Economic outlook for specific Victorian industries

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Report by Access Economics Pty Limited for

Skills Victoria

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Executive Summary

Skills Victoria commissioned Access Economics to provide an outlook for the Victorian labour market in 2010, and to incorporate into this report information gathered during consultations from the 16 Industry Training Advisory Bodies (ITABs) conducted in December 2009.

The past year has been a challenging one for most industries in Victoria, with the year starting amid the depths of the global financial crisis, but with that crisis generally easing through the year. At the start of 2010 some industries (or components of industries) continue to face low demand, while others are concerned about widespread skill shortages re-emerging.

What are the key issues which have affected ITABs over the past year and/or are seen as important over the coming years?

Through the report Access Economics attempts to split these into supply side issues (developments which affect the structure of the industry or how it produces goods and services) and demand side issues (developments which affect the quantum or type of goods and services demanded from the sector).

Key supply side issues

Key supply side issues affecting a number of industries include the following:

- The ongoing effects of **globalisation** which in some cases mean ongoing industry consolidation and rationalisation. The automotive industry is an area where significant global restructuring and consolidation is occurring, which in some cases affects local operations. In business services there is a continued trend towards greater outsourcing of services.
- Continuing fallout from the global financial crisis, including **the strength of the $A**, as the Australian economy performed far better through the crisis than most other developed economies. That means more intense pressure from imported products in some sectors. For example, Victorian forestry exports are now much less competitive, as are manufactured chemical products. However in the case of furnishing, the lower cost of imported components provided some significant opportunities for local businesses.
- A greater focus on **environment and sustainability issues**, with some sectors looking for greater opportunities to work with sustainable materials, along with greater consideration of environmental sustainability when designing new facilities. The movement towards lean manufacturing is also resulting in greater sustainability as companies look to reduce energy and water usage, and waste. For primary industries, increased variability of climatic conditions along with declining water security and quality are major issues which may fundamentally affect what the sector can produce.
- A range of **government policies** are influencing how industries perform and how training occurs. In transport and storage, proposed reforms to the graduated licensing system to meet the increased demand for drivers is seen as risking under-skilled drivers being licensed. For sport and recreation, additional training needs flow from duty of care obligations for the responsible service of alcohol, while further training needs also flow from encouraging a greater awareness of health and wellbeing in sport. The National

Broadband Network (NBN) rollout is likely to result in shortages of skilled telecommunications workers.

- Changes to the way businesses operate due to **technology**. A greater prevalence of online booking systems for retailers and the tourism sector mean skills and training are required in e-communications and web management skills. The culture and recreation sector has had to adapt to the introduction of digital television and radio, while companies in the metals and engineering sector have been investing significantly in production equipment upgrades and e-commerce to improve efficiency.
- The **ageing of Australia's population** remains a slow burner of an issue, but one which sees some sectors concerned about how they will obtain sufficient staff once baby boomers start to retire in greater numbers. The community services and health industry faces the additional consequence of increased demand for its services due to an ageing population.
- The availability of appropriate **infrastructure**, with the transport sector seeing frequent bottlenecks. Upgrades to the rail network and ports over time are likely to affect the mode of goods distribution.

Key demand side issues

Key demand side issues affecting a number of industries include the following:

- The ongoing **fallout from the global financial crisis (GFC)** remains a key short term cyclical issue affecting the demand for goods and services. Underlying consumer and business demand was weak at the start of 2009 but has improved, while government support worked the other way through 2009. The culture and recreation sector suffered from reduced discretionary spending, though government stimulus spending boosted spending on sporting and recreation infrastructure and benefited the home entertainment and digital media industries. In forestry the global financial crisis threatened the viability of a number of forestry investment vehicles, but as the economy improves a notable pickup in housing activity may pose problems at the other end of the sector. Plans for new mining activity suffered as commodity prices tumbled, but a rebound in commodity prices suggests mining activity and new investment again have some powerful support.
- A greater emphasis on **sustainability** which has brought about greater demand for green products. In business services and manufacturing environmental sustainability is required in day-to-day operations to remain competitive. This is leading to demand for skills and training in sustainable development, corporate social responsibility, triple bottom line, and environmental social governance. Minimum energy ratings for new homes are likely to drive change in the types of skills required in the furnishing sector, along with greater demand for electricians with 'green skills'.
- **Changing demographics with an ageing population** is changing the types of goods and services being demanded in some sectors. More rapid overall population growth of late and the corresponding growth in demand for new housing are expected to flow through to increased demand for Victorian timber products.
- More broadly, **social trends** are also producing changes in demand for some goods and services. Factors affecting the food processing industry include the increased prominence of healthy eating. There has been growth in product labelling information

such as the Daily Intake Guide labelling in the past three years, lifting information requirements and increased need for accountability in the food product design and production process.

Occupations in demand

Occupations in demand were generally specific to the coverage of the respective ITABs. However there was some commonality across areas, including:

- Mention was made by nearly all ITABs of the need for **emerging green occupations** which will be required in the future, including skills in measuring and reducing carbon pollution, skills to reduce waste (particularly in the manufacturing process), and skills to install energy saving devices.
- A rapidly growing and **ageing population** is seeing demand for certain occupations increase, from construction workers (to build the required housing) to aged care and health workers.

Some skills are still in critical shortage, despite a surge in training. Reasons for this include demand continuing to outstrip supply or people not entering the workforce in relevant occupations once they have completed training. The latter in some cases includes international students who go on to work in different areas after completing training and then gaining permanent residence.

The content and in some cases quality of training provided by registered training organisations (RTOs) was a common theme among consultations with ITABs. The ITABs reported that employers are often unwilling to undertake necessary training because there is a mismatch between the skills required and those provided within training courses. That is, the courses available do not contain all the elements required for their staff, or alternatively contains content that is not relevant. In some cases it was felt that the training did not include relevant updated technology and processes which are required in today's provision of services and products. Many ITABs are working with the RTOs to try to tailor courses specifically for individual employer's requirements, which is expected to result in increased uptake of training by many employers.

Prospects for job growth

The advice from ITABs on skill needs is couched within this document in the context of Access Economics' labour market forecasts. There are two sets of employment forecasts. The first are forecasts by broad Australian and New Zealand Standard Industry Classification (ANZSIC) industry, and are presented at the regional and metropolitan level, as well as for total Victoria. The forecasts for specific ITABs have been created by taking ABS ANZSIC employment data at a detailed level and aggregating these categories to broadly match the ITAB coverage. A detailed list of which ANZSIC classifications map to each ITAB can be found in Appendix A. Note that the sum of the ITAB employment numbers do not equal total employment for Victoria, as some classifications are not included in any ITAB.

Access Economics' forecasts of industry output and employment growth over time include elements of 'structural change', where some industries gain importance in their share of the economy's output or employment over time while others decline. Structural change is a continuous process across any economy. Structural change can result from both market influences (including technological advances and changes in consumer tastes/spending patterns and trade) and government-related influences (microeconomic reforms applying to different industries.

The key structural change for Australia as a whole over the past two decades has been the decline in the relative sizes of the manufacturing and agricultural sectors, and the considerable expansion in the share of output contributed by the services sector. Industries such as mining and construction have been more cyclical over time, responding to changes in global and domestic economic conditions respectively.

Those structural changes which are leading to the services sectors becoming a larger share of the economy will continue over time, as will productivity growth which tends to limit job gains in sectors such as farming, manufacturing and utilities.

Beyond those however there is a strong cyclical rebound underway in the Victorian labour market. The muted impact of the GFC in Australia saw the unemployment rate peak at a far lower level than had been feared, and the closing months of 2009 saw a significant number of new jobs created.

Access Economics' forecasts are for jobs growth in Victoria of 3.8% in 2010, followed by 3.3% growth in 2011 and 1.7% growth in 2012. The short term profile is notably stronger than allowed for in last year's Treasury mid-year update, which in large part reflects the very rapid pace of jobs growth towards the end of 2009, which notably exceeded expectations.

Access Economics believes that the state has emerged from the crisis in good shape and recovery looks set to continue. The greatest short term risk is to manufacturers who are still battling tough conditions, amid a return to a higher exchange rate and climbing interest rates. Strong population gains in Victoria will drive employment onward, as well as encouraging demand in the already healthier than average housing construction sector.

Beyond short term cyclical effects, the strongest prospects for jobs growth over the coming years remain in key community services sectors such as public administration and safety, education and training, and health care and social assistance.

Note that jobs growth is only one of the key elements which drives training demand. There is also training of new entrants who replace those who retire, as well as training associated with other job turnover as people switch between jobs.

Many occupations require an upgrading of skills over time for existing employees (including due to many of the broader economic and social factors identified in this document). Indeed, an upgrading of skills for current employees forms a key focus of the specific training recommendations provided by ITABs in this report.

Access Economics
30 April 2010

1 Introduction

Skills Victoria commissioned Access Economics to provide an outlook for the Victorian labour market in 2010, and to incorporate into this report information gathered during consultations from the 16 Industry Training Advisory Bodies (ITABs) conducted in December 2009.

This report presents Access Economics' views of the economic and employment outlook in 16 Victorian industries, with forecasts by industry and metro/regional split (at the one digit ANZSIC level) given in the following chapter. The discussion of the outlook for each industry which then follows takes into account the individual advice offered by the sixteen ITABs, and in some cases reproduces advice gathered from the ITABs (for example, the lists of qualification shortages have been provided by the ITABs).

More specifically, this report contains:

- a synthesis of Access Economics analysis of each industry with the ITAB advice (ITAB advice is presented under the heading "Summary of ITAB advice and consultation", while Access Economics' general view on the industry is contained under the heading "Industry outlook";
- the labour market outlook for 2010 and beyond for each industry;
- occupations in demand for 2010 for each industry;
- a brief assessment of the soundness of the advice provided by the ITABs on the skills and training needs of their industries where necessary.

In general the advice presented by each ITAB is indeed sound. Each ITAB appears to have consulted widely with industry participants (if not at the time of consultation, in the months following) so as to obtain guidance on specific issues faced and the expected outlook for the future.

Access Economics has, in the main, restricted comments about the specific ITAB advice to comments regarding the economic conditions facing each industry.

The discussion for each industry which follows starts by noting:

- **Coverage:** The occupations covered by each industry.
- **Specific industry and business cycle drivers:** the factors of particular importance to the industry and overall economic factors to watch out for.
- **Recent relative sectoral performance rating:** with past rates of job growth rated as Low, Below Average, Average, Above Average, or High. These ratings are compared to all other ITABs. It should be noted that total ITAB employment does not equal total Victorian employment.
- **Forecast relative sectoral performance rating:** presents Access Economics' assessment of future rates of job growth as Low, Below Average, Average, Above Average or High over 2010 and 2011. Again, these ratings are compared to all other ITABs.

2 Industry forecasts

Access Economics' forecasts for employment growth in Victoria are presented in this chapter. Forecasts are shown for employment by industry at the 1 digit ANZSIC level, firstly for Victoria as a whole and then separately for metropolitan and regional Victoria. A table showing the concordance between the ITAB industries and the matching Australian Bureau of Statistics (ABS) industry classification is shown in Appendix A.

Table 2.1 presents employment forecasts for the state from Access Economics and the Victorian Department of Treasury and Finance. The Victorian 2009-10 Budget Update released on 26 November 2009 shows a relatively modest recovery in employment was expected at that time. Access Economics' latest forecasts for jobs growth are somewhat stronger over 2009-10 and 2010-11. In part this is due to Access Economics' forecasts being more recent, taking into account the very rapid pace of jobs growth towards the end of 2009, which notably exceeded expectations.

Table 2.1: Total employment forecasts – Victoria

	2009-10	2010-11	2011-12	2012-13
Access Economics	2.3%	3.4%	2.1%	1.0%
Department of Treasury and Finance, Victoria	0.25%	1.25%	1.75%	1.75%

Source: Access Economics, Department of Treasury and Finance

Access Economics believes that the state has emerged from the crisis in good shape and recovery looks set to continue. The greatest short term risk is to manufacturers who are still battling tough conditions, amid a return to a higher exchange rate and climbing interest rates. Strong population gains in Victoria will drive employment onward, as well as encouraging demand in the already healthier than average housing construction sector.

The following tables show the employment level for each major industry in 2009, followed by expected employment growth over the next three years. The projections are shown for Victoria as a whole, and then split into metropolitan Victoria (Melbourne) and regional Victoria.

Overall, the manufacturing industry in Victoria employs the greatest number of people in total, including those working in the metals and engineering, TCF&L, food, beverage and tobacco, and wood pulp and paper sectors. The manufacturing industry is not expected to emerge from the downturn until 2011, due to a combination of factors such as reduced demand for output, commodity prices and exchange rates. Overall, we expect manufacturing employment to continue to decline over time (consistent with the historic trend) as technology helps deliver strong productivity gains.

On the other hand, financial and insurance services is expected to record a turnaround in fortunes in 2010 with the strongest rate of jobs growth expected, following job losses in 2008 and 2009. As one the hardest hit industries through the global financial crisis, jobs are seen as returning in line with improving business confidence. Employment in the mining industry may improve in the short term on the back of promising oil and gas prospects as commodity prices rebound. Beyond short term cyclical effects in 2010, the strongest prospects for jobs growth over the coming years remain in key community services sector such as public administration and safety, education and training, and health care and social assistance.

Table 2.2: Employment forecasts by industry – Victoria

Industry	2009 level	2010 % change	2011 % change	2012 % change
Agriculture, Forestry and Fishing	77,357	4.0	1.5	-2.2
Mining	10,230	11.8	1.2	-2.6
Manufacturing	272,312	-0.1	0.6	-1.2
Electricity, Gas, Water and Waste Services	27,797	-3.2	4.1	2.7
Construction	201,210	1.4	4.0	1.4
Wholesale Trade	103,115	2.3	1.8	0.7
Retail Trade	260,569	5.4	2.3	1.1
Accommodation and Food Services	157,200	3.7	4.0	2.8
Transport, Postal and Warehousing	127,075	-0.2	3.8	1.9
Information Media and Telecommunications	59,085	1.3	1.8	0.8
Financial and Insurance Services	91,989	13.6	2.7	1.7
Rental, Hiring and Real Estate Services	34,044	0.8	4.6	1.9
Professional, Scientific and Technical Services	185,617	7.6	4.0	2.6
Administrative and Support Services	83,380	8.5	3.7	2.4
Public Administration and Safety	108,254	-1.2	4.8	3.1
Education and Training	186,424	5.3	4.5	3.1
Health Care and Social Assistance	264,788	6.4	4.7	3.3
Arts and Recreation Services	57,269	4.1	4.1	1.9
Other Services	93,792	1.0	3.1	1.8
Blue collar	731,212	2.6	3.0	0.5
White collar	1,670,302	4.3	3.4	2.1
Total	2,401,514	3.8	3.3	1.7

Source: Access Economics, ABS

Employment forecasts for metropolitan and regional Victoria are provided in Table 2.3 and Table 2.4. On average, regional Victoria represents a quarter of total employment.

Prospects for jobs growth remain stronger for Melbourne than they do for regional Victoria as a whole as migration and business consolidation favour the capital. Melbourne receives most of the benefit of expansion of business services, while ongoing infrastructure development and population growth is also stronger in the capital.

Table 2.3: Employment forecasts by industry – metropolitan Victoria

Industry	2009 level	2010 % change	2011 % change	2012 % change
Agriculture, Forestry and Fishing	11,991	5.8	1.7	-1.6
Mining	5,180	11.7	1.7	-2.5
Manufacturing	202,692	0.4	0.6	-1.0
Electricity, Gas, Water and Waste Services	16,523	-1.7	3.4	3.0
Construction	148,504	2.1	3.8	1.6
Wholesale Trade	85,806	3.0	1.6	0.8
Retail Trade	189,165	5.4	2.7	1.2
Accommodation and Food Services	116,316	3.5	4.5	2.9
Transport, Postal and Warehousing	98,698	-0.2	4.2	2.1
Information Media and Telecommunications	48,518	1.0	2.2	0.8
Financial and Insurance Services	81,454	13.6	2.8	1.7
Rental, Hiring and Real Estate Services	27,397	0.9	4.8	2.0
Professional, Scientific and Technical Services	159,121	7.9	3.9	2.7
Administrative and Support Services	65,955	8.9	3.7	2.5
Public Administration and Safety	80,586	-0.9	4.9	3.3
Education and Training	139,697	5.0	4.9	3.1
Health Care and Social Assistance	189,761	6.1	5.3	3.4
Arts and Recreation Services	44,750	5.0	3.9	2.1
Other Services	69,657	0.2	4.0	1.9
Blue collar	482,290	3.3	3.1	0.9
White collar	1,299,492	4.3	3.6	2.2
Total	1,781,782	4.0	3.5	1.9

Source: Access Economics, ABS

Table 2.4: Employment forecasts by industry – regional Victoria

Industry	2009 level	2010 % change	2011 % change	2012 % change
Agriculture, Forestry and Fishing	65,366	3.6	1.5	-2.3
Mining	5,049	12.0	0.7	-2.7
Manufacturing	69,620	-1.5	0.4	-1.8
Electricity, Gas, Water and Waste Services	11,273	-5.4	5.2	2.3
Construction	52,705	-0.8	4.5	0.8
Wholesale Trade	17,308	-1.1	3.0	-0.1
Retail Trade	71,403	5.4	1.4	0.8
Accommodation and Food Services	40,883	4.2	2.7	2.4
Transport, Postal and Warehousing	28,376	0.1	2.4	1.5
Information Media and Telecommunications	10,566	2.4	0.0	0.4
Financial and Insurance Services	10,534	13.6	1.6	1.3
Rental, Hiring and Real Estate Services	6,647	0.5	3.8	1.4
Professional, Scientific and Technical Services	26,495	5.8	4.3	2.1
Administrative and Support Services	17,425	6.7	3.8	1.8
Public Administration and Safety	27,667	-1.9	4.3	2.7
Education and Training	46,727	6.3	3.1	2.9
Health Care and Social Assistance	75,027	7.3	3.3	3.1
Arts and Recreation Services	12,519	1.1	5.1	1.1
Other Services	24,134	3.1	0.8	1.8
Blue collar	248,922	1.2	2.8	-0.2
White collar	370,810	4.4	2.3	1.8
Total	619,731	3.1	2.5	1.0

Source: Access Economics, ABS

3 Building and Construction

Coverage: Civil Operations, General Construction, Plumbing Services, Shared – Building and Construction.

Specific industry and business cycle drivers: Resource prices, demographics (particularly population growth among those aged 18-30), interest rates (particularly for housing construction), business investment.

Recent performance rating: Average

Expected relative sectoral performance rating: Average

Summary of ITAB advice and consultation

The Building Industry Consultative Council Industry Advisory Body (BICCIAB) identified the key change drivers for their industry to be:

- Government stimulus in response to the GFC (demand side)
- Sustainability (demand side)
- Government regulation (supply side)
- Ageing workforce and skills shortage (supply side).
- Skills shortages (demand side)

Government stimulus, in the form of major infrastructure additions to schools (through the Building the Education Revolution scheme) combined with the solar hot water and insulation installation programs, bolstered the industry and picked up the slack created by reduced private investment during the downturn. Much of the rebuilding after the 2009 Black Saturday bushfires has yet to occur, due to the need for permits and site preparation. Construction is expected to begin to gather pace this year, creating substantial demand in that region. Major infrastructure such as the Wonthaggi desalination plant is anticipated to cause skill shortages with relocation of workers to the Gippsland region. It is also anticipated that the Gorgon Gas project in WA will result in a drain on labour from Victoria and other states during the construction process.

Sustainability is one of the key drivers of change in the industry. The plumbing industry plans to make substantial water and energy savings through its PlumbSmarter project and the demand for both skills and training in efficient practices looks set to increase. The emissions trading scheme will affect the production and price of the inputs into the building and construction sectors, such as glass, bricks, concrete and metals. In response to financial and compliance incentives, employers will seek skills which reduce waste and can provide savings for the business.

In addressing **skills shortages**, enhanced by the aging workforce, skilled migration has historically been able to go someway to meeting highly skilled labour gaps, though temporary workers are not seen as a long term solution. Schemes which encourage training and boost flexibility are instead seen as the key. For instance, a recent Council of Australian Government (COAG) initiative has provided the impetus for the development of a national licensing system for plumbers which should allow employers to recognise their skills across states, generating more flexibility and opportunities for plumbers. Skills Victoria has provided project funding to implement pre-vocational training for civil construction and female plumbers respectively in order to attract and skill workers for the industry.

It is estimated that 40% of people working on a site have no accredited training as there is little incentive to acquire the formal qualifications[1]. A range of training requirements in the industry have been identified by BICCIAB. An industry White Card for Occupational Health and Safety (OH&S) has been made compulsory, and has led to a surge in OH&S training. This new required training has highlighted an additional training problem for the industry – literacy. In order to obtain a White Card, reading and writing skills are required. While numeracy and literacy are in the pre-apprenticeship program it is becoming clear that further training is required to help people already working in the industry obtain a White Card.

BICCIAB has also reported that changes to the TAFE system affect the training and skill acquisition of workers in this industry. Increased funding is anticipated to boost training places at Victorian TAFEs, but up front enrolment fees required of the student or employer may result in less demand for training. There remains a critical need for appropriate training facilities in construction in the State, which would then require additional teachers. The recent pay increase for TAFE teachers seems to have helped attract and retain teachers in the system.

The plumbing and fire protection sectors have undergone recent changes to **regulation** and licensing. Further training on safe insulation installation practices are likely to be required, in the wake of the Federal Governments ceiling installation scheme, while a $40 million package has recently been announced to help the industry keep employees on until a new installation scheme is announced in the new financial year, or to help them find other employment. The home insulation project was a disaster due to the fact that non tradespeople were employed and given very little training or a skill set with a very narrow skill base. This may have been avoided if adequate training was provided to all installers.

BICCIAB has identified the **ageing population** as a major change driver – for example the plumbing industry estimates that more than 5,000 plumbers will retire from the industry in the next five years. If people are not encouraged to enter into the profession, then this will '*without doubt place the greening of existing and new buildings in jeopardy*'[2]. BICCIAB has identified significant skill shortages in the industry, attributed to the ageing workforce and difficulties in recruiting workers into the industry.

Industry outlook

Nationally, the construction sector faced a downturn, although much shallower than the last recession, which is a good outcome given developments in construction sectors in the rest of the developed world. Tight credit conditions remain a notable constraint on the pace of commercial construction in Australia, and this, combined with rising office vacancies and retail sales off their mid-2009 peaks, sees commercial construction continue to ease back from the

[1] ABS Census, 2006.

[2] BICCIAB stakeholder questionnaire response, 2009.

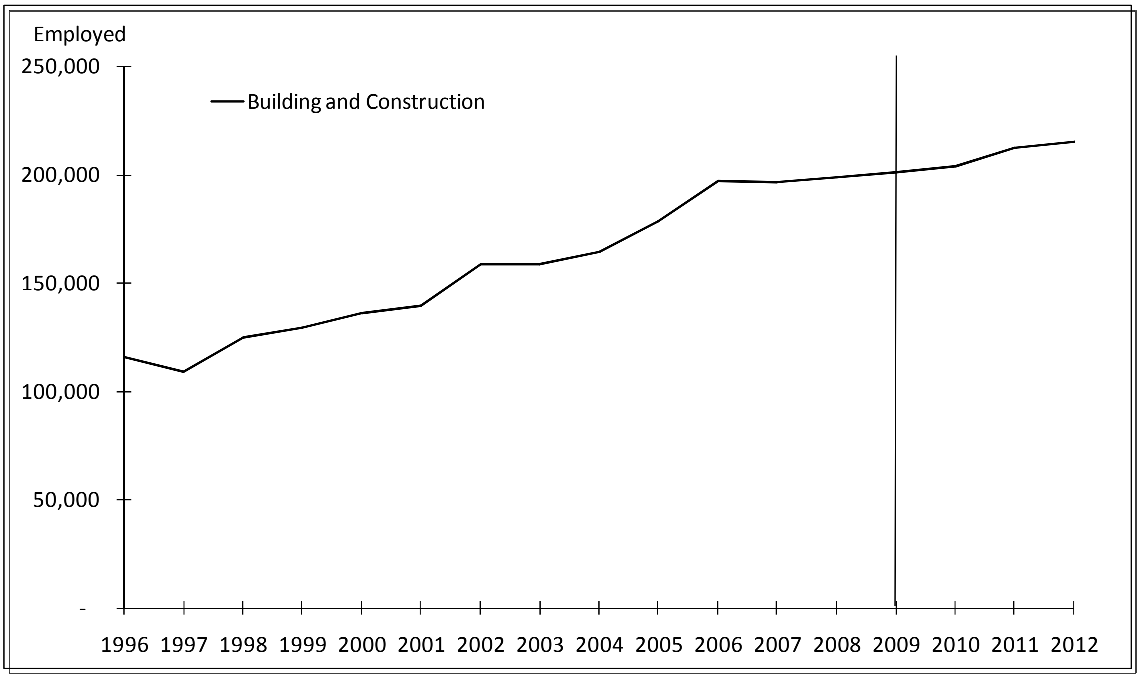
highs seen in late 2008. However, a little perspective here is important: commercial construction might have fallen sharply as a share of Australia's economy, but that has merely seen it fall back to levels last seen in 2005, leaving it not too far away from its longer term average. Access Economics expects some further falls in commercial construction in the short term, but the sector is projected to level off in the first half of 2010, and begin a modest recovery in 2011. The outlook for engineering construction is rather better. It is only just off its record high as a share of Australia's economy, and remains triple the levels it averaged through the 1980s and 1990s. Further falls are likely in the short term, but will again pick up in 2011 (and nationally shortages will be seen as the Gorgon project gathers pace and encourages more people to move west).

However, Access Economics forecasts 4% jobs growth in the Victorian construction sector in 2011 will be driven more by housing construction, which should stabilise in 2010, and accelerate in 2011. In the past five years the number of new homes being built has been steadily falling away at the same time that the number of new homes which need to be built has been steadily on the rise. That gap is now starting to reach critical levels. It initially drove rental vacancy rates low, and is now starting to turn around the trend seen for many decades of falling numbers of people in the average home. This is unlikely to last, and a notable upswing in the pace of national housing construction is forecast through 2011. The story will perhaps be more muted in Victoria, as the state had relatively less pent up demand for housing than some other regions. However population growth in the state remains very strong, which will aid a housing construction recovery.

Indeed the Performance of Construction Index (PCI) for January 2010 indicates that nationally, the industry has recorded its strongest performance since January 2008.

Major construction projects to boost Melbourne's transport network will create jobs in the metropolitan region. Specialist tunnelling professionals will be required to work on a network of underground road and rail projects. Three projects are anticipated to start in Victoria in the next six months; the M80, the Wonthaggi Desalination plant and Peninsula Link, which in combination, it is estimated by the industry, will require more engineering staff than are currently in the state. Combined with the demand for engineers in Western Australia's oil and gas sectors, BICCIAB believes that a serious shortage of engineering staff will re-emerge.

Chart 3.1: Total employment in the construction industry – Victoria



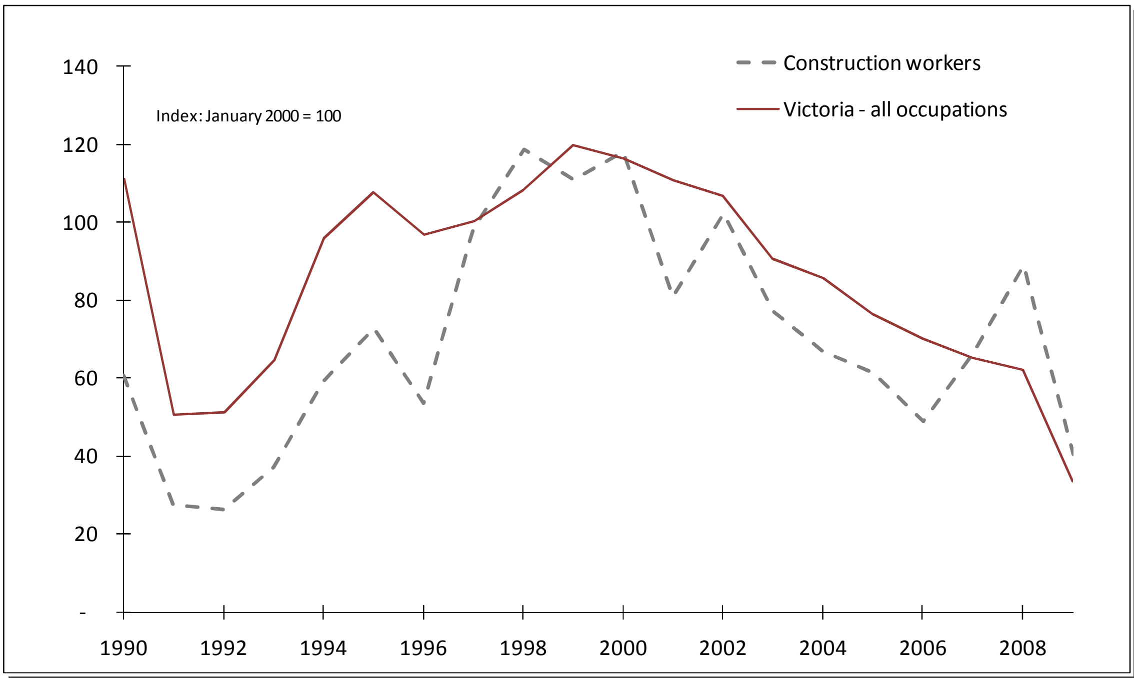
Source: Access Economics, ABS

Chart 3.1 shows employment forecasts for the construction industry[3] in Victoria. Employment growth slowed in 2009 during the downturn, and is expected to remain stable over 2010. After that time however, a lift in employment is expected, as housing construction and many major infrastructure projects gather pace.

Chart 3.2 shows that vacancies for construction trades leapt in 2007 and 2008, reflecting the skills shortage created in large part by the mining boom. This occurred at the same time that the index for Victoria as a whole was decreasing. However the index fell sharply in 2009, reaching its lowest point since 1993. Vacancies should increase throughout 2010 though, as the index troughed in June 2009, and has been rising fairly steadily since then.

[3] The construction industry for the purposes of employment forecasts comprises numerous ANZSIC categories, the largest of which are Building installation services and building completion services. For a full list, please see Appendix A.

Chart 3.2: Index of job vacancies, construction trades – Victoria



Source: DEEWR skilled vacancy index, Access Economics

Occupations in demand

The difference in timing on the expected cycles in housing on the one hand and engineering and commercial work on the other suggests that 2010 demand may be stronger for those occupations more closely linked with housing construction (including occupations such as bricklayers, roofers, tilers, labourers and carpenters).

Housing starts have already begun to increase.

While there are a couple of large engineering and commercial projects underway in the State, the overall demand for construction managers, architects, surveyors, engineers and the like is expected to be weaker in 2010. That being said, it is likely that these occupations will experience increasing demand over the next couple of years as the renewed commodity boom fires up the resources sector once more.

That said, there is likely to be a degree of overlap between the two construction sectors – for example commercial construction employees involved in completion and fit-out services such as plasterers, painters and tilers are likely to have more opportunity to switch across to the housing sector, whereas engineers and architects are likely to find the switch more difficult.

Critical skills shortages

BICCIAB have advised that the following occupations are experiencing a critical skills shortage (occupations denoted with a * are also listed on the National Skill Needs List (January 2010)):

- Bricklayers*
- Carpenters*

- Drainers*
- Estimators
- Fibrous Plasters*
- Fire Systems Design
- Gasfitters*
- General Plumbers*
- Mechanical Services and air-conditioning *
- Painter and Decorator*
- Roof Plumber*
- Roof Slater and Tiler*
- Site Forman
- Sprinkler pipe fitters
- Solid Plaster*
- Surveyors
- Stonemason*
- Wall and Floor Tiler*
- Plant Operations
- Bridge Builders
- Road Construction and Maintenance
- Pipelaying
- Engineers
- Paraprofessionals

Qualifications required

The following qualifications are required for the occupations currently experiencing a critical skills shortage:

Bricklayers: Certificate III in general construction (bricklaying/blocklaying)

Estimators: Certificate III plus a Certificate IV in Building and Construction (estimating)

Fibrous Plasters: Certificate III in Wall and Ceiling Lining

Fire systems design: Certificate IV and Diploma in plumbing and services

Mechanical services, general plumbers and air-conditioning: Certificate III in plumbing

Painter and Decorator: Certificate III in Painting and Decorating

Roof Slater and Tiler: Certificate III in Roof Tiling

Site Foreman: Certificate III plus a Certificate IV in Building and Construction (site management)

Solid Plaster: Certificate III in Solid Plastering

Surveyors: Diploma of Building Surveying

Wall and Floor Tiler: Certificate III in Wall and Floor Tiling)

Plant Operations: Certificate III in Civil Construction Plant operations

Bridge Builders: Certificate III in Bridge Construction and Maintenance

Road Construction and Maintenance: Certificate III Road Construction and Maintenance

Pipelaying: Certificate III in Pipe Laying

Engineers and paraprofessionals: Diploma

Emerging green skills

BICCIAB have identified the following emerging green skills which will be increasingly in demand, and which will require additional training:

- Trenchless Technology
- Geothermal science
- Basic Design in green technology
- Fire system design
- Home insulation
- Energy rating of homes
- Gas appliance Servicing Type A & B

Appendix A: Industry concordance

Table A.1: Concordance between ITAB industry structure and ABS ANZSIC classification

ITAB Industry	ANZSIC Industry
Automotive	Motor Vehicle and Motor Vehicle Part Manufacturing
	Other Transport Equipment Manufacturing
	Motor Vehicle and Motor Vehicle Parts Wholesaling
	Motor Vehicle Retailing
	Motor Vehicle Parts and Tyre Retailing
	Automotive Repair and Maintenance
Building and construction	
	Residential Building Construction
	Non-Residential Building Construction
	Heavy and Civil Engineering Construction
	Land Development and Site Preparation Services
	Building Structure Services
	Building Installation Services
	Building Completion Services
	Other Construction Services
Business services	
	Waste Collection Services
	Waste Treatment, Disposal and Remediation Services
	Central Banking
	Depository Financial Intermediation
	Non-Depository Financing
	Financial Asset Investing
	Life Insurance
	Health and General Insurance
	Superannuation Funds
	Auxiliary Finance and Investment Services
	Auxiliary Insurance Services
	Motor Vehicle and Transport Equipment Rental and Hiring
	Farm Animal and Bloodstock Leasing
	Other Goods and Equipment Rental and Hiring
	Non-Financial Intangible Assets (Except Copyrights) Leasing
	Property Operators

ITAB Industry	ANZSIC Industry
	Real Estate Services
	Scientific Research Services
	Legal and Accounting Services
	Advertising Services
	Market Research and Statistical Services
	Management and Related Consulting Services
	Other Professional, Scientific and Technical Services
	Computer System Design and Related Services
	Employment Services
	Other Administrative Services
	Building Cleaning, Pest Control and Gardening Services
	Packaging Services
Community services & health	
	Hospitals
	Medical Services
	Pathology and Diagnostic Imaging Services
	Allied Health Services
	Other Health Care Services
	Residential Care Services
	Child Care Services
	Other Social Assistance Services
Cultural & recreation	
	Motion Picture and Video Activities
	Sound Recording and Music Publishing
	Radio Broadcasting
	Television Broadcasting
	Libraries and Archives
	Museum Operation
	Creative and Performing Arts Activities
	Sports and Physical Recreation Activities
	Amusement and Other Recreation Activities
Electro-technology & communication	
	Printing and Printing Support Services
	Reproduction of Recorded Media
	Electricity Generation
	Electricity Transmission

ITAB Industry	ANZSIC Industry
	Electricity Distribution
	On Selling Electricity and Electricity Market Operation
	Gas Supply
	Newspaper, Periodical, Book and Directory Publishing
	Software Publishing
	Internet Publishing and Broadcasting
	Telecommunications Services
	Internet Service Providers and Web Search Portals
	Data Processing, Web Hosting and Electronic Information Storage Services
	Other Information Services
Food	
	Food, Beverage and Tobacco Product Manufacturing
Forestry	
	Forestry and Logging
	Forestry Support Services
	Log Sawmilling and Timber Dressing
	Other Wood Product Manufacturing
	Pulp, Paper and Paperboard Manufacturing
	Converted Paper Product Manufacturing
Furniture	
	Furniture Manufacturing
Manufacturing and engineering	
	Mining
	Other Manufacturing
	Petroleum, Coal, Chemical, Polymer and Rubber Product Manufacturing
	Non-Metallic Mineral Product Manufacturing
	Primary Metal and Fabricated Metal Product Manufacturing
	Professional and Scientific Equipment Manufacturing
	Computer and Electronic Equipment Manufacturing
	Electrical Equipment Manufacturing
	Domestic Appliance Manufacturing
	Pump, Compressor, Heating and Ventilation Equipment
	Specialised Machinery and Equipment Manufacturing
	Other Machinery and Equipment Manufacturing
	Architectural, Engineering and Technical Services
	Machinery and Equipment Repair and Maintenance

ITAB Industry	ANZSIC Industry
Primary industry	
	Nursery and Floriculture Production
	Mushroom and Vegetable Growing
	Fruit and Tree Nut Growing
	Sheep, Beef Cattle and Grain Farming
	Other Crop Growing
	Dairy Cattle Farming
	Poultry Farming
	Deer Farming
	Other Livestock Farming
	Aquaculture
	Fishing
	Hunting and Trapping
	Agriculture and Fishing Support Services
	Parks and Gardens Operations
	Veterinary Services
Racing	
	Horse and Dog Racing Activities
Service Industries	
	Agricultural Product Wholesaling
	Mineral, Metal and Chemical Wholesaling
	Timber and Hardware Goods Wholesaling
	Specialised Industrial Machinery and Equipment Wholesaling
	Other Machinery and Equipment Wholesaling
	Grocery, Liquor and Tobacco Product Wholesaling
	Textile, Clothing and Footwear Wholesaling
	Pharmaceutical and Toiletry Goods Wholesaling
	Furniture, Floor Covering and Other Goods Wholesaling
	Commission-Based Wholesaling
	Motor Vehicle Parts and Tyre Retailing
	Fuel Retailing
	Supermarket and Grocery Stores
	Specialised Food Retailing
	Furniture, Floor Coverings, Houseware and Textile Goods Retailing
	Electrical and Electronic Goods Retailing
	Hardware, Building and Garden Supplies Retailing

ITAB Industry	ANZSIC Industry
	Recreational Goods Retailing
	Clothing, Footwear and Personal Accessory Retailing
	Department Stores
	Pharmaceutical and Other Store-Based Retailing
	Non-Store Retailing
	Retail Commission-Based Buying and/or Selling
	Accommodation and Food Services
	Travel Agency and Tour Arrangement Services
	Gambling Activities
	Personal Care Services
	Funeral, Crematorium and Cemetery Services
	Other Personal Services
Textile, clothing & footwear	
	Textile Manufacturing
	Leather Tanning, Fur Dressing and Leather Product Manufacturing
	Textile Product Manufacturing
	Knitted Product Manufacturing
	Clothing and Footwear Manufacturing
Transport, distribution & logistics	
	Transport, Postal and Warehousing
Water	
	Water Supply, Sewerage and Drainage Services

Appendix B: Industry consultation

This appendix has been provided in confidence to Skills Victoria.

Appendix C: Australian Apprenticeships – National Skills Needs List, January 2010

This regularly updated list includes trades which are experiencing persistent skills shortage on a national level, based on DEEWR labour market research. The Federal Government offers incentives for employers to take on apprentices in these fields, as well as benefits for the apprentices themselves. These include the Support for Adult Australian Apprentices payment, Tools For Your Trade payment, Rural and Regional Skills Shortage incentive and the Securing Australian Apprenticeships initiative.

The trades included on the January 2010 list are shown in the table below, grouped by each ITAB.

ITAB	Trades needed
Automotive	Automotive electrician, Panel beater, Motor mechanic, Vehicle body maker, Vehicle painter, Vehicle trimmer
Building and construction	Bricklayer, Carpenter, Carpenter and joiner, Drainer, Fibrous plasterer, Gasfitter, General plumber, Mechanical services and air-conditioning plumber, Painter and decorator, Roof plumber, Roof slater and tiler, Solid plasterer, Stonemason, Wall and floor tiler
Business services	n/a
Community services and health	n/a
Culture and rec	n/a
Electro-tech and comms	Binder and finisher, Communications Linesperson, Electrical powerline tradesperson, Electrician (Special class), Electronic equipment tradesperson, General Communications Tradesperson, Printing Machinist, Screen printer
Food processing	Baker, Butcher (including smallgoods producers), Pastry cook
Forestry	Wood machinist (A-grade)
Furnishing	Binder and finisher, Fitter, Floor finisher, Furniture finisher, Furniture upholsterer, Landscape Gardener, Painter and decorator, Picture framer
Metals and engineering	Aircraft maintenance engineer (Avionics), Aircraft maintenance engineer (Mechanical), Boat builder and repairer, Electronic equipment tradesperson, Fitter, Flat glass tradesperson, Locksmith, Metal fabricator, Optical mechanic, Pressure welder, Refrigeration and air-conditioning mechanic, Sheetmetal worker (First class), Toolmaker, Welder (First class)
Primary	Tree surgeon
Racing	n/a
TCF	n/a
Water	n/a
Wholesale/retail/tourism/hosp	Cook, Hairdresser

Source: *www.australianapprenticeships.gov.au*