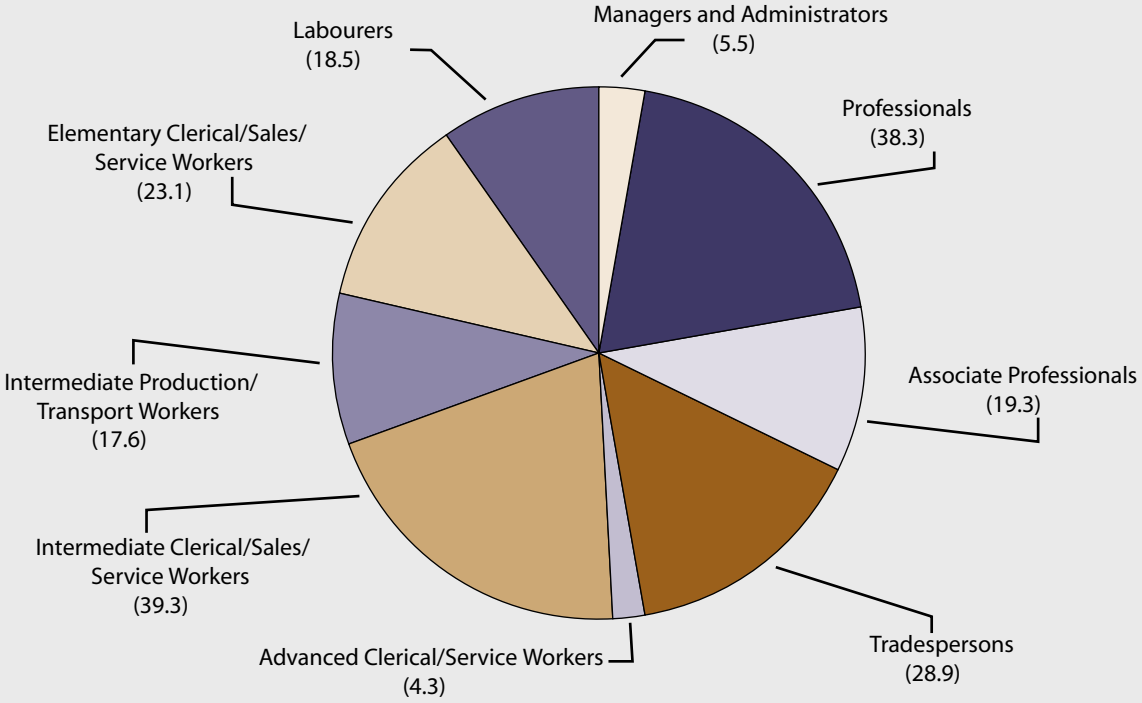
Figure 16: Forecast Reduction in Employment Levels (Thousands of Employed Persons) due to Population Ageing, by Occupation, 2004–05 to 2009–10



Source: Centre of Policy Studies, MONASH model forecasts. The occupational grouping used for this Chart is the ABS's ASCO major groups classification.

Employment by Hours Worked

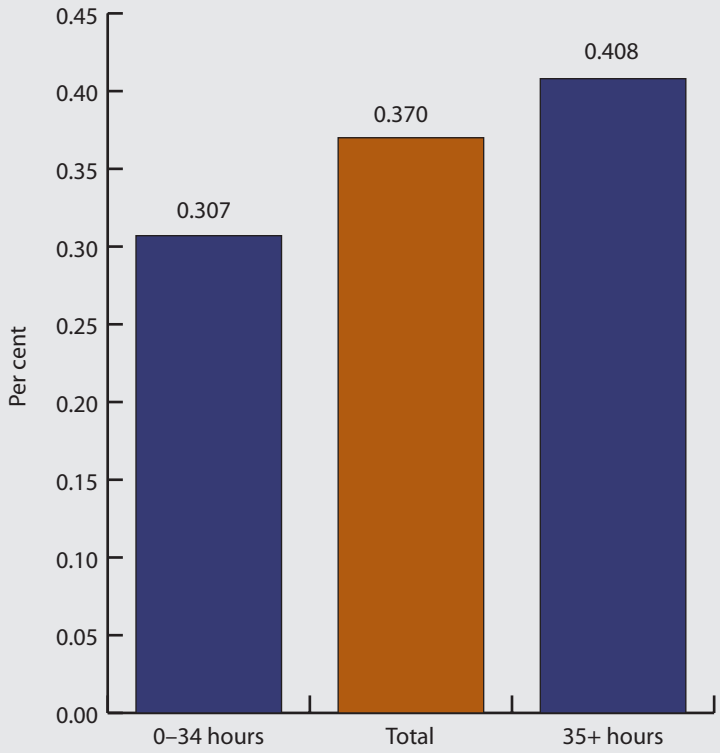
Whilst the MONASH model does not produce explicit forecasts for full-time and part-time employment levels, forecasts can be generated by nine separate (weekly) hours worked categories: 0 hours; 1–15 hours; 16–29 hours; 30–34 hours; 35–39 hours; 40 hours; 41–44 hours; 45–48 hours and 49+ hours.

While population ageing is expected to reduce employment growth for all hours worked categories, a larger reduction in the employment growth rate of those working 35 hours per week or longer is forecast than for the growth rate of people working from 0 to 34 hours per week (as illustrated in Figure 18)[5]. This will have the overall impact of increasing the share of part-time employment in total employment.

The MONASH forecasts are consistent with the Productivity Commission projections for a rise in the share of part-time work and lower average hours worked. This is because participation rates for mature-age workers are projected to rise and mature-age workers have a greater tendency to work part-time hours than workers aged 25 to 44 years.

[5] The ABS uses two main definitions of hours worked, usual hours worked and actual hours worked, which result in different classifications of the same employed person. Under the ABS *Labour Force Survey* definitions, as an example, it is possible that a number of employed persons may be classified as full-time workers but would have worked less than 35 hours in the survey reference week for a variety of reasons (such as holidays, illness and plant shut-downs). In July 2005, 17.7 per cent of full-time workers worked less than 35 hours in the survey reference week.

Figure 17: Forecast Reduction in Average Annual Employment Growth (Percentage Points) due to Population Ageing, by Hours Worked, 2004–05 to 2009–10



Source: Centre of Policy Studies, MONASH model forecasts.

WHAT IT MEANS FOR BUSINESS

The ageing of the population coupled with an already tight labour market, especially for the more skilled occupations, will have significant implications for business. The results of the MONASH modelling show that population ageing will impact on all major industries and occupations and affect all of Australia. The extent to which particular States and Territories or labour market regions are affected will not be uniform due to differing demographic and structural characteristics. Also, because industries vary in terms of their labour intensity of production, occupational mix and the workforce age distribution of existing workforces, different industries will be affected in different ways and over differing time-frames.

With the prospective shortfall in workers over the next five years potentially being as large as 195 000 workers and spread unevenly across industries and occupations, many firms could face difficulties in obtaining the workers they need. This holds especially for firms hiring high proportions of Tradespeople and some lesser skilled occupations and for firms in Mining and Manufacturing.

In relative terms South Australia will be the most affected by ageing and the Northern Territory the least. However, in line with the size of their populations, New South Wales, Victoria and Queensland will have the largest employment shortfalls.

With a likely shift in employee preferences from full-time work towards part-time work as a result of population ageing, those industries that remain reliant on full-time workers could also face more difficulties than otherwise.

A tight labour market and the ageing of the population, combined with current skill shortages, could therefore have adverse consequences for many businesses unless they adapt. Without sufficient skilled workers, many businesses will have difficulty in continuing to produce their current level of output, let alone in expanding output to keep up with the consumption wishes of Australians and export markets.

In addition to having trouble maintaining production, firms could have other challenges to their profits from skill shortages. One is that there could be additional reworking of products and services from insufficiently trained employees in order to make ordered items suitable for customers.

Another challenge to company profits from the ageing of the population and skill shortages is that wages could be higher than otherwise, as the reduced supply of trained workers means that they can earn a higher premium for supplying their labour. The Productivity Commission (2005) drew attention to the likelihood of higher wage pressures in its recent Report, *Economic Implications of an Ageing Australia*.

Allied with wage pressures, the costs of recruiting are likely to be higher. Many businesses will find that they will have to do more job advertising and even run more recruitment rounds in order to fill their positions.

Population ageing and skill shortages are also likely to impact on Australia's competitiveness—both in terms of maintaining production at a reasonable cost and in terms of the competition for skilled migrants.

Without sufficient skilled workers, many businesses will have difficulty in continuing to produce their current level of output, let alone in expanding output to keep up with the consumption wishes of Australians and export markets.

While almost all other developed countries will be subject to population ageing over the next five years and beyond, some of our competitors such as Germany and France have substantial excess labour supply. Similarly, many of the developing countries with which we compete have young and fast-growing populations and will have a competitive advantage.

As population ageing begins to bite elsewhere, other countries will compete more strongly with Australia for migrants, especially skilled migrants. This means that businesses might not be able to rely on skilled immigrants to fill their vacancies at the same rate as in the past. It will also mean that there will be more pressure from overseas countries for experienced Australian workers and skilled emigration might increase. Businesses could become even more reliant than in the past on underutilised sources of labour supply—in particular, mature-age job seekers, people with disabilities and parents of school-aged children.

A higher propensity to import could be a consequence of population ageing combined with skill shortages. Already, some large resource projects are having reduced Australian content as a result of skill shortages and other factors.[6]

The variety of effects of population ageing across industries, occupations and regions indicates that there is no unique solution and employers will need to take account of their own circumstances and tailor approaches to their workforce needs.

Businesses are becoming more aware of the ageing workforce issues and the need to adjust their retention and recruitment practices. Both the Business Council of Australia and the Australian Chamber of Commerce and Industry have issued policy documents warning of the implications of ageing for business and urging a range of actions be taken by member organisations to employ and retain mature age people. Drake International (Australia) has also issued a White Paper, *The age chasm*, in which the author, Professor Louise Rolland, recommended a range of strategies for businesses to handle the effects of population ageing, including implementing and managing age-balanced recruitment; learning, development and retraining strategies for mature-age workers; support for the health and wellbeing of older workers; workplace and task redesign; and managing retention and exits. Many employers are already hiring more older workers, as the national statistics show. Nevertheless, there are still some myths standing in the way of better business outcomes from employing more older workers, and indeed other groups who have been seen as outside the workforce, such as parents and people with disabilities. Yet, many lone parents and people with disabilities are already employed and more are increasingly looking to enter the labour force.

As labour shortages increase, employers will need to be innovative to attract the shrinking supply of available talent. The workforce of the future will be more diverse; it will consist of more older workers, more parents, and more people wanting to work part-time; so new strategies will be needed.

Some of the approaches that employers could take include:

- creating a more diverse workforce
- retaining mature-age employees through strategies such as phased retirement and age-aware training
- mentoring and coaching new employees to improve their productivity
- increasing education and training for existing employees (both on the job and off the job)
- improving the work/family balance for their employees to attract and retain workers with children and/or caring for elders
- providing child care facilities in or near the workplace to retain workers who are primary carers for young children

[6] An example is the fifth train of the North-West Shelf Liquefied Natural Gas development, as explained in a recent speech by Don Voelte, CEO of Woodside Energy

- modifying the workplace and tasks so that they can be performed by employees with various levels of disability
- taking advantage of government incentives to try out new employees with different characteristics from their current employees.

Australian Government incentives to assist businesses to create a more diverse workforce, announced in the 2005–06 Budget's Welfare to Work package, include the following measures:

- Wage subsidies and provision of workplace modifications to employers to hire workers with disabilities
- Provision of additional child-care places for parents of school-age children, including Outside School Hours Care
- Wage subsidies for employers to hire very long-term unemployed job seekers under the Wage Assist programme
- Targeted and improved industry and workplace engagement strategies
- Strategies to increase employment of workers with a disability
- Training for employers to manage an ageing workforce effectively
- Additional training and employment preparation services for job seekers.

Further information on these incentives and other Australian Government measures to improve labour supply and employer demand for new job seekers (especially parents of school-age children, people with disabilities, mature-age people and very long-term unemployed persons) is available in the 2005–06 Australian Government Budget and on DEWR's website[7].

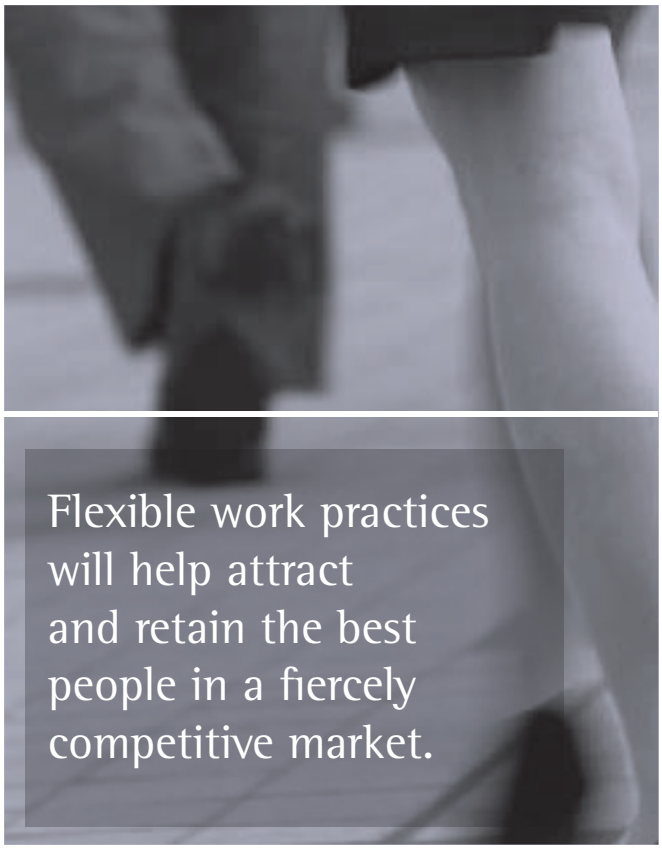
Flexible work practices will help attract and retain the best people in a fiercely competitive market. Employers may be able to influence experienced workers to remain working longer by offering attractive working conditions and incentives. Employers who proactively provide an environment which supports work/life balance (even going so far as to help them plan for retirement), will increase employee engagement, focus, and productivity.

The Australian Government is also working with employers, employees and other stakeholders to improve education and training for Australia's workers. Policies introduced in the 2005–06 Budget are available on DEST's website[8] and include the opening of 24 new Australian Technical Colleges, the provision of additional pre-vocational training places and enhancements to New Apprenticeships.

While population ageing is happening now and will have an influence on Australian employment over the next five years, Australian employers, with the assistance of the Australian Government (and other levels of government), are capable of addressing the issue. This is provided they tackle it with the same zeal and innovation for which Australia is renowned.

[7] Fact sheets on some of the main Welfare to Work measures including assistance to employers and job seekers can be obtained at **dewr.gov.au/dewr/Publications/Budget/2005–06/PortfolioBudgetStatements2005–06-FactSheets.htm**.

[8] An outline of these policies and links to additional information can be accessed at **dest.gov.au/sectors/training_skills/policy_issues_reviews/key_issues/new_iniatives.htm**.



GLOSSARY

Employment Rate

The proportion of the civilian population aged 15 years and over who are employed. This rate can also be calculated for other age groups.

Labour Force

Persons aged 15 and over who are either employed or unemployed. Employed persons worked at least an hour in the reference week, or had a job and were away for less than four weeks, while unemployed persons do not have a job but actively look for work and are available to start work, or are waiting to start a new job within four weeks.

Labour Force Participant

Person who is either employed or unemployed—see Labour Force.

Labour Force Participation Rate

Those persons who are employed or unemployed as a percentage of the civilian population aged 15 years and over. This rate can also be calculated for other age groups.

Population Ageing

As a result of lower fertility and mortality rates, the age structure of the economy is changing markedly, with the average age rising and higher proportions of older people but lower proportions of younger people.

Skill Shortages

Skill shortages exist when employers have difficulty recruiting for, or are unable to fill, vacancies in an occupation or specialist area of an occupation, assuming pay and conditions of the job are typical and the job is not in a remote or difficult to access location. Shortages are typically for specialised and experienced workers, and can coexist with relatively high unemployment. Shortages may be numerically small, or may be confined to specific geographic areas.

Unemployment Rate

The number of unemployed persons (persons who do not have a job but are actively looking for work and are available to start work, or are waiting to start a new job within four weeks) as a percentage of the labour force (employed and unemployed persons).

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APPENDIX A

Description of MONASH Model Modifications to Represent Population Ageing

The MONASH model is a dynamic, multi-regional computable general equilibrium (CGE) model of Australia, maintained by the Centre of Policy Studies at Monash University. In this model, employment is disaggregated by region, industry and occupation. Forecasts of employment by qualification level and field have been produced by the Centre of Policy Studies as an intermediate step in producing the estimates of the effects of population ageing.

The estimated effect of population ageing was derived by comparing the results of alternative simulations produced for this project using the MONASH model.

A baseline simulation was prepared under the assumption that population ageing proceeds as expected, based on modified ABS population projections which were used by the Productivity Commission in modelling developments in labour force participation rates, unemployment rates and average hours worked per week by gender and age group. These projections were combined with modelling of qualifications by level of achievement and field of study to produce forecasts of employment by qualification, exogenously from the MONASH model.

This baseline simulation is also based on the standard Monash model macroeconomic and industry growth assumptions, which are informed by forecasts from Access Economics as described in their September 2004 issue of *Business Outlook: Five year forecasts for business planners*. This baseline was modified from the standard MONASH model projections, in which employment and hours worked are determined by labour demand (in other words, that there is excess labour supply in all industries and occupations). In the standard MONASH simulation, wage rates are set exogenously based on scenarios supplied by Access Economics and employment levels are determined within the MONASH model.

In contrast, in the modified baseline simulation for this project, employment levels are determined exogenously as described above and the MONASH model is used to determine wage rates. The improved modelling allows employment in all industries and occupations to be consistent with the exogenously specified levels of employment by qualification, which in turn are influenced by labour supply constraints resulting from population ageing. These labour supply constraints are imposed at the national level and the resulting industry employment levels are then distributed among the regions.

The overall labour market environment is forecast to be benign in the baseline used for this project, with total

The estimated effect of population ageing was derived by comparing the results of alternative simulations produced for this project using the MONASH model.

employment growing at a compound average annual growth rate of 1.5 per cent per annum in the five years to 2009–10. While this growth rate is less than the compound average annual growth rate of 2.1 per cent per annum in the five years to 2004–05, a slower growth rate is to be expected as a result of assumptions that world and Australian economic growth would be slower in the next five years than in the last five years and the difficulty of achieving further reductions in an already low unemployment rate in Australia (over the five years to 2004–05, the unemployment rate was reduced from 6.6 per cent to 5.2 per cent).

This baseline simulation was compared with an alternative simulation from the MONASH model, based on a hypothetical situation with no ageing of the adult population. In this simulation, the growth rate of the adult population over the next five years is assumed to remain the same as in the baseline forecast, but the age distribution of the adult population is assumed to be unchanged instead of becoming distributed more towards older persons. This assumption leads to a forecast of higher labour supply than in the baseline forecasts, because prime-age persons generally have higher labour force participation rates and tend to work longer hours per week than mature-age persons. The amount of unemployed labour (in terms of hours available for employment) is assumed to be the same in both scenarios. Effectively, for the alternative simulation, this means that all of the additional labour supply is assumed to be employed. In turn, this implies that the employment level in the alternative simulation is substantially higher than in the baseline by 2009–10, because the baseline incorporates the effects of population ageing. The higher employment level in the alternative simulation is estimated to be associated with lower pressure on real wages than in the baseline: the real wage rate (nominal wages deflated by the price deflator for Gross Domestic Product) is modelled as growing by 1.6 per cent per annum in the baseline, but only by 1.0 per cent per annum in the alternative simulation, over the five years to 2009–10.

The ageing effect is estimated as the difference of the no-adult-population ageing simulation from the baseline simulation. These effects were prepared by industry, occupation, qualification, region, gender and hours worked and detailed results by industry, occupation and region are shown in the next Appendix.

Disclaimer: Analysis of the simulations produced using the MONASH model from the Centre of Policy Studies has been undertaken by the Department of Employment and Workplace Relations (DEWR). Accordingly, while all reasonable care has been taken to ensure that results are presented accurately, errors that may arise as a result of the analysis are attributable to DEWR. Errors as a result of the modelling process are attributable to the Centre of Policy Studies.

APPENDIX B:

Detailed MONASH model forecast results

Table B1: Forecast Reduction in Average Annual Employment Growth (Percentage Points) due to Population Ageing, by Detailed Industry, 2004–05 to 2009–10

Industry	Forecast compound average annual employment growth rate from 2004–05 to 2009–10 (%)	Reduction in forecast annual employment growth rate from 2004–05 to 2009–10 from population ageing (percentage points)
Agriculture	1.35	0.20
Services to agriculture	6.43	1.57
Forestry/logging	4.40	1.02
Fishing	-0.41	0.68
Coal mining	-1.09	0.99
Oil/gas	-1.16	0.79
Metal ore mining	1.36	1.31
Other mining	6.93	3.22
Services to mining	1.41	1.47
Food/beverage/tobacco	0.77	0.49
Textile, Clothing Footwear/leather products	0.86	0.65
Wood/paper products	0.32	0.58
Printing/publishing	0.70	0.59
Petrol/chemical products	2.61	1.18
Non-metal mineral products	-2.46	0.26
Metal products	1.43	0.76
Machinery/equipment	2.37	1.20
Other manufacturing	1.79	0.51
Electricity/gas	0.38	0.66
Water/drains	-0.96	0.20
General construction	0.21	0.00
Construction services	0.19	0.02
Basic material wholesale	1.92	0.48
Machinery/auto wholesale	1.87	0.49
Household good wholesale	1.89	0.50
Food retailing	2.03	0.27
Household good retailing	2.07	0.26
Auto retailing/services	1.30	0.30

Industry	Forecast compound average annual employment growth rate from 2004–05 to 2009–10 (%)	Reduction in forecast annual employment growth rate from 2004–05 to 2009–10 from population ageing (percentage points)
Hotels/restaurants	1.02	0.48
Road transport	1.58	0.31
Rail transport	0.76	0.78
Water transport	-1.75	0.65
Air transport	0.39	0.43
Other transport	0.00	0.00
Services to transport	-0.32	0.63
Storage	-0.48	0.74
Communications	0.10	0.45
Finance	0.43	0.58
Insurance	-0.76	0.40
Finance/insurance services	-0.23	0.45
Property services	2.40	0.31
Business services	2.30	0.31
Government administration	0.88	0.14
Defence	1.72	0.09
Education	3.18	0.43
Health services	1.95	0.16
Community services	1.75	0.12
Film/radio/TV	-1.17	0.27
Libraries/museums/art	-1.17	0.33
Sport/recreation	-1.15	0.37
Personal services	1.21	0.36
Other services	1.18	0.29
Private households employing staff	1.12	0.54
All industries	**1.50**	**0.37**

Table B.2: Forecast Reduction in Average Annual Employment Growth (Percentage Points) due to Population Ageing, by Detailed Occupation, 2004–05 to 2009–10

ASCO Minor Group Description	Forecast compound average annual employment growth rate from 2004–05 to 2009–10 (%)	Reduction in forecast annual employment growth rate from 2004–05 to 2009–10 from Population Ageing (percentage points)
General Managers and Administrators	2.12	0.00
Miscellaneous Generalist Managers	1.34	0.06
Resource Managers	1.67	0.44
Engineering, Distribution and Process Managers	1.71	0.34
Sales and Marketing Managers	1.56	0.56
Miscellaneous Specialist Managers	2.42	0.22
Farmers and Farm Managers	2.21	-0.23
Natural and Physical Science Professionals	1.70	0.56
Building and Engineering Professionals	1.97	0.34
Accountants, Auditors and Corporate Treasurers	2.36	0.45
Sales, Marketing and Advertising Professionals	1.81	0.61
Computing Professionals	1.81	0.70
Miscellaneous Business and Information Professionals	2.02	0.35
Medical Practitioners	1.99	-0.17
Nursing Professionals	1.51	0.23
Miscellaneous Health Professionals	1.39	0.25
School Teachers	2.70	0.43
University and Vocational Education Teachers	3.10	0.20
Miscellaneous Education Professionals	2.83	0.18
Social Welfare Professionals	2.79	0.04
Miscellaneous Social Professionals	1.79	0.38
Artists and Related Professionals	1.70	0.50
Miscellaneous Professionals	1.50	0.30
Medical and Science Technical Officers	1.68	0.62
Building and Engineering Associate Professionals	1.26	0.31
Finance Associate Professionals	1.27	0.34
Miscellaneous Business and Administration Associate Professionals	1.88	0.26
Shop Managers	1.72	0.12

ASCO Minor Group Description	Forecast compound average annual employment growth rate from 2004–05 to 2009–10 (%)	Reduction in forecast annual employment growth rate from 2004–05 to 2009–10 from Population Ageing (percentage points)
Hospitality and Accommodation Managers	1.33	0.27
Miscellaneous Managing Supervisors (Sales and Service)	1.48	0.38
Enrolled Nurses	2.37	0.41
Welfare Associate Professionals	2.07	0.25
Miscellaneous Health and Welfare Associate Professionals	1.23	0.51
Police Officers	0.72	0.69
Miscellaneous Associate Professionals	1.26	0.46
Mechanical Engineering Tradespersons	0.47	0.48
Fabrication Engineering Tradespersons	-0.07	0.70
Automotive Tradespersons	-0.71	0.54
Electrical and Electronics Tradespersons	-0.32	0.50
Structural Construction Tradespersons	0.05	0.34
Final Finishes Construction Tradespersons	0.45	0.10
Plumbers	0.10	0.37
Food Tradespersons	1.01	0.48
Skilled Agricultural Workers	1.53	0.47
Horticultural Tradespersons	1.17	0.27
Printing Tradespersons	0.40	0.45
Wood Tradespersons	0.00	0.32
Hairdressers	1.43	0.80
Textile, Clothing and Related Tradespersons	1.70	-0.01
Miscellaneous Tradespersons and Related Workers	0.88	0.59
Secretaries and Personal Assistants	2.14	0.20
Advanced Numerical Clerks	2.12	0.18
Miscellaneous Advanced Clerical and Service Workers	1.27	0.30
General Clerks	1.89	0.32
Keyboard Operators	1.63	0.47
Receptionists	1.85	0.33
Intermediate Numerical Clerks	1.33	0.47

ASCO Minor Group Description	Forecast compound average annual employment growth rate from 2004–05 to 2009–10 (%)	Reduction in forecast annual employment growth rate from 2004–05 to 2009–10 from Population Ageing (percentage points)
Material Recording and Despatching Clerks	1.06	0.57
Miscellaneous Intermediate Clerical Workers	1.33	0.51
Intermediate Sales and Related Workers	1.23	0.46
Carers and Aides	2.50	0.26
Hospitality Workers	1.19	0.64
Miscellaneous Intermediate Service Workers	1.45	0.54
Mobile Plant Operators	0.64	0.51
Intermediate Stationary Plant Operators	0.86	0.54
Intermediate Textile, Clothing and Related Machine Operators	0.92	0.44
Miscellaneous Intermediate Machine Operators	0.75	0.72
Road and Rail Transport Drivers	1.14	0.18
Intermediate Mining and Construction Workers	0.00	0.64
Miscellaneous Intermediate Production and Transport Workers	1.23	0.58
Elementary Clerks	1.42	0.16
Sales Assistants	1.58	0.49
Miscellaneous Elementary Sales Workers	1.57	0.53
Elementary Service Workers	1.93	0.17
Cleaners	2.10	0.07
Process Workers	0.98	0.68
Product Packagers	1.49	0.53
Mining, Construction and Related Labourers	0.46	0.39
Agricultural and Horticultural Labourers	1.42	0.53
Elementary Food Preparation and Related Workers	1.51	0.46
Miscellaneous Labourers and Related Workers	1.03	0.20
Total	**1.50**	**0.37**

Table B.3: Forecast Average Annual Employment Growth and Reduction in Average Annual Employment Growth Due to Population Ageing, by State and Territory, 2004–05 to 2009–10

State/Territory	Forecast compound average annual employment growth rate from 2004–05 to 2009–10 (%)	Reduction in forecast annual employment growth rate from 2004–05 to 2009–10 from population ageing (percentage points)	Reduction in forecast annual employment growth rate as a percentage of compound average annual employment growth rate from 2004–05 to 2009–10 (%)
New South Wales	1.40	0.37	26.5
Victoria	1.40	0.39	27.4
Queensland	1.84	0.37	20.3
South Australia	0.80	0.34	42.9
Western Australia	1.93	0.34	17.4
Tasmania	0.96	0.33	34.7
Northern Territory	2.70	0.46	17.1
Australian Capital Territory	1.06	0.38	36.1
Australia	**1.50**	**0.37**	**24.7**

Table B.4: Forecast Reduction in Employment Levels (Thousands of Employed Persons and Percentage of National Reduction) due to Population Ageing, by Region, 2004–05 to 2009–10

Region	Forecast shortfall of employed persons	Percentage of national shortfall (%)
NSW		
Sydney	44 300	22.8
South Eastern	1280	0.7
Central West	1470	0.8
Far West	250	0.1
Hunter	5220	2.7
Illawarra	3700	1.9
Mid North Coast	1970	1.0
Murray	1130	0.6
Murrumbidgee	1180	0.6
North Western	910	0.5
Northern	1180	0.6
Richmond-Tweed	1470	0.8
		32.9
Victoria		
Melbourne	37 100	19.1
Barwon	2910	1.5
Western District	1230	0.6
Central Highlands	1260	0.6
Wimmera	310	0.2
Mallee	810	0.4
Loddon-Campaspe	1560	0.8
Goulburn	2180	1.1
Ovens Murray	770	0.4
East Gippsland	580	0.3
Gippsland	1540	0.8
		25.8

Region	Forecast shortfall of employed persons	Percentage of national shortfall (%)
Queensland		
Brisbane	19 380	10.0
Moreton	7010	3.6
North West	680	0.3
Far North	2310	1.2
Northern	2400	1.2
Mackay	1310	0.7
Central West	80	0.0
Fitzroy	1860	1.0
South West	150	0.1
Darling Downs	1810	0.9
Wide Bay-Burnett	2050	1.1
		20.1
WA		
Perth	12 980	6.7
Peel	790	0.4
Kimberley	220	0.1
Pilbara	760	0.4
Gascoyne	150	0.1
Mid West	520	0.3
Goldfields	1020	0.5
Wheatbelt	460	0.2
Great Southern	290	0.1
South West	1210	0.6
		9.4
SA		
Adelaide	9500	4.9
Outer Adelaide	1070	0.5
Yorke Lower North	230	0.1
Murray Lands	590	0.3
South East	650	0.3
Eyre	190	0.1
Northern	730	0.4

Region	Forecast shortfall of employed persons	Percentage of national shortfall (%)
		6.7
Tasmania		
Greater Hobart	1210	0.6
Northern	1280	0.7
Southern	250	0.1
Mersey-Lyell	1070	0.5
		2.0
ACT	3580	**1.8**
NT	2550	**1.3**
AUSTRALIA	**194 650**	**100.0**

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