highest qualification attained by a person. If a person has multiple qualifications or skill sets, these are not recorded in the regular surveys.

Thus the estimates of qualification requirements presented in this report should be interpreted as the lower bound of requirements. Another reason why they are a lower bound is because they are requirements for the employed population and exclude requirements for volunteers or for people who have a second job in service industries. This is particularly an issue in the sport and recreation sector in which a lot of volunteers work.

Economic forecasts are inherently uncertain, especially over long horizons. It is inevitable that developments that are currently unforeseen will eventually render forecasts from any model, not just the ones used for this report, inaccurate.

Notwithstanding the limitations outlined above, the estimates in this report provide sound baseline data that are systematic, comprehensive and consistent. They are important for organisations and individuals who have to make assumptions about the future in making plans. These estimates are clearly a better alternative to ad hoc partial evaluation of the labour market for service industries that ignore the interactions with the rest of the economy in the analysis. They should however be validated and fine-tuned with information from other sources and stakeholder consultation. Conversely, stakeholder views could be tested with objective analysis of the type in this report.

It is imperative that forecasts such as those in this report are updated on a regular basis as new information becomes available and improvements are made in methods of analysis.

1. Introduction

The Australian Government's interest in developing policies on skills and workforce development is ongoing and stems from a desire to sustain economic growth and to ensure Australia continues to remain globally competitive.

Appropriate investment in education and training generally means a workforce with a better mix of skills leading to potentially higher productivity, higher labour force participation, lower unemployment and increased incomes and living standards. Reforms that improve the quality educational outcomes will also drive higher productivity over the medium term (Australian Government 2010a).

The link between education and training and participation, productivity and economic growth is in the first instance indicated by the strong association between higher levels of educational qualifications and higher earnings (wages are deemed to reflect the labour productivity of individuals) and labour force participation (again a reflection of the productivity of individuals). It is also indicated by the more than satisfactory rates of return to education and training (Long and Shah 2008).

Statistical analyses show that an individual's education has a significant positive effect on their earnings and likelihood of employment. Shah (2009a) shows that following job separation, males with qualifications are less likely to become unemployed and women with qualifications are less likely to leave the labour force. Even the lowest level qualifications (certificate I/II) seem to be important in keeping people attached to the labour market.

Education and training affects more than an individual's earnings and labour market experience. It has positive effects on the individual's health, investment decisions and consumer behaviour. Society-wide effects range from reduced crime and social welfare expenditure to expansion of general and institutional trust and civic co-operation.

Sound development of policies on education and training requires up-to-date information on economic changes and its implication on the future demand for skills. Such information is also of interest to other stakeholders in the labour and education and training markets, including individuals making choices about careers and courses and education and training providers planning course offerings.

The Government has set up eleven national Industry Skills Councils (ISCs) to provide advice on the skills needs of Australian industry. The mandate of Australia's ISCs is to bring together industry, educators and governments and unite them on a common industry-led agenda for action on skills and workforce development. Services Skills Australia (SSA) is one of the eleven councils and is responsible for the assessment of current and future skills needs in service industries, which include retail and wholesale trade and personal services; tourism, hospitality and events; and sport, fitness and recreation.

This report provides SSA with forecasts of labour and skills requirements in service industries in Australia from 2010 to 2015. It provides baseline information on the minimum skill requirements to achieve a specific qualification profile for the sector workforce in 2015. The qualification profile is derived from forecasts of the industrial and occupational structure of the workforce and continuation of current trends in qualifications. The baseline information should ideally be validated with stakeholders, fine-tuned with information from other sources, such as employer surveys, and regularly updated. The information also provides a reality check for stakeholder views.

1.1 Macroeconomic context

The Australian economy, like most other economies around the world, experienced the fallout from the global financial crisis. While the impact of the crisis has been rather severe for many countries, Australia has escaped relatively unscathed from the experience. The Government's stimulus packages together with the continuing demand for Australian resources from China, Japan, South Korea and India cushioned the economy from the worst effects of the crisis. Retail spending was assisted by the cash handouts to households in the first stimulus package.[3] As the economy is weaned off the stimulus, some slowing in consumer spending can be expected. Many long-term challenges, however, remain for Australia.

The *Intergenerational Report 2010* (IGR 2010) contains population and macroeconomic projections for Australia to 2050 (Australian Government 2010a). It identifies ageing (particularly the increase in the old age dependency ratio[4]) and climate change as presenting significant long-term risks for the economy and sustainability of government finances.

Economic growth is projected to slow, with growth in real GDP falling to an average of 2.7 per cent per year until 2025 from the 3.3 per cent reported over the last 40 years. Growth in real GDP per capita is also projected to decline from 1.9 to 1.5 per cent per year over the same time which is mainly a result of declining labour productivity. The *Intergenerational Report* expects the labour force participation rate of those aged 15 years or older to decline from about 65 per cent in 2010 to 63 per cent in 2025.

The demand for resources from East Asia and India is expected to continue and as a result there are suggestions of boom times returning for Australia. An extended export-based resources boom creates risks for other sectors of the Australian economy. For instance, service industries may have to cope with capital, labour and skills shortages that result from rapid growth in the mining sector. The boom also has the potential to put pressure on interest rates. The improving balance of trade and higher interest rates can push up the value of the Australian dollar.

The higher Australian dollar can adversely affect industries exposed to international competition (e.g. tourism) but reduce the input costs of other services. Tourism to Australia is not only sensitive to the value of the Australian dollar but it is also affected by the health of economies from which Australia traditionally receives tourists, for example, Europe, Japan and the U.S. However a recent report suggests inbound tourism from China is set to increase over the next few years as evidenced by a number of Chinese airlines planning to increase the number of weekly flights to Australia. This may then offset some of the decline from the traditional sources. The economic outlook for many of these economies, especially those in Europe, is less certain, although there are reports of significant increase in tourism from China.

Australia's population is projected to grow to 23.5 million by 2015 and then 26.8 million by 2025 (ABS 2008).[5] The projections assume net overseas migration averaging 180,000 per year, fertility rate of 1.9 babies per woman and increasing life expectancy. Current Australian Government policy puts a relatively higher emphasis on skilled migration in the overall migration programme. Skilled migrants generally have a much higher participation rate in the labour force than other migrants.

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[3] See case study of the retail sector conducted by the ABS following the two stimulus packages (ABS 2009a).

[4] The old age dependency ratio is the number of people aged 65 years or older to the number in the working age population (15–64 years).

[5] These are Series B projections. Series A projections are 23.8 million and 28.1 million, respectively. Series C projections are 23.1 million and 25.6 million respectively. Australian Government (2010a) projects the population to in 2025 to be 27.5 million.

Growing population and ageing means that the number of deaths will also increase in absolute terms (ABS 2008). In relative terms, the crude death rate is expected to bottom in 2011 before slowly increasing.

The ageing of the population will also affect future labour supply. Thus productivity growth will be the key driver of future per capita economic growth and improvements in living standards. Reforms that reduce barriers to participation can lift growth and reduce future pressures on labour supply. Improving educational attainment would be one way to lift aggregate labour force participation because people holding qualifications are more likely to participate than those who do not hold qualifications.

With respect to climate change, the Australian Government is committed to a range of policies that will affect the demand for skills. Economic modelling suggests the costs of stabilising and then reducing green house gas emissions are significant but manageable. Delaying action, however, would carry higher risk and would be more costly.

Although the employment effects of adopting carbon-abating measures are unlikely to be significant in the long-run, there are inevitable skill implications arising from adaptation and mitigation activities. Additional skill needs could arise as a result of a change in the tasks that are to be performed in an occupation. They could also arise if existing tasks are to be performed differently, with new tools or new materials. Meeting the challenge of climate change has the potential to trigger a wave of innovation and a highly skilled workforce will only facilitate this process. The catalyst in all this is undoubtedly a price on carbon emissions, without which progress will be extremely slow and ineffectual in the long run.

Improving the skills base of the workforce is thus emerging as a critical factor if Australia is to meet the economic, environmental and social challenges of the future. Skilled migration may provide a short-term solution, but a long-term sustainable solution requires continual improvement of the skills of the existing workforce and higher level skills for new entrants.

1.2 The workforce covered by SSA

The industry sectors represented by SSA are wholesale, retail, floristry, tourism, hospitality, events, hairdressing, beauty services, funeral services, sport, fitness, outdoor recreation, community recreation, community pharmacy.

SSA’s main role is with respect to workforce and skills development, generally at the sub-professional level. As such it currently manages ten industry training packages which are used to deliver vocational education training (VET) to workers in the sectors listed above.

The above sectors include a broader workforce than that for which SSA has responsibility. For instance, pharmacists work in the community pharmacy sector but their training and workforce development are outside the ambit of SSA. This report’s focus is on the part of the workforce which SSA has direct training and workforce development responsibility.

The workforce covered by SSA is, therefore, defined by a set of occupations, training for which is predominantly delivered using one of the ten training packages that SSA has responsibility for.

Of the 998 occupations listed in the Australian and New Zealand Standard Classification of Occupations (ANZSCO) at the six-digit level, SSA covers 79. They can be grouped under three major sectors:

- wholesale, retail and personal services (includes retail, wholesale, beauty, floristry, funeral services and community pharmacy)
- tourism and hospitality (includes travel, tours, meetings and events, accommodation, caravans, restaurants and catering)
- sport and recreation (includes sport, fitness, community recreation and outdoor recreation).

A total of 27 occupations are included in the wholesale, retail and personal services (WRAPS) sector; 30 in tourism and hospitality; and 22 in sport and recreation. The full lists of occupations in the three sectors are provided in Tables 1.1 to 1.3. Apart from level one, all other skill levels as defined in the ANZSCO hierarchy are represented in these occupations.

Box 1.1 Australian and New Zealand Standard Classification of Occupations (ANZSCO)

ANZSCO is a skill-based classification of occupations providing a basis for standardised collection, analysis and dissemination of occupation data for Australia and New Zealand. It reflects the contemporary labour market in these two countries. Its scope is all occupations and jobs in the two countries' labour markets undertaken for pay or profit, including jobs occupied by people working for themselves. ANZSCO is not designed to cover work not undertaken for pay or profit, for example voluntary work. However, this does not preclude ANZSCO from describing such activities.

In Australia, ANZSCO replaces the Australian Standard Classification of Occupations (ASCO) Second Edition.

The ANZSCO classification has five hierarchical levels:

1. 8 major groups (1-digit)
2. 43 sub-major groups (2-digit)
3. 97 minor groups (3-digit)
4. 358 unit groups (4-digit)
5. 998 occupations (6-digit).

The 998 occupations at the 6-digit level are clustered into 358 unit groups. The occupations in each cluster have similar features. Similarly, the 358 unit groups are clustered into 97 minor groups, etc.

The conceptual model of the classification uses skill level and skill specialisation to define the groups. Five skill levels are used in the classification. The occupations are distinguished by the tasks performed in occupations. All occupations are at one skill level.

Table 1.1 Occupations in wholesale, retail and personal services (WRAPS) sector

Occupation	Skill level
Retail manager (general)	2
Antique dealer	2
Betting agency manager	2
Hair or beauty salon manager	2
Post office manager	2
Florist	3
Hairdresser	3
Beauty therapist	4
Funeral director	2
Funeral workers nec	3
Hair or beauty salon assistant	5
Order Clerk	4
Production clerk	4
Purchasing officer	4
Sales clerk	4
Stock clerk	4
Warehouse administrator	4
Sales representative (personal & household goods)	4
Sales assistant (general)	5
Pharmacy sales assistant	5
Retail supervisor	4
Sales assistants & salespersons nec	5
Checkout operator	5
Office cashier	5
Retail buyer	3
Visual merchandiser	4
Other sales support worker	5

Table 1.2 Occupations in tourism and hospitality sector

Occupation	Skill level
Cafe/restaurant manager	2
Caravan park & camping ground manager	2
Hotel or motel manager	2
Licensed club manager	2
Bed & breakfast operator	2
Accommodation & hospitality managers nec	2
Travel agency manager	2
Amusement centre manager	2
Conference & event organiser	2
Hospitality, retail & service managers nec	2
Baker	3
Pastrycook	3
Chef	2
Cook	3
Bar attendant	4
Barista	4
Cafe worker	5
Gaming worker	4
Hotel service manager	3
Waiter	4
Bar useful or busser	5
Doorperson or luggage porter	5
Hospitality workers nec	5
Tourist information officer	4
Travel consultant	4
Hotel or motel receptionist	4
Fast food cook	5
Pastrycook's assistant	5
Food trades assistants nec	5
Kitchenhand	5

Table 1.3 Occupations in sport and recreation sector

Occupation	Skill level
Fitness centre manager	2
Sports centre manager	2
Fitness instructor	4
Bungy jump master	4
Fishing guide	4
Hunting guide	4
Mountain or glacier guide	4
Outdoor adventure instructor	4
Trekking guide	4
Whitewater rafting guide	4
Outdoor adventure guides nec	4
Diving instructor (open water)	3
Gymnastics coach or instructor	3
Horse riding coach or instructor	3
Snowsport instructor	3
Swimming coach or instructor	3
Tennis coach	3
Other sports coach or instructor	3
Dog or horse racing official	3
Sports development officer	2
Sports umpire	3
Other sports official	3

The sport and recreation sector is characterised by having a large number of voluntary workers, for instance, parents who supervise weekend sport, surf life savers etc. Information on the activities of volunteers is generally not collected in the normal ABS labour force surveys because they do not receive a wage for this work. The sector also includes semi-professionals whose second job is in this sector. Once again, the regular surveys do not collect data on the second job. Volunteers and semi-professionals however require training to work effectively, just as other employed people do. The employment data in this sector will, therefore, always be an underestimate of the number of people who actually work in it. For this reason the forecasts of training requirements in this sector will also be underestimated.

Often the training of volunteers is not publicly funded. There is an arguable case for at least some basic training for volunteers to be funded publicly as the social returns from any such investment is likely to exceed the costs.

The report will generally provide analysis for the three sectors discussed above. Analysis at the occupation level within each sector will be restricted to a selection of major occupations because a high degree of uncertainty is associated with estimates for small occupations.

1.3 Factors likely to affect the future demand for skilled labour in service industries

The skill and qualification levels of Australia's population have been rising with the rate of increase higher among the employed than the unemployed populations (Shah 2009c; Shah 2010). These trends are likely to continue and also affect the workforce in service industries.

Jobs requiring higher level skills have increased faster than those requiring lower level skills. All else being equal, those with qualifications are generally more likely to be selected by employers for jobs than those without qualifications.

Qualifications embody the knowledge and skills a person has acquired during formal education and training, some of which could have been acquired on-the-job. Employers use qualifications to screen and match applicants to jobs. Qualifications are particularly important for the young (15–24 years) and new entrants to the labour market (e.g. recent migrants) who may be lacking work experience and employer references. These groups also tend to have relatively high rates of job turnover (job-to-job and job-to-joblessness) (Shah 2009a).

The total *increase* in the number of people employed in service industries who hold qualifications is a factor of:

- growth in employment
- skills deepening (see definition below).

Additional people with qualifications are also required to replace those who leave due to occupational turnover. These three factors are further discussed below.

Employment growth

Employment growth generally leads to an increase in the demand for skills, although the extent to which this happens depends on the relative growth of occupations. In the last decade employment in Australia has been increasing at more than two per cent per year. A big factor for the buoyant economy has been the surge in demand for Australian resources by China, Japan, Korea and India. Australia's growing population, both because of an increase in the fertility rate and high levels of immigration, is also a factor pushing up employment growth.

Another factor that has affected employment growth has been increasing participation in the labour force by women and older workers. While the participation rate for men has generally declined since the early 1990s, the increasing rate for women has more than offset the decline. The participation rate for people aged 55–64 years has also increased over the same period (Plumb, Baker and Spence 2010; ABS 2009b).

Population increases and ageing means the demand for services in the funeral industry will grow and thus lead to an expansion in employment in the funeral industry sector.

As the ageing of the population places additional pressure on health expenditure, the Australian Government, and the population in general, increasingly recognise the importance of preventative health. Exercise features prominently in the prevention of many ailments of modern society. If more people heed this message and become more active, then it could lead to an increase in the demand for certain types of sport and recreation services, and perhaps in the increase in employment of fitness instructors, sport coaches, personal trainers, sport and gym managers etc.

The ageing of the population and increases in life expectancy is increasing the demand for services provided by community pharmacies. Community pharmacists are also continuing to assume new roles in disease management and preventative health. These changes have the potential to increase demand for pharmacy assistants. At the same time the trend towards pharmacy aggregation into larger businesses, including competition from supermarkets, has the potential to decrease demand for pharmacy assistants. The impact of these changes on the overall demand for pharmacy assistants is unclear but demand is unlikely to decline in the medium term (Human Capital Alliance 2010).

Exposure to international competition and new technologies, including the internet, are affecting the distribution and level of employment across a wide range of industries. The effects vary according to the extent to which a particular industry is vulnerable to, positively exposed to, or insulated from global competition.[6] Unlike jobs in low-skill manufacturing industries, jobs in service industries are generally less vulnerable to global competition, although tourism is an exception.

The internet is also changing the buying habits of consumers. It provides a borderless environment for shopping. Not only are goods being purchased on the internet but also such things as airline flights and holidays. Changed arrangements for supermarket sale points that allow customers to scan their own purchases may affect employment growth for checkout operators. All these changes are affecting skills and jobs in the retail and tourist industries.

While the general effect of technological change is known to increase demand for employees with higher skills, its net effect on demand for all skill types can be mixed if new technologies lead to de-skilling in some occupations.

Skills deepening

Within many occupations, the number of people with qualifications has increased faster than total employment. This is referred to as *skills deepening*. It is the result of a number of factors:

- An overall rise in the level of skill and qualification requirements within occupations due to technological and organisational changes.
- The significant returns to training in the labour market for those who invest in education, as well as reforms to education systems broadening access. Long and Shah (2008) show higher-level VET qualifications generally yield reasonably large private rates of return. Higher rates of employment are also associated with people who hold qualifications although higher *incomes* are more likely only for higher-level qualifications (Burke et al. 2003; Ryan 2002).
- The availability of more people with higher level qualifications make it possible for industry to use more skill-intensive technologies which further foster the demand for skills.
- The relatively higher demand for people with qualifications than the total number required can also be seen as reducing the degree to which there are skill gaps within occupations—the employment of people who are inadequately qualified for the jobs they hold.

[6] See Maglen and Shah (1999); Maglen (2001); and Shah and Burke (2003).

Replacement needs

The actual number of people with qualifications required and the amount of training that will be undertaken will be greater than needed to meet the *increase* in the numbers of people with qualifications. The additional requirements are from the need to replace those who leave occupations. While in some occupations (e.g. funeral directors) the main reasons for replacement are events such as death, ill-health or retirements, in other occupations (e.g. sales assistants) it is net outflows to other occupations. In many occupations, the number of workers retiring will rise in coming years due to the ageing of Australia's baby boomers. The appropriate measure to assess the qualification requirements in each occupation due to turnover is *net replacement* which takes account of the age and gender structure of the occupation (Bureau of Labor Statistics 2006; Shah and Burke 2001). The age distribution of the workforce in service industries will be discussed later in this report.

1.4 Factors likely to affect the future supply of skilled labour in service industries

The supply of people with skills for service industries will largely be a function of the:

- number of people completing qualifications
- net migration to Australia of people with qualifications.

The two main factors that will affect the number of people completing VET qualifications in the future are the participation rate in VET and the size of the working age population.

NCVER (2009) shows the overall participation rate in VET of those aged 15–64 years has changed little from 2004 to 2008. The rates did however change for different age cohorts. The rate for those aged 15–19 years increased sharply from 26.5 per cent in 2004 to 30.2 per cent in 2006 and since then it has remained relatively stable. For all other cohorts, the rate declined but by relatively small amounts.

Table 1 shows population projections for Australia by age from 2009 to 2015. Under a middle scenario (Series B) the ABS projects Australia's population aged 15–64 years will increase by just over a million people from 2009 to 2015. At the same time the size of the cohort aged 15–19 years is projected to remain more or less constant.

Table 1.4 Population projections, Australia, 2009–2015, 2020 and 2025 (millions)

Year			Age (years)		
	15–19	20–24	25–44	44–64	15–64
2009	1.48	1.53	6.12	5.48	14.60
2010	1.49	1.55	6.20	5.57	14.80
2011	1.49	1.57	6.29	5.65	14.99
2012	1.49	1.59	6.37	5.69	15.14
2013	1.49	1.62	6.45	5.75	15.30
2014	1.49	1.63	6.53	5.82	15.46
2015	1.49	1.64	6.61	5.89	15.62

Source: ABS (2008) Series B

This means that if the current participation rates were to continue into the future then the number of people aged 15–19 years in VET will remain constant but the number aged 20–64 years will increase.

The continuation of the participation rate in VET will depend on the investment governments, individuals and employers make in the system. Investment by individuals will largely be driven by the private rates of return to VET qualifications. People holding qualifications are also more likely to remain attached to the labour force, have more self-confidence and have a higher socio-economic status in the community. However to increase the participation rate, which is the aim of current government policy, will require additional public investment.

The supply of qualifications is also affected by the willingness of employers to take on apprentices, which in turn depends on the state of the economy.

Finally, completion rates of VET courses are generally quite low especially when compared to completion rates of undergraduate courses.[7] Improving the completion rates can increase the supply of people with VET qualifications with little additional cost.

Net overseas migration of people aged 15–64 years who hold VET qualifications depends on the annual quotas the government establishes for each migration programme. It also depends on the number of resident Australians leaving the country to live abroad and the proportion among them who hold VET qualifications. The number of Australians leaving is affected by the availability of jobs in the traditional destination countries many of which are still recovering from the global financial crisis. In recent years only a minority of settler or long-term arrivals to Australia held VET qualifications, although an increasing number on temporary visa holders do hold such qualifications. Not all qualifications that migrants hold are recognised in Australia though.

1.5 Scope of this report

Chapter 2 describes the changing profile of the workforce in service industries in terms of their age, gender, hours work, qualifications and state of residence from 2001 to 2009.

Chapter 3 contains employment forecasts in service industries from 2020 to 2015. The forecasts are by occupation and qualification and incorporate the changes in the industry and occupational structure of employment and also trends in skills deepening.

Chapter 4 contains projections of the number s of people with qualifications required to achieve the qualification profile of the workforce in service industries forecast in chapter 3. The numbers required include replacement of those who leave due to turnover in the occupations.

Finally, chapter 6 contains some concluding comments.

7 Foyster, Hon and Shah (2000) estimated course completions in TAFE institutes in Australia from 1994 to 1996 to be about 27 per cent. In a more recent study Mark and Karmel (2010) also estimate course completion of about 27 per cent for students who commenced in 2005. Undergraduate course completions in higher education have been estimated to be at least 65 per cent (Shah and Burke 1999; Urban et al. 1999; Martin, Maclachlan and Karmel 2001). Data on completions of courses provided by private providers are generally available.

2. Profile of service industries' workforce

This chapter describes the changing profile of the workforce employed in service industries in Australia from 2001 to 2009. The service industries are grouped into three sectors defined by a set of occupations. The sectors are:

- wholesale, retail and personal services (WRAPS)
- tourism and hospitality
- sport and recreation.

The descriptions show the current profile of the workforce by gender, age, hours of work and qualification. They also indicate how the profile has been changing over the last decade. These descriptions provide a context within which to consider and understand the forecasts of skilled labour requirements included in chapter 3 and 4.

The descriptions are based on data collected in surveys of the labour force that the Australian Bureau of Statistics (ABS) regularly.[8] The ABS is the best source of data for the type of analysis envisaged in this report. The data are highly reliable and consistent over time.

Key findings

The service industries employed about 1.9 million people in 2009. Its share of total employment was 17.4 per cent.

Employment in the sector grew by 1.7 per cent per year from 2001 to 2009, which is less than the 2.2 per cent per year for the whole economy.

Note that SSA's *Environmental Scan for 2010* reports current employment in service industries to be about 2.4 million. The discrepancy between this and the above figure is due to the broader scope assumed in the Scan. Unlike the current study, which uses occupations to define the scope, the Scan used industries to define the scope. This resulted in professional occupations such as accountants, pharmacists, information technology specialists etc falling within the scope. Clearly the training needs and workforce development of these occupations are not the responsibility of SSA. The training and workforce development responsibility of SSA is basically circumscribed by the part of the workforce, including those not in the workforce such as volunteers, who use the set of Training Packages that SSA has direct responsibility for maintaining and developing.

[8] Data from *Labour Force* surveys (Cat. no. 6202.0) have been used wherever possible to provide the descriptions. The scope of these surveys is people aged 15 years or older. The data from the each quarter have been averaged to obtain the annual estimates. The normal *Labour Force* surveys do not include data on some characteristics of an individual, for example, it does not collect data on qualifications. The descriptions of the workforce with respect to these other characteristics use the annual *Survey of Education and Work* (Cat. no. 6227.0), which is supplementary to the *Labour Force* survey. It is conducted in May each year and its scope is 15–64 years, although in 2009 the scope was extended to include people aged 15–69 years.

Consistent with the general trend in the whole workforce, the proportion holding qualifications has also been rising among workers in service industries.

The qualification in this report refers to the highest level of the non-school qualification a person has attained. It is the standard way data on qualifications are collected. Thus the highest qualification attained does not necessarily reflect the full set of skills a person may possess. It also does not capture the extent to which people hold multiple qualifications. In this respect, the qualifications data in this report underestimate the full set of skills of a person. Unfortunately, measurement of skill sets is difficult and as yet there are no standards for measuring them.

WRAPS

WRAPS is the largest of the three sectors in service industries with total employment of 1.14 million in 2009. This represents 61 per cent of the total employment in service industries.

Employment in the sector increased by 113,000, or by 1.3 per cent per year, from 2001 to 2009. This rate of growth is below that for the average for services industries.

In 2009, 77 per cent of all workers in the sector were in just four occupations—retail manager (general) (18.8 per cent), hairdresser (4.9 per cent), sales assistant (general) (41.8 per cent) and checkout operator (11.6 per cent).

Sales assistants' share of employment in the sector has been declining. In contrast, checkout operators' share has been increasing. These two occupations are closely related and to a certain extent a job in one occupation can be substituted by a job in the other. It is more likely however that the diverging trends in the two occupations reflect the ongoing trend of consolidation of businesses in the retail industry.

The employment in the sector is highly feminised, with 64 per cent female workers in 2009. The last decade has seen feminisation actually increase. Among all occupations in the sector, only retail managers employed more males than females.

The sector employs a large number of young people (15–19 year-olds). In 2009, 22 per cent were in this age group, and in some occupations the percentage was much higher—32 percent of among sale assistants and 46 per cent among checkout operators. The proportion of retail assistants aged 45 years or older has however increased from 17 per cent in 2001 to 20 per cent in 2009. Most retail managers are also aged 45 years or older—43 per cent in 2009.

About the same numbers of people work full-time as part-time in this sector. Note that high proportion of people on casual work contracts work part-time. Full-time work is more prevalent in some occupations (e.g. retail manager, hairdresser) than in others. Part-time work has however been increasing among hairdressers. Sales assistants and checkout operators predominantly work part-time—69 and 82 per cent, respectively in 2009.

Compared to the rest of the workforce, only a minority of workers in the sector hold qualifications (39 per cent in 2008), but the proportion holding qualifications has been increasing. Retail managers (50 per cent) and hairdressers (76 per cent) were most likely to hold qualifications and retail assistants (28 per cent) and checkout operators (23 per cent) least likely to hold. Note that hairdressers need a qualification to practice in the vocation and, therefore, those who do not have a qualification or the qualification they hold is at a lower level than that which is necessary, are then most likely to be apprentices.

Tourism and hospitality

Tourism and hospitality employed 674,000 workers in 2009, an increase of 93,000 from 2001. This represents a growth rate of 1.8 per cent per year.

The two largest occupations in the sector are waiter and kitchenhand, each employing more than 100,000 people. Other significant occupations in the sector are chef, cafe or restaurant manager, bar attendant, cook and fast food cook.

The sector employs more females than males—55 percent compared to 45 per cent in 2009—but the imbalance is less than in WRAPS. In some occupations the gender imbalance is greater than this though. For instance, while chefs and fast food cooks are much more likely to be male, cooks and waiters are much more likely to be female.

This sector also employs a large number of young people—20 per cent in 2009. In some occupations the proportion is much higher—33 per cent among waiters, 60 per cent among fast food cooks and 38 per cent among kitchenhands.

In contrast, 41 per cent of cafe and restaurant managers were aged 45 years or older. One in every four kitchenhands was also in this age group.

Chefs, cooks and fast food cooks all have different age profiles. In 2009, the most common age of chefs was between 25 and 34 years, cooks were generally older (42 per cent were aged 45 years or older) and most fast food cooks were young.

About the same numbers of people work full-time as part-time, although the proportion working part-time has increased slightly more recently, perhaps as a result of the global financial crisis. During the crisis, rather than retrenching workers many employers opted instead to cut their hours of work.

Cafe or restaurant managers and chefs predominantly work full-time. While a majority of cooks still work full-time, their numbers have fallen in recent years. Bar attendants, waiters, kitchenhands and fast food cooks are mostly employed part-time.

There was a relatively smaller increase in the proportion of workers with qualifications in the sector—from 40 per cent in 2002 to 43 per cent in 2008.

In 2008, more than 75 per cent of kitchenhands and fast food cooks did not have any qualifications. On the other hand, 73 per cent of chefs and about half of all cafe and restaurant managers did.

Sport and recreation

In 2009, about 59,000 people were employed in sport and recreation, the smallest of the three service industries sectors. The sector has been growing much faster than the other sectors though—8.7 per cent per year. Note that a large number of people in sector are excluded from the employment figures because they work in a volunteer capacity.

More than half the people in the sector work in just two occupations—fitness instructor and swimming coach. Employment of fitness instructors more than doubled from 2001 to 2009.

The female share of employment in the sector increased from 47 per cent in 2001 to 54 per cent in 2009. The strongest trend in feminisation was among swimming coaches.

The sector employs a large number of young people (15–19 year-olds), although more recently the proportion in this age group has declined. In 2009, one in every four swimming coaches was a young person.

Part-time employment has been on the rise in the sector. In 2008, 66 per cent worked part-time compared to 59 per cent in 2002. The change is largely attributable to an increase in the number of part-time swimming coaches.

An increasing proportion of workers in the sector hold qualifications—59 per cent in 2008. The qualifications of many were at the degree or higher level. While 75 per cent of fitness instructors held a qualification (certificate III/IV) in 2008, the proportion of swimming coaches with a qualification was only about 50 per cent.

Table 2.1 Summary of employment in service industries by sector, Australia, 2001–09

	Employment			Percentage female		Percentage 15–24 year-olds		Percentage part-time		Percentage with non-school quals	
Sector	2009 ('000)	% of SSA	Average annual growth 2001-09 (%)	2009	Change 2001–09	2009	Change 2001–09	2008	Change 2002–08	2008	Change 2002–08
WRAPS	1,143	61	1.3	64	0	38	0	49	0	39	+ +
Retail manager (general)	*215*	*11*	*1.0*	*45*	+ +	*11*	+	*11*	*0*	*50*	+ +
Hairdresser	*56*	*3*	*2.9*	*87*	+	*37*	+	*38*	+ +	*76*	*0*
Sales assistant (general)	*478*	*25*	*0.4*	*71*	*0*	*52*	*0*	*69*	+	*28*	+
Checkout operator	*133*	*7*	*3.8*	*79*	*0*	*61*	– –	*82*	*0*	*23*	+ +
Tourism & hospitality	674	36	1.9	55	0	39	+	50	0	43	+ +
Cafe/restaurant manager	*59*	*3*	*1.4*	*52*	*0*	*8*	*0*	*22*	*0*	*53*	+ +
Chef	*64*	*3*	*5.2*	*27*	+ +	*27*	+ +	*19*	*0*	*73*	*0*
Cook	*43*	*2*	*0.5*	*62*	+ +	*29*	*0*	*46*	+	*36*	+ +
Bar attendant	*58*	*3*	*0.5*	*56*	*0*	*52*	+ +	*60*	– –	*39*	+ +
Waiter	*107*	*6*	*2.3*	*77*	*0*	*65*	*0*	*77*	–	*33*	*0*
Fast food cook	*39*	*2*	*8.7*	*32*	+	*78*	*0*	*82*	–	*15*	+ +
Kitchenhand	*114*	*6*	*2.1*	*58*	*0*	*53*	+ +	*78*	+	*24*	+
Sport & recreation	59	3	8.8	54	+ +	40	0	66	+ +	59	+ +
Fitness instructor	*22*	*1*	*16.3*	*65*	– –	*36*	*0*	*69*	*0*	*75*	+ +
Swimming coach or instr	*11*	*1*	*7.0*	*49*	+ +	*48*	*0*	*73*	+ +	*45*	*0*
All service industries	1,876	100	1.7	61	0	39	0	50	+	41	+ +
All occupations	10,767		2.2	46	0	17	0	28	0	60	+ +

Source: Derived from unpublished data from the *Labour Force*, 2001–08 (Cat. no. 6202.0) and *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Small numbers have large associated standard errors .and should be interpreted with caution.
++ indicates an increase of 5 or more percentage points between 2001 and 2009
+ indicates an increase of 3-4 percentage points between 2001 and 2009
0 indicates a change of between -2 and +2 percentage points between 2001 and 2009,
– indicates a decline of 3-4 percentage points between 2001 and 2009

2.1 Trends in employment

Table 2.2 shows employment in service industries from 2001 to 2009 and Table 2.3 shows the year-on-year changes.[9]

The service industries employed about 1.9 million people in 2009, 235,000 more than in 2001. Its share of total employment however decreased from 18.2 per cent in 2001 to 17.4 per cent in 2009. Average employment growth in the industries over this period was 1.7 per cent per year compared to 2.2 per cent per year for the whole economy.

WRAPS is the largest of the three sectors that comprise service industries. In 2009, 61 per cent of people working in service industries were in WRAPS. Most of the rest were employed in tourism and hospitality with only 3 per cent in sport and recreation. While WRAPS' share of employment declined two percentage points from 2001 to 2009, the other two sectors' shares increased by one percentage point each.

The year-on-year changes in employment reflect the fluctuations in the business cycle, for instance, the drop in employment in 2008 is probably the result of the global financial crisis and the pickup in 2009 the result of the stimulus packages.

Table 2.2 Persons employed in service industries by sector, Australia, 2001–09 ('000)

Year	Sector					
	WRAPS	Tourism & hospitality	Sport & recreation	All service industries	Other sectors	All
2001	1,030	581	31	1,641	7,377	9,018
2002	1,062	577	39	1,677	7,463	9,140
2003	1,113	577	40	1,730	7,650	9,380
2004	1,115	595	40	1,751	7,776	9,526
2005	1,111	608	43	1,762	8,024	9,786
2006	1,133	602	53	1,788	8,301	10,089
2007	1,112	645	53	1,809	8,564	10,374
2008	1,158	665	53	1,876	8,768	10,644
2009	1,143	674	59	1,876	8,891	10,767
Total change 2001–09 (%)	11.0	16.1	91.1	14.3	20.5	19.4

Source: Derived from unpublished data from the *Labour Force*, 2001–08 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

[9] The *Labour Force* ((Cat. no. 6202.0) data are collected from sample surveys conducted by the ABS. The ABS uses the sample data to calculate population estimates. These estimates are subject to sampling errors. Sampling errors arise because a sample of the population rather than the whole population is surveyed. Estimates for groups with a small number of people in the sample have large errors associated with them and, therefore, should be interpreted with caution. To reduce the volatility in the estimates, data are sometimes averaged over a number of contiguous years. The average is then an approximation for the middle of the period over which the data have been averaged. Data at 6-digit ANZSCO are generally unavailable in the *Labour Force* surveys. They are however available from the Census collection. In this report, the distribution of employment across 6-digit occupations in each 4-digit unit group is assumed to be the same as in the 2006 Census.

Table 2.3 Year-on-year change in employment in service industries by sector, Australia, 2001–09 (%)

Year	Sector					
	WRAPS	Tourism & hospitality	Sport & recreation	All service industries	Other sectors	All
2001–02	3.1	-0.6	25.3	2.2	1.2	1.4
2002–03	4.8	0.1	3.0	3.2	2.5	2.6
2003–04	0.2	3.1	1.3	1.2	1.6	1.6
2004–05	-0.4	2.1	7.8	0.6	3.2	2.7
2005–06	2.0	-0.8	21.8	1.5	3.4	3.1
2006–07	-1.8	7.0	0.5	1.2	3.2	2.8
2007–08	4.1	3.2	-0.7	3.7	2.4	2.6
2008–09	-1.3	1.3	11.5	0.0	1.4	1.2
Average	1.3	1.9	8.8	1.7	2.4	2.2

Source: Derived from unpublished data from the *Labour Force*, 2001–08 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

2.1.1 Employment trends in WRAPS

This section focuses on the employment changes in WRAPS. It provides details about the changes in the age, gender, hours of work and qualifications in the sector. State and territory shares of employment in the sector are also provided.

Table 2.4 shows the employment in the various occupations that comprise the sector. Most of the employment in the sector is in just four occupations—retail manager (general), hairdresser, sales assistant (general) and checkout operator. In 2009, 77 per cent of the employment in the sector was in these four occupations, down from 79 per cent in 2001.

Sales assistant is by far the largest of these four occupations. In 2009, 42 per cent of all people employed in WRAPS were sales assistants. Employment in the occupation peaked at 527,000 in 2005 and in 2009 it had declined to 478,000.

In contrast, employment of checkout operators, a closely related occupation, has been increasing. These diverging trends are perhaps a reflection of the ongoing consolidation in the retail sector. Checkout operators are more likely to be employed by the larger outlets. The smaller outlets whose numbers are reducing, due to consolidation[10], generally employed sales assistants.

[10] For instance, in the hardware sector, large operators such as Bunnings are replacing smaller owner-operated hardware stores.

Table 2.4 Persons employed in WRAPS by occupation, Australia, 2001 to 2009 ('000)

Occupation	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average annual growth rate (%)
WRAPS	1,030	1,062	1,113	1,115	1,111	1,133	1,112	1,158	1,143	1.3
Retail manager (general)	*202*	*216*	*215*	*221*	*196*	*189*	*209*	*220*	*215*	*1.0*
Antique dealer	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1.0*
Betting agency manager	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1.0*
Hair or beauty salon manager	*4*	*4*	*4*	*4*	*4*	*3*	*4*	*4*	*4*	*1.0*
Post office manager	*3*	*4*	*4*	*4*	*3*	*3*	*4*	*4*	*4*	*1.0*
Florist	*6*	*7*	*6*	*6*	*8*	*6*	*6*	*8*	*5*	*1.7*
Hairdresser	*46*	*49*	*52*	*49*	*53*	*55*	*57*	*63*	*56*	*2.9*
Beauty therapist	*14*	*14*	*14*	*15*	*20*	*21*	*19*	*20*	*22*	*6.5*
Funeral director	*2*	*2*	*3*	*3*	*2*	*2*	*2*	*2*	*3*	*4.9*
Funeral workers nec	*0*	*1*	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*4.9*
Hair or beauty salon assistant	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*7.1*
Order Clerk	*5*	*5*	*5*	*5*	*4*	*6*	*5*	*5*	*6*	*2.2*
Production clerk	*6*	*6*	*6*	*6*	*6*	*7*	*7*	*7*	*7*	*2.2*
Purchasing officer	*17*	*15*	*17*	*17*	*15*	*19*	*18*	*19*	*19*	*2.2*
Sales clerk	*12*	*11*	*13*	*12*	*11*	*14*	*13*	*14*	*14*	*2.2*
Stock clerk	*19*	*18*	*19*	*19*	*18*	*22*	*20*	*21*	*22*	*2.2*
Warehouse administrator	*16*	*15*	*17*	*16*	*15*	*18*	*17*	*18*	*19*	*2.2*
Sales rep (personal & h'hold goods)	*33*	*30*	*34*	*28*	*31*	*35*	*33*	*33*	*33*	*0.5*
Sales assistant (general)	*466*	*475*	*497*	*508*	*524*	*527*	*487*	*496*	*478*	*0.4*
Pharmacy sales assistant	*30*	*31*	*32*	*33*	*34*	*34*	*32*	*32*	*34*	*1.6*
Retail supervisor	*22*	*26*	*26*	*25*	*28*	*30*	*33*	*34*	*35*	*5.9*
Sales assistants & salespersons nec	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*2*	*2*	*7.7*
Checkout operator	*99*	*104*	*117*	*113*	*107*	*109*	*114*	*124*	*133*	*3.8*
Office cashier	*11*	*11*	*13*	*12*	*12*	*12*	*12*	*13*	*14*	*3.8*
Retail buyer	*4*	*7*	*6*	*5*	*7*	*7*	*5*	*5*	*5*	*8.1*
Visual merchandiser	*7*	*7*	*8*	*8*	*7*	*6*	*7*	*7*	*8*	*2.4*
Other sales support worker	*2*	*2*	*3*	*3*	*2*	*2*	*3*	*3*	*3*	*4.2*
All occupations	9,017	9,144	9,378	9,528	9,800	10,042	10,305	10,576	10,736	2.2

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Gender

Table 2.5 shows the distribution of employment in WRAPS by gender in 2001 and 2009. The distributions of only the four largest occupations are shown. The 'Other' category includes all other occupations.

Employment in the sector is highly feminised, with some indication that the process is still continuing. In 2009, 87 per cent of all hairdressers were female. Only in retail management are there more males employed than females, although even in this occupation the trend is towards increasing employment of females.

Table 2.5 Gender profile of persons employed in WRAPS, selected occupations, Australia, 2001 and 2009 (%)

	2001			2009		
Occupation	Male	Female	All	Male	Female	All
WRAPS	38	62	100	36	64	100
Retail manager (general)	*60*	*40*	*100*	*55*	*45*	*100*
Hairdresser	*17*	*83*	*100*	*13*	*87*	*100*
Sales assistant (general)	*28*	*72*	*100*	*29*	*71*	*100*
Checkout operator	*21*	*79*	*100*	*21*	*79*	*100*
Other	*50*	*50*	*100*	*45*	*55*	*100*
All occupations	56	44	100	54	46	100

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Age

Table 2.6 shows the age profile of workers in WRAPS in 2001 and 2009. The sector employs a very large number of young people. In 2009, 22 per cent were aged 15–19 years. In the whole workforce only 7 per cent of people are in this age group.

In some occupations the proportion is much higher, for instance, 32 percent of sale assistants and 46 per cent of checkout operators in 2009 were young workers. Many of them are likely to be students working part-time, for whom these jobs provide income support while studying.

However there has been an increase in the number of older workers (45 years or older) among retail assistants (see vase study in Box 2.1). In 2009, 20 per cent were in this age group compared to 17 per cent in 2001. Older workers also occupied most retail manager positions—43 per cent in 2009.

In hairdressing, employment has declined for 25–34 year-olds but generally increased for all other age groups.

Table 2.6 Age profile of persons employed in WRAPS, selected occupations, Australia, 2001 and 2009 (%)

	2001						2009					
Occupation	15–19	20–24	25–34	35–44	45+	All	15–19	20–24	25–34	35–44	45+	All
WRAPS	23	16	19	18	24	100	22	16	18	17	26	100
Retail manager (gen)	*1*	*7*	*20*	*27*	*45*	*100*	*2*	*9*	*22*	*24*	*43*	*100*
Hairdresser	*14*	*20*	*32*	*19*	*16*	*100*	*17*	*20*	*24*	*18*	*21*	*100*
Sales assistant (gen)	*33*	*19*	*17*	*14*	*17*	*100*	*32*	*20*	*16*	*13*	*20*	*100*
Checkout operator	*49*	*20*	*10*	*10*	*11*	*100*	*46*	*15*	*12*	*11*	*15*	*100*
Other	*10*	*14*	*25*	*24*	*27*	*100*	*9*	*16*	*22*	*22*	*31*	*100*
All occupations	7	11	24	25	33	100	7	10	22	23	38	100

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Box 2.1 Retail assistant in a large hardware store who is also a qualified tradesperson in building and construction

For 45 years, David has run his own building business and sold it 2 years ago to his younger business partner for a tidy profit. Since ‘retiring’ David has started working for the local large hardware retail business in their trade and building supplies department. He started this work to get some extra cash into the family but also, to ‘get out of the house a bit’. He enjoys the work and gets a kick out of sharing his knowledge and experience with customers and the younger staff. Even though he received his trade qualification years ago, he made sure that he kept up to date in his career and now finds himself enjoying the building trade from ‘the other side of the fence’. An important part of his work is building relationships with local customers and he believes, supporting them with ‘tricky problems’ such as home DIY and renovation. From time to time he also assists in running customer classes on building for the retailer. Whilst he is still a builder, he now works and is paid as a retail assistant.

States and territories

Table 2.7 shows the states'[11] share of employment in WRAPS. The shares generally reflect each state's share of total employment.

Table 2.7 State and territory share of employment in WRAPS, selected occupations, Australia, 2001 and 2009 (%)

	2001							2009						
Occupation	NSW	Vic	Qld	SA	WA	Tas/ NT/ ACT	All	NSW	Vic	Qld	SA	WA	Tas/ NT/ ACT	All
WRAPS	32	25	20	8	10	5	100	31	25	21	7	10	5	100
Retail m'nger (gen)	*34*	*25*	*18*	*7*	*10*	*5*	*100*	*31*	*25*	*21*	*7*	*11*	*5*	*100*
Hairdresser	*29*	*25*	*22*	*8*	*10*	*6*	*100*	*31*	*21*	*24*	*8*	*10*	*5*	*100*
Sales assistant (gen)	*32*	*26*	*21*	*7*	*9*	*4*	*100*	*35*	*19*	*23*	*8*	*10*	*4*	*100*
Checkout operator	*32*	*25*	*19*	*8*	*11*	*5*	*100*	*32*	*26*	*19*	*7*	*10*	*5*	*100*
Other	*32*	*26*	*19*	*7*	*12*	*5*	*100*	*28*	*25*	*25*	*6*	*12*	*5*	*100*
All occupations	33	25	19	8	10	5	100	32	25	21	7	11	5	100

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

[11] In this document the term 'states' will be used to refer to states and territories.

Hours

Table 2.8 shows the full-time/part-time breakdown of employment in WRAPS in 2002 and 2008.[12] Note that a high proportion of people on casual work contracts work part-time. The sector employs about the same number of people working full-time as part-time, compared to 72 per cent working full-time in all occupations.

Full-time work is more prevalent in some occupations (e.g. retail manager, hairdresser) than in others. Part-time work has however been increasing among hairdressers. Sales assistants and checkout operators predominantly work part-time—69 and 82 per cent, respectively, worked part-time in 2009.

Table 2.8 Full-time/part-time distribution of employment in WRAPS, selected occupations, Australia, 2002 and 2008 (%)

	2002 (average 2001–03)			2008 (average 2007–09)		
Occupation	Full-time	Part-time	All	Full-time	Part-time	All
WRAPS	52	48	100	51	49	100
Retail manager (general)	*88*	*12*	*100*	*89*	*11*	*100*
Hairdresser	*69*	*31*	*100*	*62*	*38*	*100*
Sales assistant (general)	*34*	*66*	*100*	*31*	*69*	*100*
Checkout operator	*18*	*82*	*100*	*18*	*82*	*100*
Other	*70*	*30*	*100*	*70*	*30*	*100*
All occupations	72	28	100	72	28	100

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Qualifications

Table 2.9 shows the qualification[13] profiles of people employed in WRAPS in 2002 and 2008. An increasing number in the sector hold qualifications—33 per cent in 2002 to 39 per cent in 2008. The qualifications held are increasingly at higher levels. The proportion holding qualifications is however much lower than in the workforce in general.

It is generally uncommon for somebody working in this sector to hold a higher education qualification (degree or higher), although some of those who do hold qualifications at this level may also hold other lower level qualifications (see Box 2.2 for an example of such a person). Note that the surveys report only the highest level qualification of a person.

Half of all retail managers held qualifications in 2008, an increase of 7 percentage points from 2002. A significant number of them held qualifications at the degree or higher level.

While most hairdressers hold qualifications because it is a requirement in order to practice in the trade, the proportion either with low level qualifications (certificate I/II) or without any qualifications increased from 2002 to 2008.[14] This suggests a rise in the number of apprentices (who generally do not hold qualifications) the industry has taken on in recent years.

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[12] The descriptions on hours of work and qualifications are based on data from the *Survey of Education and Work*, which is an annual survey. Data for three contiguous years are averaged to smooth the volatility in the annual data.

[13] The reference is to the highest non-school qualification attained.

[14] In 2002, about 9,000 hairdressers did not hold a qualification compared to 14,000 in 2008.

Sales assistants and checkout operators are least likely of all workers in the sector to hold qualifications. This is to not surprising given that students who are still at school or who are in the process of acquiring their first qualification make up a significant proportion of workers in each occupation.

Table 2.9 Qualification profile of persons employed in WRAPS, selected occupations, Australia, 2002 and 2008 (%)

	2002 (average 2001–03)						2008 (average 2007–09)					
Occupation	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All
WRAPS	7	5	13	8	67	100	9	8	16	6	61	100
Retail manager (gen)	*13*	*7*	*16*	*8*	*57*	*100*	*14*	*11*	*19*	*7*	*50*	*100*
Hairdresser	*1*	*1*	*75*	*5*	*18*	*100*	*1*	*6*	*63*	*7*	*24*	*100*
Sales assistant (gen)	*5*	*4*	*8*	*7*	*75*	*100*	*7*	*6*	*10*	*5*	*72*	*100*
Checkout operator	*3*	*2*	*6*	*6*	*83*	*100*	*7*	*3*	*7*	*6*	*77*	*100*
Other	*8*	*8*	*13*	*9*	*61*	*100*	*11*	*12*	*18*	*7*	*52*	*100*
All occupations	21	8	19	7	45	100	25	10	20	5	40	100

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Box 2.2 Hairdresser who works also works as a teacher—her current work is as a hairdresser but the highest level of qualification she has attained is in teaching and which is at a higher level than her hairdressing qualification

Susie is a trade qualified hairdresser who has run her own salon for the past 15 years. As part of her day to day work, she supervisors and mentors apprentice hairdressers and takes particular interest in those young workers who demonstrate a real commitment and interest in the industry and all it has to offer. In the last 4 years, Susie has started teaching part time at the local area training provider. She sees this as both a natural extension of her skills, as providing her with a new career opportunity and also as a way to "give back" to the industry that has provided her with so much. To ensure her compliance with the national quality guidelines and also, to develop her teaching skills, Susie completed a training qualification which sits at a higher AQF level than her hairdressing qualification.

Susie's main job is still at her salon (at reduced hours as she has a competent salon manager) and teaching is her second job. Susie's higher teaching qualification—whilst not immediately applicable to the hairdressing industry—is critical for her teaching work. Susie still calls herself a hairdresser and strongly identifies with that industry and its work.

Table 2.10 provides a summary of the number of people with and without qualifications in WRAPS in 2002 and 2008. It shows that across almost all occupations, there was a larger percentage increase in the number of people with qualifications than without qualifications between 2002 and 2008. This is evidence of skills deepening which needs to be factored in any model forecasting the qualifications requirements in the sector.

Hairdressing is the only occupation in which there was small percentage decline in the number with qualifications and a large percentage increase in the number without qualifications. As noted above, these data are indicative of a relatively large increase in the number of apprentice hairdressers. In recent years there has seen an increase in international students enrolling in hairdressing courses in Australia. It is possible that part of the increase in apprentice numbers is due to increased numbers of international students. The currently available data do not allow decomposition of the increase in apprentice numbers between domestic and international students, let alone identify apprentices.

Table 2.10 Persons with and without qualifications in WRAPS, selected occupations, Australia, 2002 and 2008

	With qualifications			Without qualifications			All		
Occupation	2002 ('000)	2008 ('000)	% change 2002–08	2002 ('000)	2008 ('000)	% change 2002–08	2002 ('000)	2008 ('000)	% change 2002–08
WRAPS	362	430	18.8	724	685	-5.3	1,085	1,115	2.7
Retail manager (gen)	*91*	*106*	*17.4*	*119*	*105*	*-11.6*	*210*	*212*	*0.9*
Hairdresser	*43*	*43*	*-1.8*	*10*	*13*	*37.6*	*53*	*56*	*5.3*
Sales assistant (gen)	*122*	*133*	*9.1*	*364*	*342*	*-6.0*	*486*	*475*	*-2.2*
Checkout operator	*19*	*28*	*47.9*	*92*	*95*	*2.5*	*112*	*123*	*10.2*
Other	*87*	*119*	*37.7*	*138*	*130*	*-6.2*	*225*	*249*	*10.7*
All occupations	5,021	6,176	23.0	4,071	4,141	1.7	9,091	10,317	13.5

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.
The 2002 and 2008 data represent the average for 2001–03 and 2007–09, respectively.

2.1.2 Employment trends in tourism and hospitality

This section focuses on employment changes in the tourism and hospitality sector. Table 2.11 shows the employment in the sector by occupation from 2001 to 2009.

By far the two largest occupations in the sector are those of waiter and kitchenhand. Over 100,000 people were employed in each of these occupations in 2009. The next largest occupations by size are those of chef, cafe or restaurant manager, bar attendant, cook and fast food cook.

Table 2.11 Persons employed in tourism and hospitality by occupation, Australia, 2001 to 2009 (‘000)

Occupation	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average annual growth rate (%)
Tourism & hospitality	581	577	577	595	608	602	645	665	674	1.9
Cafe/restaurant manager	*53*	*53*	*51*	*55*	*52*	*53*	*53*	*55*	*59*	*1.4*
Caravan park & camping ground m'ngr	*5*	*6*	*6*	*6*	*5*	*5*	*4*	*3*	*4*	*0.8*
Hotel or motel manager	*27*	*19*	*24*	*24*	*23*	*22*	*24*	*23*	*15*	*-5.3*
Licensed club manager	*8*	*6*	*7*	*7*	*7*	*6*	*7*	*7*	*6*	*-2.9*
Bed & breakfast operator	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*-2.8*
Accommodation & hosp managers nec	*8*	*7*	*6*	*6*	*6*	*7*	*7*	*6*	*6*	*-2.8*
Travel agency manager	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1.1*
Amusement centre manager	*1*	*2*	*1*	*1*	*2*	*2*	*2*	*1*	*1*	*4.0*
Conference & event organiser	*12*	*12*	*13*	*13*	*15*	*14*	*18*	*19*	*19*	*6.7*
Hosp, retail & service managers nec	*17*	*17*	*21*	*19*	*19*	*18*	*21*	*20*	*22*	*4.0*
Baker	*13*	*17*	*15*	*16*	*15*	*15*	*16*	*19*	*16*	*3.4*
Pastrycook	*8*	*10*	*9*	*9*	*9*	*9*	*9*	*11*	*10*	*3.4*
Chef	*43*	*46*	*47*	*51*	*55*	*56*	*58*	*66*	*64*	*5.2*
Cook	*43*	*39*	*32*	*34*	*33*	*36*	*40*	*39*	*43*	*0.5*
Bar attendant	*56*	*53*	*53*	*57*	*60*	*57*	*57*	*57*	*58*	*0.5*
Barista	*10*	*9*	*9*	*10*	*10*	*10*	*10*	*10*	*10*	*0.5*
Cafe worker	*17*	*17*	*18*	*18*	*19*	*19*	*18*	*18*	*17*	*0.3*
Gaming worker	*5*	*6*	*5*	*7*	*7*	*9*	*7*	*6*	*9*	*9.5*
Hotel service manager	*5*	*4*	*6*	*5*	*5*	*4*	*7*	*8*	*9*	*9.6*
Waiter	*89*	*88*	*89*	*93*	*98*	*98*	*100*	*105*	*107*	*2.3*
Bar useful or busser	*1*	*1*	*1*	*1*	*1*	*0*	*1*	*1*	*1*	*1.8*
Doorperson or luggage porter	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1.8*
Hospitality workers nec	*2*	*1*	*2*	*1*	*2*	*1*	*2*	*2*	*2*	*1.9*
Tourist information officer	*1*	*2*	*1*	*1*	*1*	*1*	*1*	*2*	*2*	*1.7*
Travel consultant	*22*	*22*	*21*	*22*	*21*	*20*	*21*	*25*	*24*	*1.7*
Hotel or motel receptionist	*7*	*7*	*7*	*7*	*7*	*8*	*7*	*8*	*8*	*1.6*
Fast food cook	*21*	*23*	*24*	*23*	*22*	*22*	*29*	*35*	*39*	*8.7*
Pastrycook's assistant	*5*	*5*	*5*	*4*	*4*	*4*	*4*	*5*	*5*	*1.4*
Food trades assistants nec	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1.4*
Kitchenhand	*98*	*100*	*97*	*97*	*103*	*100*	*116*	*111*	*114*	*2.1*
All occupations	9,017	9,144	9,378	9,528	9,800	10,042	10,305	10,576	10,736	2.2

Source: Derived from unpublished *Labour Force*, 2001–08 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Gender

Table 2.12 shows the distribution of employment in tourism and hospitality by gender in 2001 and 2009. The smaller occupations have been combined into a category called 'Other'. While employment in this sector is less feminised than in WRAPS, the last decade has seen feminisation increase.

In 2009, 55 percent of the people employed in the sector were female. In some occupations the gender imbalance is greater than this. For instance, while chefs and fast food cooks are much more likely to be male, cooks and waiters are much more likely to be female.

Table 2.12 Gender profile of persons employed in tourism and hospitality, selected occupations, Australia, 2001 and 2009 (%)

	2001			2009		
Occupation	Male	Female	All	Male	Female	All
Tourism & hospitality	47	53	100	45	55	100
Cafe/restaurant manager	*50*	*50*	*100*	*48*	*52*	*100*
Chef	*80*	*20*	*100*	*73*	*27*	*100*
Cook	*44*	*56*	*100*	*38*	*62*	*100*
Bar attendant	*45*	*55*	*100*	*44*	*56*	*100*
Waiter	*24*	*76*	*100*	*23*	*77*	*100*
Fast food cook	*72*	*28*	*100*	*68*	*32*	*100*
Kitchenhand	*40*	*60*	*100*	*42*	*58*	*100*
Other	*52*	*48*	*100*	*45*	*55*	*100*
All occupations	56	44	100	54	46	100

Source: Derived from unpublished data from the *Labour Force*, 2001–08 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Age

Table 2.13 shows the distribution of employment by age in tourism and hospitality. As is the case with employment in WRAPS, this sector also employs a large number of young people. In 2009, one in every five workers in the sector was aged 15–19 years. In some occupations the proportion is much higher—waiters 33 per cent, fast food cooks 60 per cent and kitchenhands 38 per cent.

In contrast, 41 per cent of cafe and restaurant managers were aged 45 years or older as were 25 per cent of all kitchehands.

Chefs, cooks and fast food cooks have different age profiles. In 2009, the most common age of chefs was between 25 and 34 years, cooks were generally older (42 per cent were aged 45 years or older) and most fast food cooks were young (60 per cent were aged 15–19 years). The age profiles of both cooks and fast food cooks have changed over the years. In 2001, only 33 per cent of cooks were aged 45 years or older and 69 per cent of fast food cooks were young.

Table 2.13 Age profile of persons employed in tourism and hospitality, selected occupations, Australia, 2001 and 2009 (%)

	2001						2009					
Occupation	15–19	20–24	25–34	35–44	45+	All	15–19	20–24	25–34	35–44	45+	All
Tourism & hospitality	18	17	22	18	24	100	20	19	21	16	24	100
Cafe/restaurant m'gers	*1*	*8*	*23*	*28*	*41*	*100*	*1*	*6*	*22*	*29*	*41*	*100*
Chef	*4*	*18*	*38*	*23*	*17*	*100*	*4*	*23*	*32*	*23*	*19*	*100*
Cook	*16*	*12*	*19*	*20*	*33*	*100*	*14*	*16*	*14*	*14*	*42*	*100*
Bar attendant	*14*	*30*	*29*	*15*	*12*	*100*	*16*	*36*	*27*	*9*	*11*	*100*
Waiter	*33*	*32*	*19*	*9*	*7*	*100*	*33*	*32*	*18*	*8*	*9*	*100*
Fast food cook	*69*	*9*	*9*	*8*	*5*	*100*	*60*	*18*	*7*	*5*	*10*	*100*
Kitchenhand	*33*	*11*	*14*	*16*	*25*	*100*	*38*	*14*	*11*	*13*	*23*	*100*
Other	*8*	*14*	*25*	*21*	*32*	*100*	*7*	*12*	*26*	*22*	*33*	*100*
All occupations	7	11	24	25	33	100	7	10	22	23	38	100

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

States and territories

Table 2.14 shows each state's share of employment in tourism and hospitality in 2001 and 2009. The shares generally reflect the state's share o total employment with the exception of two occupations—NSW has a relatively more bar attendants and Queensland has relatively more fast food cooks.

Table 2.14 State and territory share of employment in tourism and hospitality, selected occupations, Australia, 2001 and 2009 (%)

	2001							2009						
Occupation	NSW	Vic	Qld	SA	WA	Tas/ NT/ ACT	All	NSW	Vic	Qld	SA	WA	Tas/ NT/ ACT	All
Tourism & hosp	34	23	20	8	10	5	100	32	25	21	8	10	5	100
Cafe/restaurant man	*37*	*23*	*20*	*7*	*9*	*5*	*100*	*31*	*24*	*20*	*7*	*13*	*5*	*100*
Chef	*34*	*25*	*17*	*9*	*11*	*5*	*100*	*38*	*22*	*21*	*6*	*8*	*5*	*100*
Cook	*30*	*21*	*26*	*7*	*11*	*5*	*100*	*32*	*26*	*19*	*5*	*12*	*5*	*100*
Bar attendant	*43*	*17*	*21*	*6*	*8*	*5*	*100*	*41*	*19*	*19*	*8*	*8*	*6*	*100*
Waiter	*34*	*27*	*18*	*7*	*9*	*5*	*100*	*28*	*30*	*19*	*8*	*10*	*5*	*100*
Fast food cook	*35*	*27*	*18*	*9*	*7*	*4*	*100*	*31*	*27*	*26*	*6*	*7*	*3*	*100*
Kitchenhand	*31*	*25*	*19*	*7*	*13*	*5*	*100*	*28*	*25*	*22*	*9*	*12*	*4*	*100*
Other	*34*	*23*	*20*	*8*	*10*	*6*	*100*	*32*	*24*	*21*	*8*	*10*	*6*	*100*
All occupations	33	25	19	8	10	5	100	32	25	21	7	11	5	100

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Hours

Table 2.15 shows the full-time/part-time distribution of employment in tourism and hospitality in 2002 and 2008. The sector employs roughly equal numbers of full-time and part-time workers, although there has been small decline in the proportion who working full-time in recent years because of the global financial crisis. During the crisis, rather than retrenching workers many employers opted instead to cut their hours of work.

Cafe or restaurant managers and chefs predominantly work full-time. A large majority of cooks also work full-time, but the share of full-time work among them is declining.

Full-time work is increasing for bar attendants and fast food cooks, although part-time work is still the norm, particularly among the latter. Most waiters work part-time as do most kitchenhands.

Table 2.15 Full-time/part-time distribution of employment in tourism and hospitality, selected occupations, Australia, 2001 and 2009 (%)

	2002 (average 2001–03)			2008 (average 2007–09)		
Occupation	Full-time	Part-time	All	Full-time	Part-time	All
Tourism & hospitality	52	48	100	50	50	100
Cafe/restaurant manager	*80*	*20*	*100*	*78*	*22*	*100*
Chef	*82*	*18*	*100*	*81*	*19*	*100*
Cook	*58*	*42*	*100*	*54*	*46*	*100*
Bar attendant	*35*	*65*	*100*	*40*	*60*	*100*
Waiter	*20*	*80*	*100*	*23*	*77*	*100*
Fast food cook	*15*	*85*	*100*	*18*	*82*	*100*
Kitchenhand	*26*	*74*	*100*	*22*	*78*	*100*
Other	*76*	*24*	*100*	*71*	*29*	*100*
All occupations	72	28	100	72	28	100

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Qualifications

Table 2.16 shows the qualification profiles of people who were employed in tourism and hospitality in 2002 and 2008. The proportion of people holding qualifications increased from 40 per cent in 2002 to 43 per cent in 2008. This suggests that skills deepening, while clearly evident, is occurring at a slower pace in this sector.

About 73 per cent of chefs held qualifications (mainly certificate III/IV) in 2008, but only about half of all cafe and restaurant managers did. Kitchenhands and fast food cooks are least likely to hold qualifications with less than 25 per cent holding qualifications in 2008.

A number of waiters held a degree or higher level qualification, some of whom could be students doing higher degrees or graduates waiting for their first 'real' job (see Box 2.3 for a case study).

Table 2.16 Qualification profile of persons employed in tourism and hospitality, selected occupations, Australia, 2002 and 2008 (%)

	2002 (average 2001–03)						2008 (average 2007–09)					
Occupation	H'Ed	Ad Dip/ dip	Cert III/IV	Cert I/II	None	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All
Tourism & hospitality	9	6	16	9	60	100	11	8	18	6	57	100
Cafe/restaurant m'gers	*15*	*9*	*17*	*9*	*49*	*100*	*17*	*14*	*17*	*5*	*47*	*100*
Chef	*6*	*6*	*51*	*7*	*30*	*100*	*9*	*10*	*50*	*4*	*27*	*100*
Cook	*3*	*3*	*13*	*14*	*68*	*100*	*7*	*6*	*15*	*8*	*64*	*100*
Bar attendant	*5*	*6*	*12*	*10*	*67*	*100*	*7*	*10*	*16*	*5*	*61*	*100*
Waiter	*9*	*6*	*8*	*7*	*69*	*100*	*11*	*6*	*10*	*6*	*67*	*100*
Fast food cook	*4*	*1*	*6*	*5*	*84*	*100*	*3*	*2*	*6*	*3*	*85*	*100*
Kitchenhand	*5*	*4*	*6*	*7*	*77*	*100*	*6*	*4*	*7*	*6*	*76*	*100*
Other	*14*	*9*	*18*	*9*	*50*	*100*	*17*	*11*	*20*	*5*	*47*	*100*
All occupations	21	8	19	7	45	100	25	10	20	5	40	100

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Box 2.3 University student working in hospitality as a barista—the skills needed to work as a barista are not recognised but the degree (which is in an unrelated field) is captured in workforce data because it is the highest qualification she has attained

Jasmine has completed a degree in computer science at a university and hopes one day to establish her own business internationally. She is now enrolled in a Masters program in animation programming at the same university and whilst doing that she works part-time as a barista in a local coffee shop. She has had this job since she started university over 5 years ago and she has a positive working relationship with the owner who provides her with flexibility to make sure that she can fulfil her study commitments and from time to time, travel overseas. As part of her work with the coffee shop, she undertook and completed a barista course which resulted in a nationally recognized skill set. Whilst being a barista is not the primary career goal of Jasmine, she did appreciate the opportunity to “be better at what I do” and learn more in depth knowledge of coffee and its origins. Her manager believes that it was a helpful retention strategy to keep Jasmine in the business for longer than they both expected. Jasmine’s manager appreciates the work and knowledge of Jasmine as she is the longest serving staff member, knows many of the local clientele and is able to run the business if the manger has to step away. Jasmine is also excellent with new staff. As far as Jasmine can see, she believes that working in a hospitality industry has given her a “customer service ethic” and enabled her to “deal with a range of customers who walk through the door”.

Table 2.17 summarises the number of people with and without qualifications in tourism and hospitality in 2002 and 2008.

Employment in the sector generally increased for people with qualifications and for people without qualifications. While 50,000 more people with qualifications were employed in 2008 than in 2002, the increase in the number without qualifications was only 34,000.

Almost all employment growth among fast food cooks was for those without qualifications.

Table 2.17 Persons with and without qualifications in tourism and hospitality, selected occupations, Australia, 2002 and 2008

	With qualifications			Without qualifications			All		
Occupation	2002 ('000)	2008 ('000)	% change 2002–08	2002 ('000)	2008 ('000)	% change 2002–08	2002 ('000)	2008 ('000)	% change 2002–08
Tourism & hospitality	229	279	21.7	340	374	9.9	569	653	14.6
Cafe/restaurant m'gers	*26*	*30*	*16.0*	*25*	*27*	*9.0*	*51*	*58*	*12.6*
Chef	*33*	*49*	*47.8*	*14*	*18*	*33.1*	*47*	*67*	*43.5*
Cook	*11*	*13*	*19.6*	*23*	*23*	*1.7*	*34*	*36*	*7.5*
Bar attendant	*18*	*24*	*35.8*	*37*	*37*	*2.2*	*54*	*61*	*13.1*
Waiter	*29*	*36*	*26.1*	*65*	*74*	*13.3*	*94*	*110*	*17.2*
Fast food cook	*4*	*5*	*40.9*	*19*	*30*	*55.9*	*23*	*35*	*53.5*
Kitchenhand	*21*	*26*	*24.1*	*71*	*81*	*14.2*	*91*	*106*	*16.4*
Other	*88*	*95*	*8.4*	*87*	*83*	*-4.5*	*175*	*178*	*2.0*
All occupations	5,021	6,176	23.0	4,071	4,141	1.7	9,091	10,317	13.5

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.
The 2002 and 2008 data represent the average for 2001–03 and 2007–09, respectively.

2.1.3 Employment trends in sport and recreation

This section focuses on employment changes in the sport and recreation sector. It is the smallest of the three service industries sector in terms of the number of people employed and whose main job is in the sector. The data on the workforce presented in this section do not capture people who work as volunteers in the sector nor does it capture people who have a second job in the sector. An example of such a person is a physical education teacher working three days a week at a state school and takes swimming classes at the local pool at weekends and during the school holidays. See Box 2.4 for an example of a delivery driver who also is a volunteer soccer coach.

Table 2.18 shows the number of workers employed in sector by occupation from 2001 to 2009. In many occupations, the number of people employed is less than 500 and because of rounding the number recorded is zero.[15] Note that because of small numbers in this sector, the estimates have a higher degree of associated uncertainty and, therefore, should be interpreted with care.

More than half the employment in the sector is in just two occupations—fitness instructor and swimming coach. The occupation of fitness instructor is one of the fastest growing with number of people employed in it doubling over this period.

[15] The numbers of people employed as bungy jump master, mountain or glacier guide, trekking guide and whitewater rafting guide were actually zero in each year.

Table 2.18 Persons employed in sport and recreation by occupation, Australia, 2001 to 2009 ('000)

Occupation	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average annual growth rate (%)
Sport & recreation	31	39	40	40	43	53	53	53	59	4.0
Fitness centre manager	*2*	*2*	*2*	*2*	*3*	*3*	*2*	*2*	*2*	*4.0*
Sports centre manager	*3*	*4*	*4*	*3*	*5*	*5*	*4*	*4*	*4*	*4.0*
Fitness instructor	*8*	*12*	*13*	*11*	*13*	*18*	*20*	*19*	*22*	*16.3*
Bungy jump master	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*na*
Fishing guide	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*na*
Hunting guide	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*na*
Mountain or glacier guide	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*na*
Outdoor adventure instructor	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*na*
Trekking guide	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*na*
Whitewater rafting guide	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*na*
Outdoor adventure guides nec	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*na*
Diving instructor (open water)	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*na*
Gymnastics coach or instructor	*2*	*2*	*2*	*2*	*2*	*3*	*3*	*3*	*3*	*na*
Horse riding coach or instructor	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*na*
Snowsport instructor	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*na*
Swimming coach or instructor	*6*	*7*	*8*	*9*	*8*	*9*	*9*	*10*	*11*	*7.0*
Tennis coach	*2*	*2*	*2*	*2*	*2*	*3*	*3*	*3*	*3*	*na*
Other sports coach or instructor	*3*	*3*	*4*	*4*	*4*	*4*	*4*	*4*	*5*	*na*
Dog or horse racing official	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*na*
Sports development officer	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*na*
Sports umpire	*2*	*2*	*2*	*3*	*3*	*3*	*3*	*3*	*3*	*7.0*
Other sports official	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*8.8*
All occupations	9,017	9,144	9,378	9,528	9,800	10,042	10,305	10,576	10,736	2.2

Source: Derived from unpublished data from the *Labour Force*, 2001–08 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Box 2.4 Full time worker who is also a volunteer coach for a sports club and the skills used in the sports club (volunteer work) are not captured in workforce data

Barry has a certificate II in transport and logistics and has had a long career working full time for a transport company in Western Sydney. He works long hours during the week making deliveries for food suppliers around Sydney, but his weekends (in his words) are “sacred” and reserved for his family and importantly for supporting his young sons achieve their ambition of playing for Sydney FC. Tom (11) and Sam (9) play for the inner city “Young Devils” soccer team. This community sporting group depends upon the commitment that Barry makes each week in coaching and providing coordination support for the football club. Barry’s work for the soccer club involves him (among other things) coordinating a roster of parents who can supervise games, making sure that each side has a designated coach and that someone takes the responsibility of bringing drinks, the first aid kit and oranges to the game. He liaises regularly with the State Sporting Association personnel to ensure that the regulations are being complied with (for instance, working with parents of new children joining the club). Barry has his national level I coaching certificate (which he undertook himself) but apart from this, his supervisory role at the soccer club is not recognised through the national qualification system, nor are the supervisory skills that he is developing and using in his unpaid work.

Gender

Table 2.19 shows the gender distributions of employment in sport and recreation in 2001 and 2009. The smaller occupations have been combined into the ‘Other’ category. Just over of half of all workers in the sector were female in 2009, but in 2001 less than half were female. This suggests an ongoing process of feminisation of employment in the sector.

However the trends appear to be in opposite directions in the two main occupations in the sector. While among fitness instructors the shift is towards more male employment, among swimming coaches it is towards more female employment.

Table 2.19 Gender profile of persons employed in sport and recreation, selected occupations, Australia, 2001 and 2009 (%)

	2001			2009		
Occupation	Male	Female	All	Male	Female	All
Sport & recreation	53	47	100	46	54	100
Fitness instructor	*30*	*70*	*100*	*35*	*65*	*100*
Swimming coach/instructor	*61*	*39*	*100*	*51*	*49*	*100*
Other	*60*	*40*	*100*	*53*	*47*	*100*
All occupations	56	44	100	54	46	100

Source: Derived from unpublished data from the *Labour Force*, 2001–08 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Age

Table 2.20 shows the age distribution of people employed in the sector. This sector also employs many young (15–19 years) people, although their share of employment has declined from 19 per cent in 2001 to 16 per cent in 2009. Conversely, the employment of older workers (45 years or older) has increased. Relatively fewer fitness instructors are young compared to swimming coaches.

Table 2.20 Age profile of persons employed in sport and recreation, selected occupations, Australia, 2001 and 2009 (%)

	2001						2009					
Occupation	15–19	20–24	25–34	35–44	45+	All	15–19	20–24	25–34	35–44	45+	All
Sport & recreation	19	19	25	22	15	100	16	24	19	21	20	100
Fitness instructor	*12*	*26*	*27*	*20*	*15*	*100*	*10*	*26*	*21*	*27*	*16*	*100*
Swimming coach	*27*	*20*	*22*	*20*	*12*	*100*	*23*	*24*	*18*	*15*	*19*	*100*
Other	*19*	*15*	*24*	*24*	*17*	*100*	*18*	*21*	*19*	*18*	*24*	*100*
All occupations	7	11	24	25	33	100	7	10	22	23	38	100

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

States and territories

Table 2.21 shows each state's share of employment in the sport and recreation sector in 2001 and 2009. It shows NSW has a relatively smaller share of employment in this sector and Victoria and Queensland have larger shares.

Table 2.21 State and territory shares of employment in sport and recreation, selected occupations, Australia, 2001 and 2009 (%)

	2001							2009						
Occupation	NSW	Vic	Qld	SA	WA	Tas/ NT/ ACT	All	NSW	Vic	Qld	SA	WA	Tas/ NT/ ACT	All
Sport & recreation	27	28	22	6	12	6	100	26	28	22	9	11	5	100
Fitness instructor	*33*	*25*	*19*	*8*	*10*	*5*	*100*	*31*	*25*	*21*	*7*	*11*	*5*	*100*
Swimming coach	*29*	*21*	*22*	*9*	*14*	*5*	*100*	*26*	*31*	*22*	*8*	*10*	*3*	*100*
Other	*26*	*29*	*22*	*7*	*10*	*6*	*100*	*26*	*29*	*20*	*10*	*10*	*5*	*100*
All occupations	33	25	19	8	10	5	100	32	25	21	7	11	5	100

Source: Derived from unpublished data from the *Labour Force*, 2001–09 (Cat. no. 6202.0). Annual employment data are calculated by averaging the employment for the four quarters of the financial year. Scope: persons aged 15 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Hours

Table 2.22 shows the full-time/part-time distribution of employment in the sector. Part-time employment has been increasing in the sector with its share of total employment rising from 59 per cent in 2002 to 66 per cent in 2008. It has increased for all occupations except fitness instructor.

When the growth in employment of swimming coaches (see Table 2.18) is considered alongside the increase in part-time work in the occupation, it is possible that equivalent full-time work in the occupation is relatively unchanged.

Table 2.22 Full-time/part-time distribution of employment in the sport and recreation sector, selected occupations, Australia, 2002 and 2008 (%)

	2002 (average 2001–03)			2008 (average 2007–09)		
Occupation	Full-time	Part-time	All	Full-time	Part-time	All
Sport & recreation	41	59	100	34	66	100
Fitness instructor	*30*	*70*	*100*	*31*	*69*	*100*
Swimming coach	*36*	*64*	*100*	*27*	*73*	*100*
Other	*49*	*51*	*100*	*39*	*61*	*100*
All occupations	72	28	100	72	28	100

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors .and should be interpreted with caution.

Qualifications

Table 2.23 shows the qualification profile of people employed in sport and recreation in 2002 and 2008. The percentage holding qualifications in the sector increased from 50 per cent in 2002 to 59 per cent in 2008, which is an above average change.

Compared to other workers in service industries, a relatively high proportion in this sector hold qualifications at the degree or higher level.

An increasing proportion of fitness instructors hold qualifications—75 per cent held at least one in 2008.

Table 2.23 Qualification profile of persons employed in sport and recreation, selected occupations, Australia, 2001 and 2009 (%)

	2002 (average 2001–03)						2008 (average 2007–09)					
Occupation	H'Ed	Ad Dip/ dip	Cert III/IV	Cert I/II	None	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All
Sport & recreation	17	9	14	10	50	100	22	9	22	7	41	100
Fitness instructor	*19*	*12*	*19*	*13*	*37*	*100*	*20*	*15*	*35*	*5*	*25*	*100*
Swimming coach	*16*	*7*	*10*	*8*	*58*	*100*	*20*	*6*	*13*	*7*	*55*	*100*
Other	*16*	*8*	*12*	*9*	*55*	*100*	*25*	*6*	*14*	*8*	*48*	*100*
All occupations	21	8	19	7	45	100	25	10	20	5	40	100

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.

Table 2.24 summarises the number of people in sport and recreation with and without qualifications in 2002 and 2008. The high growth in overall employment in the sector means that employment increased for both who held qualifications and those who did not, although the percentage growth for the former is nearly four times greater.

Table 2.24 Persons with and without qualifications in tourism and hospitality, selected occupations, Australia, 2002 and 2008

	With qualifications			Without qualifications			All		
Occupation	2002 ('000)	2008 ('000)	% change 2002–08	2002 ('000)	2008 ('000)	% change 2002–08	2002 ('000)	2008 ('000)	% change 2002–08
Sport & recreation	18	33	79.4	19	22	20.0	37	55	49.3
Fitness instructor	*7*	*15*	*124.2*	*4*	*5*	*25.9*	*11*	*21*	*87.4*
Swimming coach	*3*	*5*	*49.5*	*4*	*6*	*29.7*	*7*	*10*	*37.6*
Other	*8*	*13*	*53.2*	*10*	*12*	*13.5*	*18*	*24*	*31.3*
All occupations	5,021	6,176	23.0	4,071	4,141	1.7	9,091	10,317	13.5

Source: Derived from unpublished data from the *Survey of Education and Work* 2001–09 (Cat. no. 6207.0). Scope: persons aged 15–64 years or older. Small numbers have large associated standard errors and should be interpreted with caution.
The 2002 and 2008 data represent the average for 2001–03 and 2007–09, respectively.

3. Forecasts of employment in service industries 2010 to 2015

This chapter provides forecasts of employment by occupation and qualification in service industries from 2010[16] to 2015.[17] The starting point in deriving these forecasts is the modelling output on employment growth by occupation from the MONASH model. MONASH uses Access Economics' the five-year macro forecasts of the Australian economy as one of the inputs. A brief description of MONASH is included in Box 2. The model is estimated for the whole Australian economy. The forecasts for service industries are extracted from this national output.

MONASH forecasts do not incorporate the impact of climate mitigation and adaption policies that are likely to be implemented over the next few years, although the impact of some large infrastructure projects that are related to climate change, such as in the water industry, are probably factored in the Access Economics forecasts. The model is about a 'business as usual' case but one which ignores the major costs of not tackling climate change(Stern 2006; Garnaut 2008).

The analyses in the previous chapter provided evidence of skills deepening in the workforce, meaning that the growth in the number of people with qualifications is faster than overall growth in employment. As Table 2.10 shows, employment increased 13.5 per cent between 2002 and 2008, but employment of people with qualifications increased by 23 per cent. The rate of skills deepening was also found to vary by occupation. Thus any method for forecasting the number of people with qualifications in the workforce must take account of the trends in skills deepening.

In this chapter, the forecasts of employment by occupation from the MONASH model are combined with recent trends in skills deepening to derive forecasts of qualifications in service industries. Thus the expected changes in the industrial, occupational and skills structure of employment are all factored into derivation of the forecasts.

The forecasts are in terms of the highest non-school qualification of a person. Note that the forecasted growth in the number with qualifications does not represent the numbers that would need to be trained. The numbers that would need to be trained must also include replacement needs. The training needs will be analysed in the next chapter.

[16] The year 2010 means the financial year 2009-10. This convention is adopted in the rest of the report.
[17] Qualifications are a proxy for skills. Consistent data on skills are generally unavailable as there is no standard for measuring skills.

Box 2 MONASH model for forecasting employment by occupation

MONASH is a computational general equilibrium model for forecasting employment by occupation (Adams et al. 1994; Dixon and Rimmer 1996; Meagher 1997; Dixon and Rimmer 2000). It is maintained by the Centre of Policy Studies (CoPS), Monash University. An intuitive description of the model is contained in Appendix O in Industry Commission (1997)

In brief, the MONASH model is a sequence of single-period models, linked through time by the behaviour of capital and labour markets. It has three main elements—a database, theory and parameters—that are embodied in the model's system of equations. These equations describe how industries and consumers respond to changes in policy. The core of the database is a large input-output matrix, which shows how each sector of the economy is linked to other sectors. These linkages are only for a particular point in time. Behaviour responses of different groups to policy changes are based on economic theory. The model specifies likely responses of producers, consumers, foreigners and investors to policy changes. It also includes a government sector, the revenue and expenditure behaviour of which is modelled separately. While theory guides the model's broad assumptions (which can be altered to accommodate different scenarios), actual numerical parameters are required to estimate the size of the responses. In MONASH, these parameters are derived either from the input-output database or from other external sources.

MONASH converts the forecast for aggregate output to forecasts for output by industry. These are then converted to forecasts of employment by industry, which in turn are converted to employment by occupation.

MONASH uses a range of historical data input to estimate the model. These include:

- national accounts
- input-output tables
- state accounts
- Census data on population
- Foreign trade statistics
- Capital stock statistics
- Income and expenditure surveys
- Other unpublished data from the ABS.

To generate forecasts, MONASH has to have access to informed opinion on future changes to variables that are exogenous to the system. The model is adaptable and can incorporate data from a range of sources. Currently it uses the following:

- Access Economics' 5-year macro forecasts of output by major industry sector
- Australian Bureau of Agricultural and Resource Economics' (ABARE) export prices and volumes for primary products
- Tourism Forecasting Council's (TFC) prospects for tourism
- Productivity Commission's assessment on changes in protection implied by government industry policy
- CoPS' assessment of changes in technology and consumer tastes.

The forecasts that are included in this report are the revised version (March 2010) of the set first released in September 2009. They incorporate the five-year macro forecasts of the Australian economy released by Access Economics in September 2009.

Key findings

Economy-wide employment forecasts

Employment in Australia is forecast to grow more slowly over the next six years than it did over the last six years—10.2 per cent growth from 2009 to 2015compared to 14.8 per cent growth from 2003 to 2009. In 2015, employment in Australia is forecast to be about 11.9 million.

Occupation groups with above average growth in employment will be managers, machinery operators and drivers, professionals and technicians and tradespersons; clerical and administrative and sales will have below average growth; and community and personal services and labourers will have about average growth.

An increasing number of people in the workforce are forecast to hold qualifications, and at higher levels. The numbers without qualifications is forecast to remain constant. Consequently, the proportion holding qualifications will increase from 60.7 per cent in 2009 to 64.4 per cent in 2015.

Forecasts of employment in service industries

Employment in service industries is forecast to grow relatively more slowly than in other sectors of the economy. In 2015, the sector is forecast to employ 1.94 million people, an increase of 57,000 or 3.1 per cent from the level in 2009.

WRAPS

Overall employment in the sector is forecast to increase by 15,000. Not all occupations will grow though. Employment is forecast to decline for retail managers and sales assistants but increase for all other occupations in the sector. The reduction in demand for retail managers and sales assistants suggests the trend in consolidation of businesses in the retail sector is expected to continue.

In 2015, 73,000 more people will hold qualifications than they did in 2009, and in the same period the number without any qualifications is forecast to drop by 58,000. This gives net employment growth of 15,000. The proportion with qualifications will increase from 39 per cent in 2008 to 45 per cent in 2015.

While the number of people holding higher level qualifications is forecast to increase, the number holding lower level qualifications is forecast to decline. In 2015, there will 26,000 more people hold a degree or higher level qualification, 27,000 more will hold an advanced diploma/diploma and 33,000 more will hold a certificate III/IV. There will 12,000 less holding certificate I/II.

Tourism and hospitality

Overall employment in the sector is forecast to increase by 37,000. In all occupations, except cook, employment is forecast to grow but by variable amounts.

In 2015, 29,000 more people will hold qualifications than they did in 2009. The number of people without any qualifications is also forecast to increase but by only 8,000. The qualifications profile will shift towards higher level qualifications with a decline of 14,000 in certificate I/II. The proportion with qualifications will increase from 43 per cent in 2008 to 46 per cent in 2015.

More chefs are expected to hold qualifications at the diploma or higher level. Cooks and bar attendants are also forecast to include more workers holding higher level qualifications.

Sport and recreation

Employment in this sector is forecast to grow at about the same rate as in the rest of the economy but at a higher rate than in other sectors of service industries. About 6,000 more people will be employed in the sector in 2015 than in 2009.

While strong employment growth is forecast for fitness instructors, the number of swimming coaches employed is not expected to change much.

In 2015, there will be 11,000 more people with qualifications in the sector than in 2009. The number without qualifications will be fewer by 5,000. The growth will mostly be for higher level qualifications. The proportion with qualifications will increase from 59 per cent in 2008 to 72 per cent in 2015.

Most fitness instructors are expected to hold a qualification in 2015 but only about half of all swimming coaches will.

3.1 Economy-wide forecasts of employment

This section includes economy-wide forecasts of employment for Australia by major occupation group and qualification for the period 2010 to 2015. They are included to provide a point of reference for forecasts for service industries.

3.1.1 Forecasts of employment by major occupation group

Tables 3.1 and 3.2 show the forecasts of employment by major occupation group.

Employment is forecast to grow more slowly over the next six years than it did over the last six years—14.8 per cent from 2003 to 2009 compared to 10.2 per cent growth from 2009 to 2015.[18] In 2015, employment is forecast to be 11.9 million.

Managers, machinery operators and drivers, professionals and technicians and tradespersons are forecast to grow at above average rate. These groups, apart from machinery operators and drivers, generally include high-skill occupations. Employment is not forecast to grow by much in sales worker occupations.

[18] The Australian Government forecasts of employment growth released in the Budget 2010 papers are higher than in this table (Australian Government 2010b). In particular, the forecast for 2010 in the Budget papers is 2.5 per cent compared to 0.6 per cent in this table. Note however that recent economic conditions have been volatile and for the Budget papers more recent data have been available than for the MONASH model. The Budget papers forecasts for 2011and 2012 are comparable to the MONASH forecasts.

Table 3.1 Forecasts of employment by major occupation group, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Occupation	2009	2010	2011	2012	2013	2014	2015	Total	Average
Managers	1,381	1,374	1,405	1,456	1,492	1,536	1,571	13.8	2.2
Professionals	2,233	2,257	2,292	2,351	2,410	2,457	2,501	12.0	1.9
Technicians & trades	1,639	1,637	1,717	1,735	1,751	1,795	1,838	12.2	1.9
Community & personal serv	964	977	985	1,009	1,028	1,041	1,054	9.4	1.5
Clerical & administrative	1,662	1,661	1,681	1,709	1,734	1,757	1,779	7.1	1.1
Sales	1,008	1,006	1,003	1,009	1,019	1,020	1,021	1.3	0.2
Machinery operators & drivers	744	756	774	791	810	828	848	14.0	2.2
Labourers	1,135	1,131	1,159	1,182	1,200	1,225	1,248	10.0	1.6
All	10,765	10,799	11,018	11,242	11,443	11,659	11,860	10.2	1.6

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010). Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.2 Forecasts of employment by major occupation group, persons, Australia, 2009 (actual) to 2010–15 (forecasts) (%)

	Actual	Forecasts					
Occupation	2009	2010	2011	2012	2013	2014	2015
Managers	12.8	12.7	12.8	12.9	13.0	13.2	13.2
Professionals	20.7	20.9	20.8	20.9	21.1	21.1	21.1
Technicians & trades	15.2	15.2	15.6	15.4	15.3	15.4	15.5
Community & personal services	9.0	9.0	8.9	9.0	9.0	8.9	8.9
Clerical & administrative	15.4	15.4	15.3	15.2	15.2	15.1	15.0
Sales	9.4	9.3	9.1	9.0	8.9	8.7	8.6
Machinery operators & drivers	6.9	7.0	7.0	7.0	7.1	7.1	7.2
Labourers	10.5	10.5	10.5	10.5	10.5	10.5	10.5
All	100	100	100	100	100	100	100

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010). Small numbers have large associated standard errors and should be interpreted with caution.

3.1.2 Forecasts of employment by qualification

Tables 3.3 and 3.4 show the forecasts of employment by qualification. Trends in skills deepening are factored into these forecasts.[19]

The tables show the number of people with qualifications will increase by 16.9 per cent from 2009 to 2015, and the number without qualifications will largely remain unchanged. Some of the additional people with qualifications will be new entrants and others will be existing workers acquiring qualifications (e.g. apprentices). As a consequence the proportion with qualifications will increase from 60.7 per cent to 64.4 per cent.[20] The qualification profile is also expected to shift towards higher level qualifications.

The fastest growth in qualifications is expected at the advanced diploma/diploma level. In 2015, 279,000 more people are expected to hold qualifications at this level than they did in 2009. This represents an increase of 26.3 per cent. In contrast, qualifications at certificate I/II level are expected to decline by 56,000.

[19] Regression method was used to forecast the qualification profile of each 4-digit occupation. The model was estimated using data from the ABS *Survey of Education and Work* (Cat. no. 6207.0) from 2001 to 2009.

[20] Shah (2009b) reports a slightly higher forecast for the proportion with qualifications. The disparity is due to the refinement in the method to estimate skills deepening rates and also use of more recent data for the estimation of skills deepening rates.

Table 3.3 Forecasts of employment by qualification, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Level of non-school qualification	2009	2010	2011	2012	2013	2014	2015	Total	Average
With qualifications	6,536	6,610	6,816	7,026	7,226	7,438	7,643	16.9	2.6
Higher education	*2,775*	*2,795*	*2,883*	*2,992*	*3,098*	*3,193*	*3,283*	*18.3*	*2.8*
Advanced diploma/diploma	*1,056*	*1,098*	*1,142*	*1,192*	*1,240*	*1,288*	*1,335*	*26.3*	*4.0*
Certificate III/IV	*2,190*	*2,221*	*2,311*	*2,372*	*2,427*	*2,499*	*2,567*	*17.2*	*2.7*
Certificate I/II	*514*	*495*	*480*	*470*	*461*	*458*	*458*	*-11.0*	*-1.9*
Without qualifications	4,228	4,189	4,202	4,216	4,216	4,221	4,218	-0.3	0.0
All	10,765	10,799	11,018	11,242	11,443	11,659	11,860	10.2	1.6

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.4 Forecasts of employment by qualification, persons, Australia, 2009 (actual) to 2010–15 (forecasts) (%)

	Actual	Forecasts					
Level of non-school qualification	2009	2010	2011	2012	2013	2014	2015
With qualifications	60.7	61.2	61.9	62.5	63.2	63.8	64.4
Higher education	*25.8*	*25.9*	*26.2*	*26.6*	*27.1*	*27.4*	*27.7*
Advanced diploma/diploma	*9.8*	*10.2*	*10.4*	*10.6*	*10.8*	*11.0*	*11.3*
Certificate III/IV	*20.3*	*20.6*	*21.0*	*21.1*	*21.2*	*21.4*	*21.6*
Certificate I/II	*4.8*	*4.6*	*4.4*	*4.2*	*4.0*	*3.9*	*3.9*
Without qualifications	39.3	38.8	38.1	37.5	36.8	36.2	35.6
All	100	100	100	100	100	100	100

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

3.2 Forecasts of employment in service industries

Table 3.5 shows the forecasts of employment in service industries from 2010 to 2015. Employment in these industries is expected to grow more slowly than in other sectors of the economy. The factors that may be having an impact on growth in these industries are: the effect of the stimulus wearing off; government spending tightening as a result of the policy to bring the budget to surplus; the continuing high value of the Australian dollar; the weakness in areas of the global economy which are the source of traditional inbound tourism; and the tightening credit and investment capital because of the fierce competition from the booming mining sector.[21]

In 2015, 1.94 million people are expected to be employed in service industries. This is 57,000, or 3.1 per cent, more than in 2009.

[21] Recent reports of substantial increase in tourism from China in the next few years provided its economy continues to grow have probably not been factored in this round of forecasts. Had this information been available at the time the forecasts were generated, then it is likely that forecasts of employment in the tourism and hospitality would be higher than that reported here.

Table 3.5 Forecasts of employment in service industries by sector, persons, Australia, 2009 (actual), 2010–15 (forecasts) ('000)

	Sector					
Year	WRAPS	Tourism & hospitality	Sport & recreation	Service industries	Other sectors	All occupations
2009 (Actual)	1,148	670	59	1,878	8,887	10,765
2010	1,148	680	60	1,889	8,910	10,799
2011	1,144	682	60	1,886	9,131	11,018
2012	1,153	691	62	1,906	9,336	11,242
2013	1,163	698	63	1,924	9,518	11,443
2014	1,163	700	64	1,928	9,731	11,659
2015	1,163	707	65	1,935	9,925	11,860
Total growth 2003–09 (%)	3.1	16.1	49.9	8.5	16.2	14.8
Total growth 2009–15 (%)	1.3	5.5	9.7	3.1	11.7	10.2
Average annual growth 2003–09 (%)	0.5	2.6	7.3	1.4	2.5	2.3
Average annual growth 2009–15 (%)	0.2	0.9	1.6	0.5	1.9	1.6

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010). Small numbers have large associated standard errors and should be interpreted with caution.

3.2.1 Forecasts of employment in WRAPS

Table 3.6 shows the forecasts of employment in the WRAPS sector. The sector is expected to employ 15,000 more people in 2015 than in 2009. Not all occupations are expected to grow though. While employment will increase for all other occupations, it is expected to decline for retail managers and sales assistants. The decline in demand for retail managers and sales assistants probably reflects the continuing consolidation of businesses in the retail sector.

Table 3.6 Forecasts of employment in WRAPS, selected occupations, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Occupation	2009	2010	2011	2012	2013	2014	2015	Total	Average
WRAPS	1,148	1,148	1,144	1,153	1,163	1,163	1,163	1.3	0.2
Retail manager (general)	*221*	*219*	*216*	*216*	*216*	*214*	*211*	*-4.4*	*-0.8*
Hairdresser	*56*	*57*	*58*	*59*	*60*	*60*	*61*	*7.5*	*1.2*
Sales assistant (general)	*482*	*479*	*474*	*473*	*474*	*470*	*465*	*-3.4*	*-0.6*
Checkout operator	*135*	*137*	*138*	*141*	*144*	*146*	*148*	*10.0*	*1.6*
Other	*254*	*256*	*259*	*264*	*270*	*274*	*278*	*9.3*	*1.5*
All occupations	10,765	10,799	11,018	11,242	11,443	11,659	11,860	10.2	1.6

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010). Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.7 shows the forecasts for qualification in WRAPS. In 2015, there will be 73,000 more people with qualifications than there were in 2009. This represents an increase of 16.4 per cent. At the same time there will be 58,000 fewer people without qualifications. This means than 45 per cent of people employed in the sector will hold qualifications in 2015 compared to 39 per cent who did in 2009.

The qualification profile is expected to change towards higher level qualifications. In 2015, 26,000 more people will hold a degree or higher level qualification than in 2009, 27,000 more will hold advanced diploma/diploma and 33,000 more will hold certificate III/IV. At the same time 12,000 fewer people will hold qualifications at certificate I/II.

Table 3.7 Forecasts of employment in WRAPS by qualification, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Level of non-school qualification	2009	2010	2011	2012	2013	2014	2015	Total	Average
With qualifications	445	460	468	481	496	507	518	16.4	2.6
Higher education	*102*	*107*	*111*	*115*	*120*	*124*	*127*	*25.2*	*3.8*
Advanced diploma/diploma	*101*	*101*	*106*	*112*	*118*	*123*	*128*	*26.1*	*4.0*
Certificate III/IV	*179*	*190*	*193*	*199*	*205*	*209*	*213*	*18.7*	*2.9*
Certificate I/II	*62*	*62*	*58*	*55*	*53*	*51*	*50*	*-20.0*	*-3.6*
Without qualifications	703	689	676	671	667	657	645	-8.2	-1.4
Total	1,148	1,148	1,144	1,153	1,163	1,163	1,163	1.3	0.2

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.8 shows the forecasts for selected occupations in WRAPS in 2015. While the proportion of retail managers with qualifications will increase and will be above average for the sector, it will still be below average for the whole workforce. About 30 per cent of retail managers will hold qualifications at the diploma or higher level.

The qualifications profile for hairdressers is forecast to change more than other occupations. First, contrary to the general trend, an increasing number of hairdressers will hold certificate I/II. Second, the proportion without qualifications will increase—from 24 per cent in 2008 to 29 per cent in 2015. This suggests continuation of the growth in the number of apprentices. If the past trend in apprentice numbers was fuelled by international students, then the continuation of this trend in the future is questionable because of recent changes migration laws which have tried to decouple international student education from permanent residency.

While still only a minority of sales assistants and checkout operators are expected to hold qualifications in 2015, quite a number are expected to hold qualifications at the degree or higher level. Once again, this is continuation of historical trends discussed in chapter 2.

Table 3.8 Forecasts of employment in WRAPS by qualification, selected occupations, Australia, 2015

	2015 ('000)						2015 (%)					
Occupation	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All
WRAPS	127	128	213	50	645	1,163	11	11	18	4	55	100
Retail manager (gen)	*32*	*31*	*47*	*12*	*89*	*211*	*15*	*15*	*22*	*5*	*42*	*100*
Hairdresser	*0*	*6*	*31*	*6*	*17*	*61*	*0*	*11*	*51*	*10*	*28*	*100*
Sales assistant (gen)	*42*	*37*	*58*	*11*	*318*	*465*	*9*	*8*	*12*	*2*	*68*	*100*
Checkout operator	*15*	*6*	*15*	*9*	*103*	*148*	*10*	*4*	*10*	*6*	*70*	*100*
Other	*38*	*47*	*62*	*13*	*118*	*278*	*14*	*17*	*22*	*5*	*42*	*100*
All occupations	3,283	1,335	2,567	458	4,218	11,860	28	11	22	4	36	100

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

3.2.2 Forecasts of employment in tourism and hospitality

Table 3.9 shows the forecasts of employment in tourism and hospitality. The sector is expected to employ 37,000 more people in 2015 than in 2009. Employment growth is expected to vary by occupation, with strong growth expected for chefs and fast food cooks.

Table 3.9 Forecasts of employment in tourism and hospitality, selected occupation, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Occupation	2009	2010	2011	2012	2013	2014	2015	Total	Average
Tourism & hospitality	670	680	682	691	698	700	707	5.5	0.9
Cafe/restaurant manager	*60*	*60*	*60*	*60*	*60*	*60*	*60*	*0.3*	*0.1*
Chef	*64*	*67*	*68*	*70*	*72*	*74*	*76*	*18.1*	*2.8*
Cook	*43*	*42*	*42*	*42*	*41*	*41*	*40*	*-5.2*	*-0.9*
Bar attendant	*59*	*60*	*60*	*61*	*62*	*62*	*63*	*5.6*	*0.9*
Waiter	*106*	*109*	*110*	*113*	*115*	*116*	*119*	*12.8*	*2.0*
Fast food cook	*38*	*40*	*41*	*42*	*44*	*45*	*46*	*20.6*	*3.2*
Kitchenhand	*112*	*114*	*114*	*116*	*117*	*117*	*118*	*4.9*	*0.8*
Other	*189*	*188*	*187*	*187*	*187*	*186*	*185*	*-1.6*	*-0.3*
All occupations	10,765	10,799	11,018	11,242	11,443	11,659	11,860	10.2	1.6

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010). Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.10 shows the forecasts for qualifications in the sector. In 2015, 29,000 more people with qualifications will be employed in the sector than in 2009. At the same time the employment of people without qualifications is expected to increase by 8,000. This means that the proportion with qualifications in the sector will only change by three percentage points.

The qualification profile in the sector is expected to shift towards higher level qualifications with the number of people holding certificate I/II expected to decline by 14,000.

Table 3.10 Forecasts of employment in tourism and hospitality by qualification, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Level of non-school qualification	2009	2010	2011	2012	2013	2014	2015	Total	Average
With qualifications	294	293	297	304	311	315	323	9.6	1.5
Higher education	*81*	*78*	*80*	*83*	*86*	*88*	*91*	*13.4*	*2.1*
Advanced diploma/diploma	*63*	*61*	*63*	*67*	*70*	*72*	*76*	*20.4*	*3.2*
Certificate III/IV	*112*	*120*	*121*	*124*	*126*	*127*	*130*	*16.3*	*2.6*
Certificate I/II	*40*	*35*	*32*	*30*	*28*	*27*	*26*	*-34.0*	*-6.6*
Without qualifications	376	387	385	387	387	384	384	2.3	0.4
Total	670	680	682	691	698	700	707	5.5	0.9

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.11 shows the forecasts of employment in tourism and hospitality for 2015. About the same proportion of chefs will hold qualifications in 2015 as in 2008 (see Table 2.16). However the proportion with qualifications at the diploma or higher level is expected to increase from 21 to 26 per cent. Higher level qualifications are also expected to increase among cooks and bar attendants.

Table 3.11 Forecasts of employment in tourism and hospitality by qualification, selected occupations, Australia, 2015

	2015 ('000)						2015 (%)					
Occupation	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All
Tourism & hospitality	91	76	130	26	384	707	13	11	18	4	54	100
Cafe/restaurant m'ger	*11*	*11*	*10*	*0*	*27*	*60*	*19*	*19*	*17*	*0*	*45*	*100*
Chef	*9*	*10*	*35*	*2*	*19*	*76*	*12*	*14*	*46*	*2*	*26*	*100*
Cook	*6*	*3*	*8*	*1*	*23*	*40*	*14*	*7*	*19*	*3*	*57*	*100*
Bar attendant	*7*	*8*	*13*	*0*	*33*	*63*	*11*	*14*	*21*	*1*	*53*	*100*
Waiter	*16*	*6*	*13*	*6*	*78*	*119*	*13*	*5*	*11*	*5*	*66*	*100*
Fast food cook	*1*	*3*	*3*	*3*	*37*	*46*	*1*	*6*	*7*	*6*	*80*	*100*
Kitchenhand	*7*	*8*	*11*	*7*	*86*	*118*	*6*	*6*	*9*	*6*	*73*	*100*
Other	*35*	*26*	*37*	*7*	*81*	*185*	*19*	*14*	*20*	*4*	*44*	*100*
All occupations	3,345	1,312	2,558	414	4,231	11,860	28	11	22	3	36	100

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

3.2.3 Forecasts of employment in sport and recreation

Table 3.12 shows the forecasts of employment in sport and recreation. The sector is forecast to employ 6,000 more people in 2015 than in 2009. The rate of employment growth will be about the same as for the rest of the economy.

Additional demand for fitness instructors is expected to be strong but for all other occupations it is expected to be weak.

Table 3.12 Forecasts of employment in sport and recreation, selected occupations, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Occupation	2009	2010	2011	2012	2013	2014	2015	Total	Average
Sport & recreation	59	60	60	62	63	64	65	9.7	1.6
Fitness instructor	*21*	*21*	*21*	*22*	*23*	*24*	*25*	*20.0*	*3.1*
Swimming coach/instructor	*11*	*11*	*11*	*12*	*12*	*12*	*12*	*6.1*	*1.0*
Other	*28*	*28*	*28*	*28*	*28*	*29*	*29*	*3.5*	*0.6*
All occupations	10,765	10,799	11,018	11,242	11,443	11,659	11,860	10.2	1.6

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010). Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.13 shows the forecasts for qualifications in sport and recreation from 2010 to 2015. In 2015, 11,000 more people with qualifications will be employed in the sector than in 2009. At the same time 5,000 fewer people without qualifications will be employed. This means that the proportion with qualifications in the sector will increase from 59 per cent in 2008 to 72 per cent in 2015. Most of the growth in qualifications will be at higher skill levels.

Table 3.13 Forecasts of employment in sport and recreation by qualification, persons, Australia, 2009 (actual) to 2010–15 (forecasts) ('000)

	Actual	Forecasts						Growth 2009–15 (%)	
Level of non-school qualification	2009	2010	2011	2012	2013	2014	2015	Total	Average
With qualifications	36	38	39	42	43	45	47	29.0	4.3
Higher education	*14*	*14*	*15*	*15*	*16*	*17*	*17*	*19.5*	*3.0*
Advanced diploma/diploma	*4*	*6*	*6*	*7*	*7*	*7*	*8*	*89.3*	*12.8*
Certificate III/IV	*14*	*14*	*15*	*16*	*17*	*18*	*19*	*32.1*	*4.8*
Certificate I/II	*4*	*3*	*3*	*3*	*3*	*3*	*3*	*-12.6*	*-2.2*
Without qualifications	23	22	21	21	20	19	18	-20.7	-3.8
Total	59	60	60	62	63	64	65	9.7	1.6

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

Table 3.14 shows the forecasts of employment in sport and recreation for 2015. Most fitness instructors are expected to hold a qualification in 2015. In contrast, only about half of all swimming coaches will hold a qualification.

Table 3.14 Forecasts of employment in sport and recreation by qualification, selected occupations, Australia, 2015

	2015 ('000)						2015 (%)					
Occupation	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	None	All
Sport & recreation	17	8	19	3	18	65	26	12	29	5	28	100
Fitness instructor	*5*	*6*	*12*	*0*	*2*	*25*	*21*	*23*	*47*	*0*	*9*	*100*
Swimming coach	*3*	*1*	*2*	*1*	*6*	*12*	*23*	*5*	*18*	*7*	*47*	*100*
Other	*9*	*1*	*5*	*2*	*10*	*29*	*32*	*4*	*19*	*8*	*37*	*100*
All occupations	3,345	1,312	2,558	414	4,231	11,860	28	11	22	3	36	100

Source: Derived from MONASH economic forecasts (CoPS September 2009, revised 15 March 2010) and CEET model. Small numbers have large associated standard errors and should be interpreted with caution.

4. Qualification requirements, 2010 to 2015

The trends over the past years suggest that the number of people with qualifications will continue to increase. In chapter 3, the percentage of the employed population holding qualifications was forecast to increase from 60.7 per cent in 2009 to about 64.4 per cent in 2015. This means additional people with qualifications will be required over the next six years.

Not only does growth in employment generate demand for new workers, including those with qualifications, in an occupation, replacement need (or turnover) also generates demand for new workers. While in some occupations the main reasons for replacement are events such as death, ill-health or retirements, in other occupations it is net outflows to other occupations. In some occupations, turnover needs can often be higher than demand due to growth.

The appropriate measure of replacement needs in this situation is *net replacement* (or net turnover) and it is calculated using a cohort-component method (Shah and Burke 2001). The model makes corrections for the changes in the future size of the labour force by age and sex. CEET has estimated net replacement rates by occupation for the past several years. The aggregate rate has varied around 2 per cent per year. The rate for the period 2010 to 2015, estimated using data from 1986 to 2009, was 2.3 per cent per year.

The qualification profile of an occupation will change with the entry of new people with qualifications and the exit of others. In some instances the number of new entrants will be insufficient to achieve the qualification profile forecast for the occupation and existing workers will need to acquire new qualifications to make up the shortfall. Not every new entrant will have a qualification though, just as not every existing worker will acquire a new qualification.

This chapter provides estimates of the numbers of people with qualifications required in service industries over the next six years to achieve the qualification profiles for the sector forecast for the years 2010 to 2015.[22] The profiles are derived in terms of the highest non-school qualification of a person. Therefore, to the extent that some people complete multiple qualifications in a year, the estimates will underestimate the *total* demand for qualifications. The number of people who complete multiple qualifications in any one year is unlikely to be very large though. Non-accredited training, such as product- or firm-specific training, that existing workers undertake is outside the scope of this study.

Key findings

Workers with qualifications are constantly required in the workforce. This may be because the workforce is expanding and also because of the need to replace qualified workers who leave. Additional qualified workers may also be required if the qualification profile of the workforce is changing.

The requirements for new qualified workers could be met by qualified new entrants or existing workers currently without qualifications acquiring qualifications.

[22] The mathematical details of the method can be found in Appendix 4 in Shah, Cooper and Burke (2007). Basically a ‘bottom up’ technique is used whereby requirements are calculated for each occupation before aggregating for the whole workforce.

Qualification requirements across all sectors of the economy

Employment in Australia is forecast to grow at 1.6 per cent per year from 2009 to 2015. For the same period the net replacement rate is estimated to be to 2.3 per cent per year. In 2015, 64.4 per cent of the workforce is expected to hold qualifications.

From 2010 to 2015, qualification requirements for the Australian workforce are estimated to be 2.5 million. New entrants with qualifications will make up 1.5 million, or 59 per cent, of this total and the remaining 1 million, or 41 per cent, will be existing workers acquiring new qualifications. About 55 per cent of all requirements will be in the three highest skill occupations—managers, professionals and technicians and trades.

Overall 37 per cent of requirements will be at the degree or higher level and 63 per cent at the VET level (21 per cent advanced diploma/diploma, 36 per cent certificate III/IV and 7 per cent certificate I/II).

This equates to an average of 153,000 degree or higher level qualifications and 265,000 VET qualifications each year from 2010 to 2015.

Although the number of people holding certificate I/II is forecast to decline, qualification requirements at this level are expected to remain relatively constant from year to year, with an annual average requirement of about 30,000. The continuing requirements are due to high turnover in occupations which employ relatively large numbers of the people with such qualifications.

Qualification requirements in service industries

Employment in service industries is forecast to grow at 0.5 per cent per year, which is considerably lower than the rate for the rest of the economy. The possible explanations for the low growth rate were discussed in chapter 3.

Net replacement rate in service industries however is expected to be much higher at 4.7 per cent per year. The high rate reflects the demographic structure and rather short-term nature of many jobs in these industries.

The net replacement rate varies significantly across occupations—from 9 per cent per year for checkout operators to just 0.6 per cent per year for chefs. The rate for hairdressers is about the average for the workforce.

The total qualification requirements are estimated to be 387,000, or 64,000 per year. New entrants with qualifications will satisfy 56 per cent of all requirements and 44 per cent will need to be met by existing workers acquiring new qualifications.

Overall 22 percent of requirements will be at the degree or higher level and 78 per cent at the VET level (27 per cent advanced diploma/diploma, 41 per cent certificate III/IV and 10 per cent certificate I/II).

WRAPS

The requirements in WRAPS are estimated to be 231,000, or 38,000 per year. About one in every five will be at the degree or higher level and the rest at the VET level (62,000 advanced diploma/diploma, 97,000 certificate III/IV and 23,000 certificate I/II).

About 15 per cent of all qualification requirements for hairdressers are expected to be at certificate I/II level. Note that in many instances the lower level qualifications are a stepping stone to higher level qualifications.

Tourism and hospitality

The requirements in tourism and hospitality are estimated to be 139,000, or 23,000 per year. Of these 31,000 will be at the degree or higher level and the 109,000 at the VET level (39,000 advanced diploma/diploma, 53,000 certificate III/IV and 15,000 certificate I/II).

The requirements in chef and fast food cook occupations are estimated to be about 18,000 and 13,000, respectively. While growth is the main factor affecting requirements for qualified chefs, both growth and replacements needs are affecting requirements for qualified fast food cooks. Despite a high rate of turnover in the occupation, requirements for qualified cooks are relatively low (6,000). This is because employment is forecast to decline in the occupation.

Sport and recreation

The requirements in this sector are estimated to be 17,000—5,000 with degree or higher level qualifications and 12,000 with VET qualifications (3,000 advanced diploma/diploma, 8,000 certificate III/IV and 1,000 certificate I/II).

About half of all requirements are in the occupation for fitness instructors.

4.2 Economy-wide estimates of qualification requirements

The requirements for qualifications in an occupation depend on the rate of employment growth, net replacement rate and the trends in skills deepening in the occupation. While growth depends very much on the business cycle and global economic conditions, the demographic structure of employment is the most important factor in determining net replacement. As the demographic structure of employment only changes gradually, the net replacement rate also changes gradually.[23] These net replacement rates however vary significantly by occupation and are generally higher in low-skill occupations.

Table 4.1 shows the employment growth rate and the net replacement rate for each of the major occupation groups.[24] The employment growth rates are brought forward from Table 3.1. The table highlights the importance of replacement needs relative to employment growth in estimating new entrants to an occupation.

Net replacement needs are generally higher for all low-skill occupation groups. The highest net replacement rate is for sales workers who generally have relatively short job tenure. As already noted, students working part-time and on a casual basis while studying, make up a substantial proportion of sales workers.

[23] The rates have hovered around the 2 per cent level over the last several years although the rate has increased marginally in the last couple of years.

[24] The estimates of net replacement rates may vary according the level of aggregation in the original input data. The estimates in Table 4.1 were calculated at the four-digit ANZSCO level and then aggregated up.

Table 4.1 Average annual employment growth and net replacement rates by major occupation group, Australia, 2010 to 2015 (%)

Major occupation group	Employment growth rate	Net replacement rate
Managers	2.2	1.8
Professionals	1.9	1.7
Technicians & tradespersons	1.9	1.7
Community & personal services workers	1.5	2.8
Clerical & administrative workers	1.1	1.9
Sales workers	0.2	5.3
Machinery operators and drivers	2.2	1.7
Labourers	1.6	2.6
All	1.6	2.3

Source: CEET net replacement model

If new entrants with qualifications—the number required for growth and replacement needs—are insufficient to achieve the qualifications profile projected for the occupation then some existing workers would need to acquire new qualifications to meet the shortfall. Table 4.2 shows the numbers of people required with qualifications by major occupation group.

New entrants with qualifications will make up 59 per cent of total requirements. The remaining 41 per cent will need to be existing workers acquiring new qualifications.

Qualifications requirements are generally higher in high-skill occupations because in many such occupations, for instance, doctors, teachers, nurses, electricians and plumbers, qualifications are a registration requirement to practice in the occupation.

About 55 per cent of all requirements will be for the three highest skill occupation groups—managers, professionals and technicians and trades. In these occupations, especially in the first two, new entrants with qualifications will satisfy a majority of requirements.

Table 4.2 Qualification requirements by major occupation group, Australia, 2010–15 (‘000)

	2010	2011	2012	2013	2014	2015	2010–15 Total	2010–15 Annual average
Occupation group	New entrants							
Managers	27	41	48	41	47	43	246	41
Professionals	51	56	77	79	69	68	400	67
Technicians & trades	29	42	32	30	46	45	223	37
Community & personal service	22	21	28	27	24	25	146	24
Clerical & administrative	23	30	33	34	34	35	188	31
Sales	17	18	19	21	20	20	116	19
Machinery operators & drivers	10	11	11	13	12	13	70	12
Labourers	12	16	17	15	17	17	94	16
All	190	234	263	258	270	266	1,483	247
	Existing workers							
Managers	21	22	24	25	24	24	140	23
Professionals	32	34	35	33	33	33	200	33
Technicians & trades	21	48	25	24	27	27	172	29
Community & personal service	24	23	25	23	23	21	139	23
Clerical & administrative	22	26	26	25	24	24	147	25
Sales	14	14	15	16	14	14	87	15
Machinery operators & drivers	8	9	9	8	9	9	51	9
Labourers	11	16	14	14	16	15	87	14
All	153	192	173	169	169	167	1,024	171
	Total requirements							
Managers	47	63	72	66	71	67	386	64
Professionals	83	91	112	112	102	101	600	100
Technicians & trades	50	90	56	54	73	72	396	66
Community & personal service	45	43	53	50	47	46	285	47
Clerical & administrative	46	56	59	58	58	58	336	56
Sales	31	32	34	37	34	35	203	34
Machinery operators & drivers	18	19	19	21	21	22	121	20
Labourers	23	32	31	29	33	33	181	30
All	343	427	436	428	439	433	2,507	418

Table 4.3 shows qualification requirements by level of qualification. Overall 37 per cent of requirements will be at the degree or higher level and 63 per cent at the VET level (21 per cent advanced diploma/diploma, 36 per cent certificate III/IV and 7 per cent certificate I/II).

On average, 153,000 people with higher education qualifications and 265,000 people with VET qualifications will be required each year from 2010 to 2015. Although the number of people holding certificate I/II is forecast to decline, requirements at this level are expected to remain relatively constant from year to year, with an annual average requirement of about 30,000. The relatively high requirements at this level are partly due to the fact that the occupations that generally employ people with such qualifications have high rates of turnover.

A majority of requirements for degree or higher level qualifications will be met by new entrants. In contrast, a majority of requirements for advanced diploma/diploma will be met by existing workers acquiring new qualifications.

Table 4.3 Qualification requirements by level of qualification, Australia, 2010–15 (‘000)

	2010	2011	2012	2013	2014	2015	2010–15 Total	2010–15 Annual average
Qualification	New entrants							
Higher education	79	94	116	118	111	109	628	105
Advanced diploma/diploma	28	36	42	41	43	42	231	38
Certificate III/IV	67	84	86	82	97	96	512	85
Certificate I/II	17	21	19	18	19	19	113	19
All	190	234	263	258	270	266	1,483	247
	Existing workers							
Higher education	45	51	51	49	47	47	290	48
Advanced diploma/diploma	43	48	49	49	48	48	284	47
Certificate III/IV	55	82	62	61	63	60	383	64
Certificate I/II	9	12	11	11	12	12	67	11
All	153	192	173	169	169	167	1,024	171
	Total requirements							
Higher education	125	145	167	167	158	156	917	153
Advanced diploma/diploma	71	84	91	89	90	90	515	86
Certificate III/IV	121	166	148	143	160	156	895	149
Certificate I/II	26	32	30	29	31	31	180	30
All	343	427	436	428	439	433	2,507	418

Table 4.4 shows the distribution of qualification requirements by major occupation group. Most requirements for manager and professional occupations are at the degree or higher level and for other occupation groups they are at the VET level.

Table 4.4 Qualification requirements by level of qualification and major occupation group 2010 to 2015, Australia, (%)

	Occupation group								
Highest non-school qualification	Managers	Prof	Tech & trades	Community & personal services	Clerical & admin	Sales	Machine operators & drivers	Labourers	All
	New entrants								
Higher education	50	81	10	24	32	29	16	18	42
Adv dip/dip	17	10	10	30	18	20	11	18	16
Certificate III/IV	28	8	71	38	39	37	56	46	35
Certificate I/II	4	1	9	8	10	14	16	19	8
All	100	100	100	100	100	100	100	100	100
	Existing workers								
Higher education	29	49	22	15	29	21	20	23	28
Adv dip/dip	32	27	22	30	36	24	21	24	28
Certificate III/IV	33	19	42	53	34	48	46	42	37
Certificate I/II	6	4	14	2	1	6	13	11	7
All	100	100	100	100	100	100	100	100	100
	Total requirements								
Higher education	43	70	15	19	31	26	18	20	37
Adv dip/dip	23	16	15	30	26	22	15	21	21
Certificate III/IV	30	11	58	46	37	42	52	44	36
Certificate I/II	5	2	11	5	6	10	15	15	7
All	100	100	100	100	100	100	100	100	100

Note: Rows and columns may not add to the total due to rounding.

4.2 Qualification requirements in service industries

This section provides the qualification requirements in service industries in more detail. Table 4.5 shows the employment growth rate and the net replacement rate for the occupations in service industries. The employment growth rates are brought forward from chapter 3.

The average net replacement rate for service industries is 4.7 per cent per year, which is almost double the average for all occupations. The rate reflects the demographic profile of the workforce and also the generally short tenure of jobs in these industries. The tenure is affected by both supply- and demand-side factors. From the supply-side, many people working in these industries do not consider holding these jobs as long-term propositions.[25] From the demand-side, costs dictate the length of tenure in many jobs, for example, paying adult wages is more costly than paying junior wages.

The net replacement rate varies significantly by occupation—9 per cent per year for checkout operators to just 0.6 per cent per year for chefs. The rate for hairdressers is at about the average for the workforce.

Table 4.5 Average annual rates of employment growth and net replacement in service industries by sector, Australia, 2010 to 2015 (%)

Major occupation group	Employment growth rate	Net replacement rate
WRAPS	0.2	5.0
Retail manager (general)	*-0.8*	*2.6*
Hairdresser	*1.2*	*2.3*
Sales assistant (general)	*-0.6*	*6.4*
Checkout operator	*1.6*	*9.0*
Other	*1.5*	*2.9*
Tourism & hospitality	0.9	4.5
Cafe/restaurant manager	*0.1*	*2.6*
Chef	*2.8*	*0.6*
Cook	*-0.9*	*3.3*
Bar attendant	*0.9*	*6.9*
Waiter	*2.0*	*6.4*
Fast food cook	*3.2*	*7.9*
Kitchenhand	*0.8*	*6.9*
Other	*-0.3*	*2.6*
Sport & recreation	1.6	1.8
Fitness instructor	*3.1*	*0.6*
Swimming coach/instructor	*1.0*	*2.5*
Other	*0.6*	*2.5*
All service sectors	0.5	4.7
All occupations	1.6	2.3

Source: CEET net replacement model

[25] The low average wages paid in many occupations in the sector tends to limit supply of labour from certain demographic groups.

Table 4.6 shows the qualification requirements in service industries from 2010 to 2015. It shows 387,000 people with qualifications will be required at an average annual rate of 64,000. About half (56 per cent) of the requirements will be met by new entrants and the rest by existing workers acquiring new qualifications or upgrading their current qualifications. The service industries' share of total requirements is 15 per cent, slightly less than its share of total employment.

Table 4.6 Qualification requirements in service industries by sector, persons, Australia, 2010 to2015 ('000)

		Sector				
	WRAPS	Tourism & hospitality	Sport & recreation	Total service industries	Other sectors	All occupations
	New entrants					
2010	20	13	1	35	155	190
2011	19	12	1	33	202	234
2012	22	14	2	37	226	263
2013	23	13	2	37	221	258
2014	22	13	2	37	233	270
2015	22	14	1	37	229	266
Total	128	80	9	216	1,266	1,483
Annual average	21	13	1	36	211	247
	Existing workers					
2010	16	10	2	28	125	153
2011	16	9	1	27	166	192
2012	19	11	2	31	142	173
2013	19	10	1	31	139	169
2014	17	9	1	27	143	169
2015	16	10	1	28	139	167
Total	102	60	8	170	854	1,024
Annual average	17	10	1	28	142	171
	Total requirements					
2010	36	24	3	63	280	343
2011	36	21	2	59	368	427
2012	40	24	3	68	368	436
2013	42	23	3	68	360	428
2014	38	22	3	63	376	439
2015	38	24	3	65	368	433
Total	231	139	17	387	2,120	2,507
Annual average	38	23	3	64	353	418

4.2.1 Qualification requirements in WRAPS

Table 4.7 shows the qualification requirements in WRAPS from 2010 to 2015. Total requirements are estimated to be 231,000, or 38,500 per year. The requirement for 62,000 advanced diploma/diplomas reflects the strong recent growth in qualifications at this level.

Many requirements in sales assistant and checkout operator occupations are for degree or higher level qualifications. Strictly speaking these are not requirements in the sense that one needs qualifications at this level to be able to hold a job in these occupations. The results are simply a continuation of historical trends which show that some people employed as retail assistants or checkout operators hold higher education qualifications. They are an expression of qualifications demand elsewhere in the workforce. People holding such qualifications generally work in these occupations for relatively short periods. Sometimes they may need to do a lower level qualification to work effectively in the occupation. It is then questionable if such higher level qualifications should form part of the requirements in these occupations, or should they be substituted with appropriate lower level qualifications. Ad hoc adjustments to the requirements however have the potential to undermine the internal coherence and consistency of the model from which these estimates have been derived in the first instance and, therefore, should be avoided.

A majority of the 23,000 certificate I/II requirements are in sales assistant and checkout operator occupations. About 15 per cent of qualification requirements in hairdressing are also at this level. Lower level qualifications can be stepping stones to higher level qualifications.

Table 4.7 Qualification requirements in WRAPS by selected occupations, Australia, 2010 to 2015

	‘000					%				
	H’Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All	H’Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All
Occupation	New entrants									
WRAPS	30	27	53	19	128	23	21	41	15	100
Retail manager (gen)	*1*	*2*	*6*	*3*	*11*	*7*	*18*	*51*	*24*	*100*
Hairdresser	*0*	*1*	*7*	*1*	*9*	*1*	*12*	*75*	*12*	*100*
Sales assistant (gen)	*15*	*13*	*21*	*6*	*56*	*27*	*24*	*38*	*11*	*100*
Checkout operator	*8*	*3*	*8*	*5*	*25*	*32*	*14*	*34*	*21*	*100*
Other	*6*	*7*	*11*	*4*	*27*	*22*	*25*	*39*	*14*	*100*
All occupations	628	231	512	113	1,483	42	16	35	8	100
	Existing workers									
WRAPS	18	35	45	4	102	18	35	44	4	100
Retail manager (gen)	*4*	*8*	*6*	*0*	*18*	*23*	*44*	*33*	*0*	*100*
Hairdresser	*0*	*4*	*2*	*1*	*7*	*0*	*51*	*30*	*19*	*100*
Sales assistant (gen)	*4*	*8*	*17*	*0*	*28*	*12*	*29*	*59*	*0*	*100*
Checkout operator	*3*	*1*	*6*	*2*	*12*	*24*	*7*	*51*	*18*	*100*
Other	*7*	*15*	*14*	*1*	*37*	*20*	*41*	*37*	*2*	*100*
All occupations	290	284	383	67	1,024	28	28	37	7	100
	Total									
WRAPS	48	62	97	23	231	21	27	42	10	100
Retail manager (gen)	*5*	*10*	*12*	*3*	*29*	*17*	*34*	*40*	*9*	*100*
Hairdresser	*0*	*5*	*9*	*2*	*16*	*0*	*29*	*55*	*15*	*100*
Sales assistant (gen)	*19*	*21*	*38*	*6*	*84*	*22*	*25*	*45*	*7*	*100*
Checkout operator	*11*	*4*	*15*	*8*	*37*	*29*	*12*	*39*	*20*	*100*
Other	*13*	*22*	*24*	*5*	*64*	*21*	*34*	*38*	*7*	*100*
All occupations	917	515	895	180	2,517	37	21	36	7	100

4.2.2 Qualification requirements in tourism and hospitality

Table 4.8 shows the qualification requirements in tourism and hospitality. The sector will require 139,000 qualifications of which a quarter will be at the degree or higher level.

About 18,000 chefs with qualifications will be required. The main reason for the relatively high level of requirements is the high rate of employment growth forecast for the occupation.

About 18,000 chefs and 13,000 fast food cooks with qualifications will be required. While growth in the occupation is the main factor affecting requirements for qualified chefs, growth and replacements needs are both affecting requirements for qualified fast food cooks. Despite a high rate of turnover in the occupation, requirements for qualified cooks are relatively low (6,000). This is because employment is forecast to decline in the occupation.

Table 4.8 Qualification requirements in tourism and hospitality by selected occupations, Australia, 2010 to 2015

	'000					%				
	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All
Occupation	New entrants									
Tourism & hospitality	20	18	31	11	80	25	22	39	14	100
Cafe/restaurant manager	*0*	*1*	*1*	*0*	*3*	*13*	*42*	*38*	*7*	*100*
Chef	*0*	*1*	*4*	*0*	*6*	*9*	*10*	*75*	*6*	*100*
Cook	*1*	*1*	*2*	*0*	*3*	*29*	*15*	*45*	*12*	*100*
Bar attendant	*3*	*3*	*6*	*1*	*12*	*23*	*27*	*44*	*6*	*100*
Waiter	*7*	*3*	*6*	*3*	*19*	*37*	*17*	*30*	*17*	*100*
Fast food cook	*0*	*1*	*2*	*1*	*5*	*9*	*27*	*36*	*27*	*100*
Kitchenhand	*3*	*3*	*5*	*3*	*14*	*22*	*22*	*33*	*23*	*100*
Other	*5*	*4*	*6*	*1*	*17*	*29*	*24*	*38*	*9*	*100*
All occupations	628	231	512	113	1,483	42	16	35	8	100
	Existing workers									
Tourism & hospitality	11	21	22	5	60	19	36	38	8	100
Cafe/restaurant manager	*2*	*3*	*2*	*0*	*7*	*32*	*42*	*26*	*0*	*100*
Chef	*3*	*4*	*5*	*0*	*12*	*28*	*31*	*41*	*0*	*100*
Cook	*2*	*0*	*1*	*0*	*3*	*67*	*12*	*21*	*0*	*100*
Bar attendant	*0*	*2*	*2*	*0*	*5*	*7*	*47*	*46*	*0*	*100*
Waiter	*0*	*1*	*2*	*1*	*4*	*3*	*28*	*37*	*32*	*100*
Fast food cook	*0*	*3*	*2*	*2*	*8*	*2*	*44*	*29*	*25*	*100*
Kitchenhand	*0*	*2*	*2*	*0*	*4*	*0*	*43*	*57*	*0*	*100*
Other	*3*	*6*	*7*	*1*	*17*	*18*	*33*	*41*	*8*	*100*
All occupations	290	284	383	67	1,024	28	28	37	7	100
	Total									
Tourism & hospitality	31	39	53	15	139	23	28	38	11	100
Cafe/restaurant manager	*3*	*4*	*3*	*0*	*10*	*26*	*42*	*30*	*2*	*100*
Chef	*4*	*4*	*9*	*0*	*18*	*22*	*24*	*52*	*2*	*100*
Cook	*3*	*1*	*2*	*0*	*6*	*46*	*14*	*34*	*6*	*100*

	'000					%				
	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All
Bar attendant	*3*	*6*	*8*	*1*	*18*	*18*	*33*	*45*	*4*	*100*
Waiter	*7*	*4*	*7*	*4*	*23*	*30*	*19*	*31*	*19*	*100*
Fast food cook	*1*	*5*	*4*	*3*	*13*	*5*	*37*	*32*	*26*	*100*
Kitchenhand	*3*	*5*	*7*	*3*	*18*	*18*	*27*	*38*	*18*	*100*
Other	*8*	*10*	*13*	*3*	*34*	*24*	*29*	*39*	*8*	*100*
All occupations	917	515	895	180	2,517	37	21	36	7	100

4.2.3 Qualification requirements in sport and recreation

Table 4.9 shows the qualification requirements in sport and recreation from 2010 to 2015. The sector will require 17,000 qualifications of which 5,000 will be at the degree or higher level and 12,000 at the VET level. About half of all requirements are in the fitness instructor occupation.

As it has already been discussed before these requirements understate the total qualification requirements in this sector because they do include qualification requirements of volunteers or those whose second job is the sector.

Table 4.9 Qualification requirements in sport and recreation by selected occupations, Australia, 2010 to 2015

	'000					%				
	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All	H'Ed	Ad Dip/ Dip	Cert III/IV	Cert I/II	All
Occupation	New entrants									
Sport & recreation	3	1	3	1	9	38	17	39	6	100
Fitness instructor	*1*	*1*	*2*	*0*	*4*	*24*	*25*	*50*	*0*	*100*
Swimming coach/instructor	*1*	*0*	*0*	*0*	*1*	*43*	*11*	*32*	*14*	*100*
Other	*2*	*0*	*1*	*0*	*3*	*53*	*8*	*28*	*11*	*100*
All occupations	628	231	512	113	1,483	42	16	35	8	100
	Existing workers									
Sport & recreation	2	1	5	1	8	23	15	55	7	100
Fitness instructor	*0*	*1*	*3*	*0*	*4*	*1*	*27*	*71*	*0*	*100*
Swimming coach/instructor	*0*	*0*	*1*	*0*	*1*	*40*	*4*	*56*	*0*	*100*
Other	*1*	*0*	*1*	*1*	*3*	*44*	*2*	*35*	*19*	*100*
All occupations	290	284	383	67	1,024	28	28	37	7	100
	Total									
Sport & recreation	5	3	8	1	17	30	16	47	7	100
Fitness instructor	*1*	*2*	*5*	*0*	*8*	*13*	*26*	*61*	*0*	*100*
Swimming coach/instructor	*1*	*0*	*1*	*0*	*2*	*42*	*8*	*42*	*8*	*100*
Other	*3*	*0*	*2*	*1*	*6*	*48*	*5*	*32*	*15*	*100*
All occupations	917	515	895	180	2,517	37	21	36	7	100

5. Concluding remarks

This report has provided an assessment of the qualifications requirements in service industries in Australia for the period 2010 to 2015. In deriving these estimates, the report has had to forecast the occupational and skill structure of employment in these industries over the same period and also the net turnover in them. This is because the three most important factors determining future qualifications requirements in the workforce are occupational growth, net replacement needs and changing skills profile over and above that due to occupational restructure.

As a context for the report a chapter was devoted to describing the historical trends in employment in these industries. These descriptions show the unique demographics of the workforce as well as provide evidence of the continuing skills deepening in these industries. A large number of jobs in these industries are short-term, with limited career paths and not requiring high levels of skill. These jobs are typically held by young people for whom they often provide their first labour market experience. In this respect the jobs are critical for the development of employability skills in young people. Thus it is important to pay particular attention to the type of training that is provided in these jobs because it will help equip young people with skills to operate effectively in the labour market later on. The training does not necessarily have to be in terms of qualifications, it could be in terms of skill sets.

The estimates of qualification requirements presented in this report were derived from complex models of the economy. Output from a number of such models was combined to arrive at the final estimates. The MONASH/CEET models used for this purpose have long track record for producing robust economic analysis.

Models are always a simplification of reality. They can never capture the full range of complex behaviour of individuals and firms that make up an economic system or their interactions with each other. They try to model what we do know about individual and firm behaviour but cannot model what we don't know or do not understand. Therefore all models have assumptions built in to estimate complex behaviour. Models can be sensitive to small changes in the assumptions made, but good models are generally more robust.

Models are as good as the type of data used to estimate them. All models used for this report use the most reliable data that are currently publicly available. However even the most reliable data have limitations as much of it is gathered from sample surveys and standard classifications are used for coding it. For instance, data on qualifications are generally about the highest qualification attained by a person. If a person has multiple qualifications or 'skill sets', these are not recorded in the regular surveys.

Thus the estimates of qualification requirements presented in this report should be interpreted as the lower bound of requirements. Another reason why they are a lower bound is because they are requirements for the employed population and exclude requirements for volunteers or for people who have a second job in service industries. This is particularly an issue in the sport and recreation sector in which a lot of volunteers work.

Economic forecasts are inherently uncertain, especially over long horizons. It is inevitable that developments that are currently unforeseen will eventually render forecasts from any model, not just the ones used for this report, to be inaccurate.

Notwithstanding the limitations outlined above, the estimates in this report provide sound baseline data that are systematic, comprehensive and consistent for informing policy. They are important for organisations and individuals who have to make assumptions about the future in making plans. These estimates are clearly a better alternative to ad hoc partial evaluation of the labour market for service industries that ignore the interactions with the rest of the economy in the analysis. They should however be validated and fine-tuned with information from other sources and stakeholder consultation. Conversely, stakeholder views could be tested with objective analysis of the type in this report.

It is imperative that forecasts such as those in this report are updated on a regular basis as new information becomes available and improvements are made in methods of analysis.

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