

Overview of demand for professionals, associate professionals and managers: Queensland – June 2008

Economic Background

Queensland's economy grew by an estimated 3.75 per cent over the year to June 2008, exceeding national growth for the twelfth consecutive year. The three key drivers of the economy included household consumption, a sustained surge in private investment and ongoing public sector investment in infrastructure development. The latest Access Economics *Investment Monitor* shows that after 5.0 per cent growth in the March quarter 2008, the total value of known investment projects in Queensland increased to \$129.6 billion. With high levels of investment and activity expected to continue, Queensland's economic growth has been forecast to strengthen further to 4.25 per cent in 2008-09 compared with an anticipated national growth of 2.75 per cent.

Employment in Queensland grew by 2.75 per cent in 2007-08, representing jobs growth of more than 55 000 persons over the year. The year-average participation rate in Queensland was 67.1 per cent due primarily to an increase in female labour force participation, which rose to a historic high of 61 per cent in May 2008. Queensland's trend unemployment rate averaged 3.7 per cent over the year to May 2008 and it is anticipated that this 34 year low will continue throughout 2008-09.

Total trend employment rose to 2 176 400 persons with full-time employed persons (1 564 700) accounting for 72 per cent of total employed persons. The industries with the most number of employed persons were Retail Trade (346 600), Property and Business Services (255 600) and Construction (237 500). Those employing the least number of persons included Mining (37 200) Communication services (28 900) and Electricity, Gas and Water (20 000). Over the year to May 2008, the greatest increase of employed persons occurred in Education (up 13 000 persons). In the same period, Government, Administration and Defence had the greatest decrease in employed persons, with a reduction of 5500 persons.

In the first half of 2008, 45 professions and associate professions were examined to determine current and emerging occupational demand and skill shortages for Queensland. The occupations under discussion are most likely to be employed in the broad industries of manufacturing, construction, mining, health and community care, education, property and business services and government administration and defence. While employment levels and jobs growth varied across industries, most sectors experienced elevated levels of activity and SERA research showed either strong or steady demand for all of the occupations examined.

Australian Bureau of Statistics (ABS) data for Queensland show that the total number of job vacancies grew to 41 600 in May 2008, representing an increase of 17 per cent compared to May 2007. The Department of Education, Employment and Workplace Relations (DEEWR) Skilled Vacancies Index (SVI) for Queensland indicates that the combined annual count of newspaper advertisements for professions fell by 27 per cent over the year to June 2008. However, a large number of contacts reported this year that there has been a moderate shift away from newspaper advertising with employers more likely to directly approach employees in other businesses, use word of mouth, advertise on websites and in-house or access professional recruitment agencies.

The three characteristic drivers of the Queensland economy look set to continue over the course of 2008-09 and are likely to persist for several years beyond that. Demand for many of the professions is therefore expected to continue at high levels and, in many cases, further expand. In relation to

supply, there are a small number of professions that will see slight improvement from recent increases in student numbers, while migration has been a source of supply to some occupations in recent times. However, for most of the professions examined this year, supply from education and migration are unlikely to meet the expected increases in demand for their services over the coming year.

12 Specialist Managers

There were four occupations examined in this group, namely production managers in the fields of mining and manufacturing, engineering managers and child care coordinators. Quarterly ABS Labour Force Survey data show that overall employment levels of specialist managers increased by 12.3 per cent or 9,000 persons over the year to May 2008.*

The rapid growth of Queensland's population, business investment and infrastructure development and associated high levels of activity in the construction, mining and manufacturing sectors has meant that demand for production and engineering managers surpassed the supply of suitable candidates and they were all found to be in shortage in 2007-08. The strongest demand was for professionals with senior level skills and experience or for those with knowledge of Australian regulations and standards. The inclusion of these criteria tended to limit the suitability of new graduates and some overseas applicants. Department of Immigration and Citizenship (DIAC) arrivals and departure records show a net gain to the State of 81 self-identified production managers and 112 self-identified engineering managers over 2006-07 providing a possible source of supply to these workforces.

This year, child care coordinators were found to be in State-wide shortage. Factors impacting on demand for this profession included population growth, the rising levels of female labour force participation and the consequent demand for additional child care facilities across the State. While Census data indicate annual average employment growth of 4.1 per cent for childcare coordinators between 2001 and 2006, the average number of child care services has been increasing by 9.4 per cent each year since 2003. It is therefore expected that the current shortage of child care coordinators in Queensland will continue.

21 Science, Building and Engineering Professionals

Professionals in this group include geologists and civil, electrical, mining, mechanical and production or plant engineers, as well as agricultural scientists and agricultural advisers. ABS Quarterly Labour Force Survey data for May 2008 show that the number of employed persons in this group increased by approximately 5400 or by 14.5 per cent since May 2007.*

Over the year, demand for the engineering professionals and geologists in this group was underpinned by high population growth, record infrastructure expenditure and developments as well as the on-going global demand for Queensland's resources. These conditions combined to generate steady activity in the mining, construction, energy supply and manufacturing sectors. Construction activity was influenced strongly by public investment in transport, roads, water, education and health with the value of engineering construction work done over the year to March 2008 increasing by 31.3 per cent. Population growth and rapidly growing demand for air conditioning installations over the last two summers increased demand in the energy supply sector, with electricity demand expected to increase at an annual average rate of 3.6 per cent. Coal exports grew by 7.5 per cent to reach a total of 153.36 Mt over 2006-07 and the flow on effects of this combined activity to the manufacturing sector is indicated by the Australian Industry Group-PriceWaterhouseCoopers Quarterly Manufacturing Survey which shows Queensland's manufacturing activity growing for the sixth consecutive quarter in June 2007.

Supply to these professions is varied. For example, the number of student geologists, civil and mining engineers is growing but electrical engineering graduates are declining and mechanical engineering graduate numbers remain basically unchanged since 2001. In terms of supply from overseas, DIAC arrivals and departure records show minimal increases in the number of manufacturing and mining engineers migrating to Queensland while the number of civil and electrical engineers have strengthened considerably. In the meantime, high levels of activity are expected to continue across all of the industries employing engineering professionals and demand for their services is likely to grow further in 2008-09. All six professions were rated as being in State-wide shortage in 2007-08 and they are expected to remain that way at least over the coming year.

Population growth, the increasing domestic and global demand for agricultural products, rising world food prices, climate change, drought, and the need for innovation and advances in technology to overcome these challenges have been the main drivers of demand for agricultural scientists and agricultural advisers. The Department of Primary Industries and Fisheries reported that the total value of Queensland's primary industry commodities increased by an estimated \$12.5 billion in 2007-08, representing 3.0 per cent growth when compared to 2006-07. At the same time, Census figures indicate that the agricultural science professional workforce is on a downward trend, declining by 17 per cent each year between 2001 and 2006. Given that demand is increasing and the workforce is declining it seems clear why this year's SERA results found both the agricultural scientist and agricultural advisor labour markets to be in shortage.

22 Business and Information Professionals

Two business and information professions were examined in the first half of 2008, namely accountants and external auditors. Queensland's ongoing population growth, high levels of business activity and subsequent corporate governance and compliance requirements have stimulated strong demand for business and information professionals. Australian Bureau of Statistics figures show that the number of accountancy firms increased by 5.0 per cent to reach more than 5300 businesses in 2006-07. Looking forward, business investment is expected to increase to \$36 billion by the end of 2008-09 but for these professions, graduate numbers are not meeting the current demand and their labour forces appear to be increasingly supported by overseas migration. Both professions were found to be in shortage and it is anticipated that the shortages will continue over 2008-09.

23 Health Professions

Health professions assessed in this year's program were registered nurses, midwives and registered mental health nurses. Queensland is continuing to experience workforce shortages across the health industry with all three nursing professions reported to be in shortage this year. In particular, the aged care, mental health and rural sectors experienced the greatest difficulties recruiting suitable workers.

Population ageing and growth, private and public investment in new health and aged care facilities and major redevelopments or expansions to existing hospitals across the State have been the main drivers of demand for nursing professionals. Census data between 2001 and 2006 indicate weak annual average employment growth for midwives and registered nurses of only 1.5 per cent and 3.0 per cent respectively, while the number of mental health nurses grew on average by only 56 persons each year. Census data also show that all three professions have an ageing workforce with the majority of professionals aged 50 years or older in 2006. With low or declining supply coming from the education sector for these professions, it is expected the current shortages will intensify over 2008-09.

24 Education Professions

Four education professions were examined in April 2008. Findings from this research showed that pre primary, secondary and special needs teachers are in shortage in Queensland. Recruitment difficulties were reported for primary school teachers.

Demand for teachers is generally dependent on the number of students in the population, but it is also influenced by government funding and policy on curriculum and class sizes. Over the ten years to August 2007, primary and secondary school student numbers increased by 13 per cent and 18 per cent respectively. Australian Productivity Commission figures for Queensland show that the number of children enrolled in preschools grew by 3,000 between 2003 and 2007 and approximately 54,000 new students commenced in 2008 in line with the full implementation of the State's preparatory program. Census data indicate that between 2001 and 2006, the number of primary and secondary school teachers increased each year by an average 2.6 per cent while pre primary teachers recorded yearly growth of only 0.3 per cent. The number of special needs teachers in Queensland recorded solid average growth of 6.7 per cent for each year between 2001 and 2006.

In the pre primary teacher labour market, employers outside of the school system reported great difficulties securing suitable applicants and secondary teachers were reported to be in acute shortage in the subject areas of science, maths, languages, industrial technology and information technology. For all of the occupations assessed in this group, employers in remote locations reported great difficulties attracting and retaining suitable workers.

25 Social, Arts and Miscellaneous Professionals

The occupations examined in this group include social worker, welfare worker, clinical psychiatrist, solicitor, economist, student counsellor and occupational health and safety officer. Quarterly Labour Force Survey data show that overall employment levels for this group decreased by 1.9 per cent over the year to May 2008.* Of those assessed, negative growth was recorded for legal professionals (down by 22.6 per cent), welfare and community workers (down by 19.4 per cent) and counsellors (down by 37 per cent). The remaining professions all experienced a rise in employment numbers.

An increasing level of mental health awareness and an aging workforce within the social and welfare industry is driving growing demand for social workers, welfare workers and clinical psychologists, with all three professions found to be in State-wide shortage in 2007-08. Queensland's SVI suggest that the annual number of newspaper vacancies for social workers and clinical psychologists almost tripled over the year to June 2007 and although it moderated slightly in 2008, it remains at historically high levels. The number of vacancies for welfare and community workers had a tenfold increase over the year to June 2008. Student numbers in each of these professions have been slowly increasing over the last few years but DIAC figures indicate significant downturns in the number of welfare workers and clinical psychologist migrating to Queensland. Supply from overseas to the social work labour market has been historically low.

Demand for solicitors has been generated by the growing complexity of corporate law and high levels of investment in areas such as property, construction and mining, while demand for economists has been driven by a 10 per cent increase in the number of banking and finance companies established across the State. The number of overseas migrants contributing to both of these labour markets is declining and they are unlikely to fill a significant number of vacancies. Both professions have had significant increases in student numbers in the recent past and this may help to ease demand in the future, but, until that time, the labour markets for solicitors and economists have been found to be in shortage and this looks set to continue in 2008-09.

The labour markets for student counsellors and occupational health and safety officers were rated as being 'not in shortage' this year. There has been steady growth in the number of students entering courses for both of these professions and although numbers are small, there has been a steady stream of possible supply coming through overseas migration. Census data indicate that the number of occupational health and safety officers in Queensland increased by an average of 7.0 per cent each year between 2001 and 2006, while the number of student counsellors recorded negative growth, falling by an average of 10.4 per cent annually. No change is expected to occur in the occupational health and safety officer labour market in 2008-09. However, given the declining numbers in the student counsellor workforce and the prospect that some sectors will be seeking applicants with master level qualifications at minimum from July 2008, a shortage of suitably qualified student counsellors may develop over the coming year.

31 Science, Engineering and Related Associate Professionals

In 2007-08, 11 associate professional occupations from this group were assessed, namely agricultural technical officers, mine deputies, civil engineering associates and technicians, mechanical engineering associates and technicians, electrical associates and technicians, electronic engineering associates and technicians and building associates. Many of the same factors impacting on demand for the engineering professions are impacting on these occupational labour markets and they are discussed in more details in that section. According to most employers, demand is strong for these occupations and this is indicated in Queensland's SVI which shows the annual number of newspaper advertisements for science, engineering and related associate professionals increasing by 54 per cent between June 2006 and June 2007, before moderating slightly in 2008.

Apart from the building associate and agricultural technical officer workforces, supply to the remaining associate professions assessed in this group is on an upward trend due to significant increases in student numbers over the last few years. Overseas migration may also be a potential source of supply with net overseas arrivals for these occupations almost doubling between 2006 and 2007. Supply to the building associate workforce is difficult to quantify as most Queensland employers are willing to accept workers with industry experience and a trade qualification. The combined numbers coming from the education sector and from overseas for the agricultural technical officer workforce has averaged approximately seven each year since 2002.

Labour Force Survey data indicate subdued employment growth in the science, engineering and related associate professions workforce over the year to May 2008, up by only 1.1 per cent or 400 persons.* Based on this year's research, all 11 occupations were rated as being in shortage with demand outstripping supply.

34 Health and Welfare Associate Professionals

The occupations examined in this group were dental technicians and enrolled nurses. Queensland is experiencing workforce shortages across all of the health occupations examined this year, with shortages reported to be more acute in non-metropolitan locations and in certain specialist sectors. Demand for these occupations has been strongly influenced by the State's growing and ageing population and the consequent demand for health care services. Quarterly Labour Force Survey data show that employment levels for this group increased by almost 23 per cent over the year to May 2008. For the two occupations assessed, the enrolled nurse workforce increased by 28 per cent while the dental associate professional workforce declined by 2.8 per cent.*

Education data for these occupations shows a steady increase in the number of students commencing in enrolled nurse courses. In contrast, the number of students entering dental technician courses has been low and almost unchanged since 2004. Supply to this labour market may have been strongly supported by overseas migration, with the average number of self-identified dental associate

technicians migrating to Queensland more than double the number of qualified workers coming from the education sector. Queensland's SVI shows newspaper advertisements for both associate professions increasing substantially over the last few years and remaining at historically high levels over 2007-08, which may indicate that supply is not meeting demand for these associate professions. Based on this year's research the labour markets of both enrolled nurses and dental associate technicians were found to be in shortage.

39 Other Associate Professionals

The only occupation examined in this group was primary product inspectors. Much of the demand for primary product inspectors has been generated by the increasing domestic and global demand for primary products and the associated regulations to ensure that export requirements and government standards of hygiene and quality are met. According to 2006 Census data, almost 75 per cent of primary product inspectors work in government organisations.

Over the last few years, combined education completions data and DIAC arrivals and departure records show that, on average, 13 qualified inspectors entered this labour market each year. Employers, however, are willing to accept workers with any qualification as long as they have experience in the industry, and it is common practice that quarantine officers attain certificate level qualifications after being trained on the job. This, together with possible interstate migration, may account for Census data recording an average increase of 60 persons to the workforce each year between 2001 and 2006. With only 35 per cent of vacancies filled this year, supply is nevertheless not meeting demand and the current State-wide shortage of primary products inspectors in Queensland is expected to persist over the coming year.

* Labour Force Survey data is averaged over four quarters.