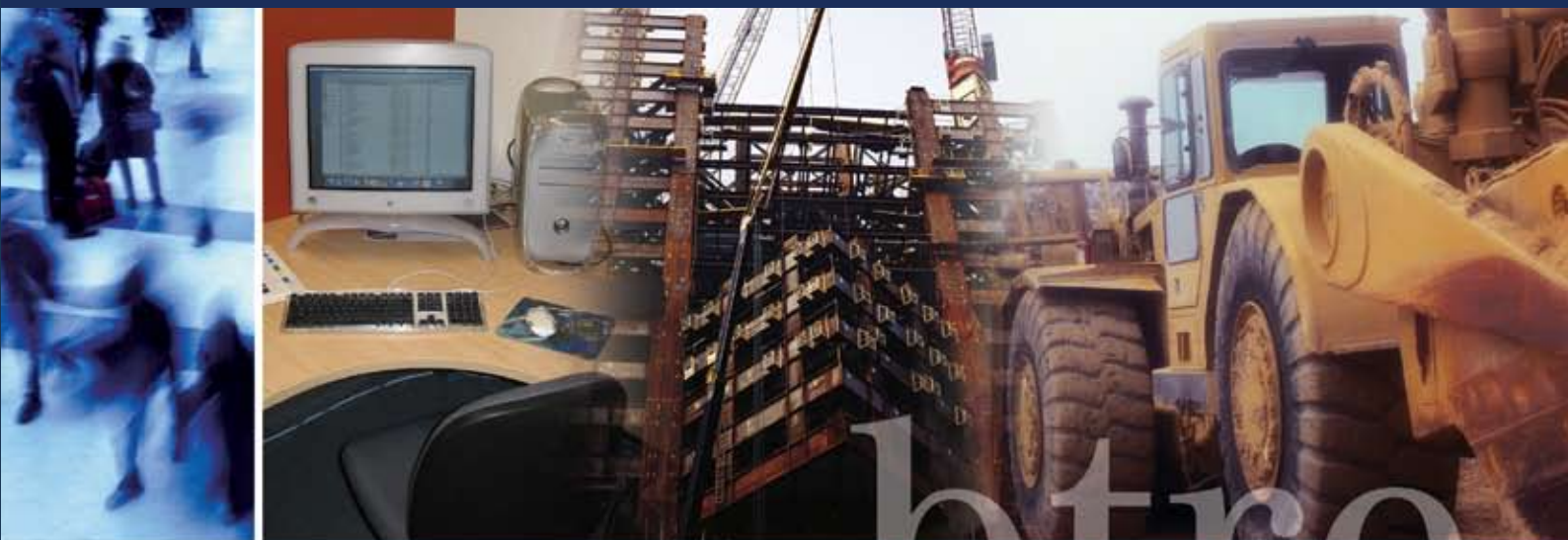




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Skill Shortages in Australia's Regions

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Skill Shortages in Australia's Regions

WORKING PAPER

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FOREWORD

This working paper was prepared by the Bureau of Transport and Regional Economics (BTRE) at the request of the Standing Committee on Regional Development (SCORD) National Regional Research Network (NRRN). The NRRN is a network of State, Territory and Australian Government representatives formed for the purpose of national information sharing on regional research issues.

The paper provides a review of the literature on skill shortages from a locational perspective. This has been achieved with the assistance of the Area Consultative Committee Network, who have been willing to supply the BTRE with their reports and studies. The paper also analyses the key drivers and responses to skill shortages in Australia, and should provide regional areas with some guidance on how to approach skill shortages.

The research was undertaken by Shelby Canterford of the BTRE's regional research team, under the supervision of Leanne Johnson and Geoff Frost.

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July 2006

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While BTRE is grateful for the assistance provided by these organisations, the views expressed in this working paper are those of the BTRE and should not be attributed to any other organisation.

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EXECUTIVE SUMMARY

Skill shortages are commonly reported across Australia and overseas. While the effect of skill shortages on the economy is not well defined, in many sectors it means decreased output and the delay or cancellation of new projects. Skill shortages are most common at times of high economic growth and low unemployment. However, they can occur in regions of high unemployment where there is a mismatch between the skills available and the skills demanded.

There are a number of perspectives of what is a skill shortage. This paper uses the definition of a skill shortage from Shah and Burke (2003):

“A skill shortage exists when the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available and willing to work under existing market conditions.”

There are two other related concepts that often get confused with skill shortages. The first is a recruitment difficulty, where a business finds it difficult to fill a vacancy, even though there is not a broader skill shortage. This may be due to the characteristics of the business, the location or the skill set required for the position. The second is known as a skill gap. Skill gaps occur when existing staff do not have the skills for the required positions.

There is no detailed data about the geographic distribution of skill shortages. The most detailed information available is produced by the Department of Employment and Workplace Relations (DEWR). DEWR produces its *Skills in Demand* list by surveying businesses that have advertised vacancies and combining the results with labour market and economic indicators.

The availability of data is critical to being able to effectively respond to skill shortages. An outcome of the February 2006 Council of Australian Governments' (COAG) meeting was that governments agree to share labour market information to identify and understand the location and extent of skill shortages (COAG 2006).

Drivers of skill shortages

There are a number of causes of skill shortages, and the relevance of these causes differs across regions. There are two main perspectives of skill shortages taken by different groups. This first is an industry or national focus. This perspective is common amongst government agencies and industry groups. The second is a location focus. Understanding the industry drivers is important for treating large scale skill shortages, but regions also need to consider the local drivers to skill shortages to find effective local solutions.

The BTRE model of the drivers of skill shortages is drawn from previous studies, and from a number of reports and case studies supplied by the Area Consultative Committee (ACC) network. There are two levels of drivers of skill shortages. The first level represents the immediate drivers known as proximal causes. These drivers are:

- Training—the number of people entering training
- Wastage—the number of people trained in a skill, but are not working in that occupation

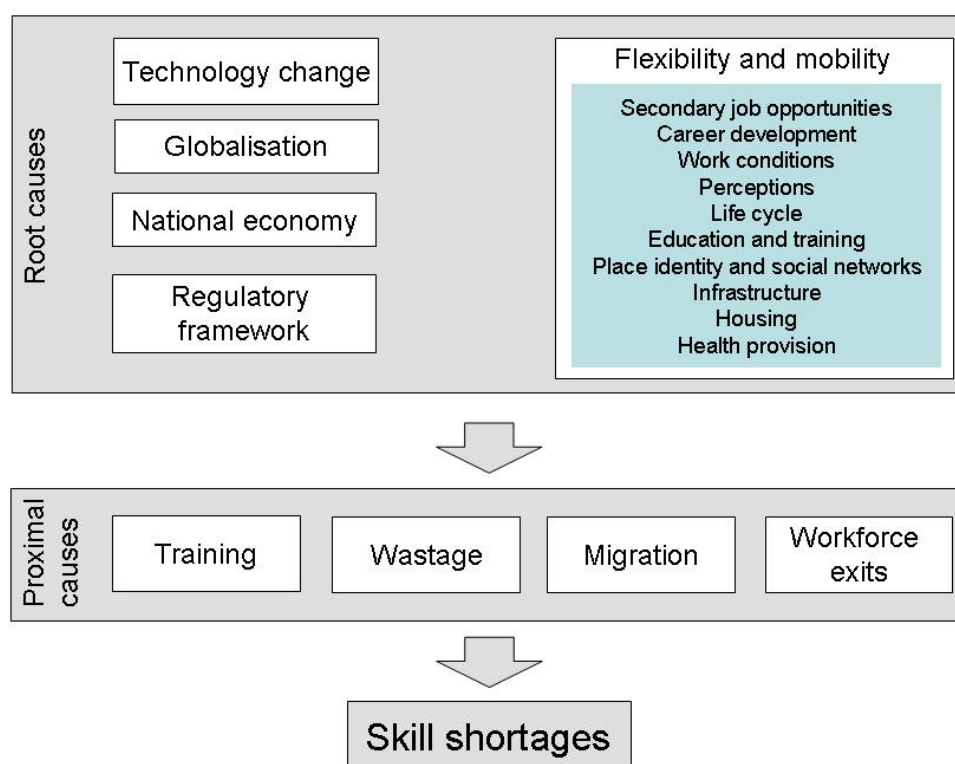
- Migration—the impacts of the global labour market
- Workforce exits—the number of people permanently leaving the workforce.

These drivers are easy to measure, so are good indicators of skill shortages. However, an understanding of the underlying or root causes of skill shortages is necessary to effectively treat the problem. The root causes fall into two broad categories. The first category contains drivers of a more macroeconomic nature:

- Technology change
- Globalisation
- National economy
- Regulatory framework.

The second category relates to the flexibility and mobility of workers. This category has a number of interacting drivers that all contribute to the choices that workers make in supplying their labour. It is this latter group that is most relevant when attempting to treat skill shortages in a particular area, as local employers and regional groups can have an influence on these drivers.

FIGURE 1 DRIVERS OF SKILL SHORTAGES



Source: BTRE analysis

Case Studies Summary

Many regions are experiencing difficulties in recruiting and retaining professionals. Health professionals are in particular demand, but teachers and other professionals are also scarce. Tradespersons are also in demand, with the type of trade required often dependant on the main industries operating within the region. Some occupations are in

shortage throughout Australia, while other skill shortages are specific to particular geographic areas.

A lack of experience or a lack of the soft skills (presentation, communication and work ethic) is most often cited as the main reason why applicants were not suitable for vacant positions.

Industry wide shortages have a variety of causes. The work conditions are considered inadequate in many occupations. However, it is often not the level of pay that is of most concern. Instead it is other conditions such as flexible hours and management practices that most influence skilled workers decisions to stay in an industry. Other causes of shortages include a poor perception of the industry and a lack of appropriate training.

Programmes and responses

There are several responses to skill shortages already in place. Immigration is seen as a solution to many regional skill shortages. However, the labour force outcomes of skilled migrants are mixed. Encouraging the migration of domestic workers can reduce some local shortages, but “poaching” workers from one region may create shortages elsewhere.

Governments are often asked for more publicly funded training as a response to skill shortages. This kind of training will not help industries with significant wastage. In other industries, there is a mismatch between the training provided and that demanded, so industry led training is often more effective.

Conclusion

Skill shortages are a common problem across Australia. They may be occupation wide, such as in nursing, or they may only occur in certain geographic areas. Skill shortages are most common in times of strong economic growth and low unemployment, but skill shortages can also occur at times of high unemployment.

The causes of skill shortages are complex. There are many drivers that could be causing a shortage in a region or occupation. No two situations are alike, and what works in one region or occupation may not work in another. Each shortage needs to be assessed individually, and treatments need to be tailored to the situation.

One reason labour markets do not adjust quickly to resolve skill shortages is the wage system. Wages are generally not flexible enough to adjust the labour supply with sufficient speed. Part of this inflexibility comes from the wage setting system and regulatory framework, where sub-specialisations in demand are not paid more than those in surplus. The other is the reluctance of employers to raise the wages of skilled workers in demand.

The popular belief is that more publicly funded training is required to alleviate skill shortages. Publicly funded training may not always be an effective solution and is unlikely to match future demand and supply. The exception is for skills that have a long training time and where there is not a pool of workers not using their skills. In many cases, industry must take the lead on training and development.

Working conditions and wages also play an important role in skill shortages. In occupations where there are poor conditions or wages, the problem may not be in the supply of labour, but rather in the willingness of labour to take up positions. Governments as employers, particularly in the areas of health and education, need to take a leading role to establish appropriate conditions.

Timely and accurate national information capable of being disaggregated to a regional scale is an important element when responding to skill shortages. This information

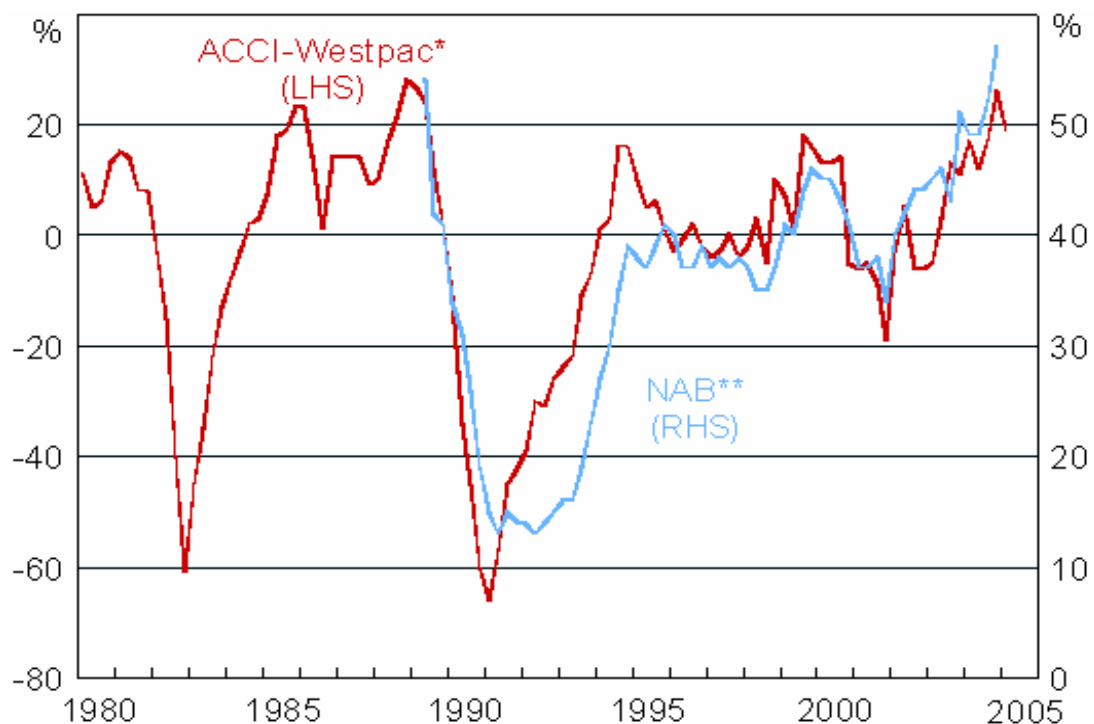
needs to be available on a geographic basis so that the location of shortages can be pinpointed. At the February 2006 COAG meeting, governments agreed to establish new sharing arrangements for labour market information to enable appropriate responses to skill shortages (COAG 2006).

CHAPTER 1 INTRODUCTION

Skill shortages are a well documented problem both in Australia and overseas. For many organisations, the impact of skill shortages is a reduction in the level of production, and a reduced ability to meet demand (Shah & Burke 2003; Richardson 2005).

The recent rise in skill shortages has been reported in many sectors, though the extent is difficult to quantify. The Department of Employment and Workplace Relations' (DEWR) Skilled Vacancies Index (DEWR 2006b) shows no significant change in the number of advertised vacancies since the mid-nineties. However, a number of industry surveys show an increase in skill shortages in recent years. Figure 1.1 shows the results of two such surveys. Skill shortages have been prevalent in the past, decreasing dramatically at times of recession. Both surveys show a definite increase in shortages since 2002.

FIGURE 1.1 DIFFICULTY FINDING SUITABLE LABOUR – TWO INDUSTRY SURVEYS



Notes: * Net balance of firms finding it harder to get labour than three months ago

** Per cent of firms indicating that availability of suitable labour is a constraint on output

Sources: Australian Chamber of Commerce and Industry – Westpac survey and the National Australia Bank (NAB). Reprinted from Edey (2005).

Skill shortages can occur at the same time as high unemployment, especially when there is a mismatch between the available and the demanded skills (McKenzie 2003). However, skill shortages are most common at times of high economic growth and low unemployment (Shah & Burke 2003).

Even though skill shortages are often discussed, the problem itself is not well defined (Shah & Burke 2003; Trendle 2005; Richardson 2005). Discussions about the regional impact of skill shortages are made more difficult by the fact that available data on the location and extent of skill shortages is patchy at best.

McKenzie (2004, also see DSE 2005) provides a good framework for explaining some of the different perspectives adopted when examining skill shortages. There are two main ways of viewing shortages—firstly from an industry, occupational or national focus, secondly from a location focus. Much previous work has been conducted within the context of the former—an industry focus. This is also the view of skill shortages often taken by government departments.

There has been some work on skill shortages conducted from a location focus, mostly in the form of skill audits and reports conducted by local councils, regional development groups and the Area Consultative Committees.

This paper was prepared by the BTRE at the request of the Standing Committee on Regional Development (SCORD) National Regional Research Network. The aim of the paper is to provide a summary of the literature regarding skill shortages, particularly from a location focus. This has been achieved with the assistance of the Area Consultative Committee Network in supplying the BTRE with their reports and studies. It is intended that this summary will provide regional areas some suggestions on how to approach skill shortages.

The next chapter will discuss what a skill shortage is and how to measure it. A discussion of the themes arising from the literature follows in chapters 3 and 4, including a discussion of the key drivers and the main players in identifying and treating skill shortages.

Chapter 5 provides an overview of the studies that have focused on the locational aspects of skill shortages. Chapter 6 discusses the industry perspective on skill shortages. Chapter 7 will then deal with some of the current programmes and responses to skill shortages, while Chapter 8 presents some concluding comments.

CHAPTER 2 DEFINING AND MEASURING SKILL SHORTAGES

WHAT IS A SKILL SHORTAGE?

There is a number of perspectives on what constitutes a skill shortage. Business and Government often have different views of skill shortages. Broadly, a skill shortage occurs when the demand for labour with a particular skill or set of skills exceeds the available supply.

The demand for labour can vary due to new technology, greater product demand, industry changes and global forces. The supply of skills can change because of people leaving the labour market, and changes in the number of people completing training (Shah & Burke 2003).

Any discussion of skill shortages should recognise the role of wages, location and other conditions (Trendle 2005). Often, there are enough suitably qualified people available to fill vacancies, but these people are not willing to work in the specified business, location or industry at the current rates of pay and conditions.

DEWR considers the location of a vacancy as part of their definition.

“Skill shortages exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.” (DEWR 2006a, p39)

What is considered a “reasonably accessible location” depends on the relationship of the position to the location. For example, a minerals engineer in a remote mining town would be considered accessible as most mining companies have fly-in-fly-out arrangements. A baker’s apprenticeship in a capital city suburb that does not have adequate public transport may not be considered accessible, because applicants would not be able to make early morning starts (personal communication with DEWR, 2006).

This definition does not reflect the interests of all stakeholders. Whilst from a public policy perspective, a vacancy in a remote location does not necessarily reflect a broader skill shortage, this definition is frustrating for regional communities that are unable to find a doctor or a plumber.

This paper will use the definition of a skill shortage from Shah and Burke (2003):

“A skill shortage exists when the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available and willing to work under existing market conditions.”

There are three concepts in the literature that have very different meanings but are often used interchangeably, which cause confusion when discussing skill shortages. The three concepts are skill shortages, recruitment difficulties and skill gaps.

A skill shortage is as we have previously defined.

The second concept describes businesses finding it difficult to fill a particular position, even though there is not a broader skill shortage. This may be due to the characteristics of the firm, the location, or the particular skill set required for that position. The effected employer will consider this a skill shortage, but it is known as a recruitment difficulty (DEWR 2006a).

Finally, a business may have no vacancies, but the employees do not have all the required skills for the available positions. The missing skills are known as a skill gap (DEWR 2006a).

In economic terms, a skill shortage is an imbalance in the labour market that should only occur for a short period while the market adjusts. This adjustment could come from a reduced demand through changing processes and capital and hence the skills required. Alternatively, supply may be increased by increasing training or by adjusting the wage rate until a new equilibrium is reached (Trendle 2005).

The problem with these possible solutions is that the labour market is not particularly responsive in the short run to fluctuations in supply or demand levels. Any adjustment can only occur in the long run as new capital is acquired or new people trained.

A wage response often does not occur to offset skill shortages, because the labour market is not flexible enough to allow the adjustments required (Trendle 2005). Many employees are covered by industry or enterprise agreements that cover a number of years, so work conditions only change in the long run. Employers may also be reluctant to offer higher wages to new recruits due to a fear that this would have flow-on effects for existing staff (Shah and Burke 2003).

The Australian Government's WorkChoices package, introduced in 2006, aims to increase the flexibility of the wage system for both employers and employees (DEWR n.d.). Drafting of this working paper took place before WorkChoices was implemented, and it is too early to assess the impact of WorkChoices on skill shortages.

The link between skill shortages and economic performance is not well defined. Conventional wisdom and anecdotal evidence indicates that firms have lower output and new projects are halted at times of high skill shortages. ABARE (2006) identifies a number of mining and energy developments for which difficulties in accessing skilled labour have been cited as a cause of delays.

Industry surveys can give an insight into the impact of skill shortages on the economy. However their results should be treated with caution as the surveys only represent a sample of businesses and are based upon business perceptions. The Australian Chamber of Commerce and Industry (ACCI) April 2006 *Survey of Investor Confidence* lists availability of suitably qualified employees as the largest constraint on investment (ACCI 2006). However, the Australian Industry Group (AIG) March 2006 *Survey of Australian Manufacturing* found less impact of skill shortages on production. Only 9 per cent of businesses nominated skill shortages as limiting production. The two main inhibitors of production were higher input costs and higher import penetration (AIG 2006).

The Australian Bureau of Statistics (ABS) (2006) has explored the relationship between skill shortages and the performance of the Western Australian economy. It found that skill shortages were related to changes in Gross State Product and other economic indicators such as the Consumer Price Index and the Wage Index. However, the direction of causality, the strength of the relationship and the contribution of other influences can not be determined.

The Tasmanian Government Department of Economic Development conducted a survey of Tasmanian businesses to develop an understanding of regional investment and infrastructure issues. The survey placed particular emphasis on the influences that

have determined whether investment has occurred in the recent past and the factors that may limit investment in 2005–06 (DED 2006).

The survey asked respondents to identify the factors that might constrain their investment in their business. The availability of skilled labour was identified by 34 per cent of all respondents as an important constraint, behind labour costs at 48 per cent and the economic climate at 46 per cent of respondents.

In a separate question, respondents were asked about any investment activities that had been planned but had not gone ahead and to identify the reasons why the plans had not proceeded. The availability of appropriately skilled labour was identified as one of these reasons. This was particularly so for the construction industry, where the lack of skilled labour was one of the most commonly cited reasons for the abandonment of projects.

MEASURING SKILL SHORTAGES

The measurement of skill shortages is a difficult issue, and to a certain extent, depends on the purpose for which the data are collected (Shah & Burke 2003). Generally there are two broad approaches to measuring skill shortages. The first is a composite measure based on a number of economic indicators such as hiring rates, wage movements, vacancy rates and employment changes. This approach provides an objective view of the labour market, but may not accurately reflect regional differences in skill shortages. It also may be inadequate for studying regulated occupations such as teachers and nurses (Shah & Burke 2003).

The second approach is to survey employers to determine unfilled vacancies. While common, the problem with this approach is that it is based on the employer's perceptions of recruitment difficulties, as outlined earlier. Some employers state that they have trouble recruiting skilled workers, yet if such a worker became available there may not be a position for them. Many employers are also looking for broader skills, such as a sheet metal worker with presentation or communication skills (Richardson 2005). In this case, the shortage is identified as sheet metal workers, yet the skill lacking is communication skills. Many other employers confuse the difference between skill gaps and skill shortages. Because of these limitations, an ideal study of shortages would combine both survey and economic indicator methods (Shah & Burke 2003).

The most detailed information on skill shortages in Australia can be gained from DEWR. The DEWR method is a combination of the survey method and composite economic indicators. The main focus of this method is to survey employers who have recently advertised vacancies to establish the success of filling of those vacancies. This information is then combined with qualitative labour market information for that occupation (DEWR 2006a).

Because the employers who have actually advertised a vacancy are surveyed, it is easy to gauge the length of time taken to recruit someone and when the vacancy was filled or not. The perceptions of employers who are not actively recruiting does not bias the results (Shah & Burke 2003).

The DEWR *Skills in Demand* report lists shortages as being either state, metropolitan or regional based. Recruitment difficulties are also noted as are any subspecialisations within an occupation.

Beside the measurement techniques, there are many other considerations when measuring skill shortages. An important component is identifying an appropriate system of classification for occupations. The standard system used in Australia is the *ABS Australian Standard Classification of Occupations (ASCO)*. The ASCO can be used at a number of levels, depending on the level of occupational detail that is

required and the data that are available. A higher level of aggregation may be appropriate for guiding vocational education priorities. However, for identification of particular regional shortages, a much more detailed indication of the skills in short supply is needed (Shah & Burke 2003).

The period of time that is considered may also have an impact on the identification of shortages (Shah & Burke 2003). Seasonal occupations may indicate a shortage at some snapshot during the year, but not if considered over the whole year. If the market is slow to respond to shocks, a year may not be sufficient to detect a growing shortage.

Finally, geographic details are required to provide a spatial analysis of skill shortages. An occupation may be in shortage in particular geographic areas, but not in others (DEWR 2006a). Skill shortages in one region can coexist with skill surpluses in another, but such geographic imbalances are more persistent in labour markets which are relatively inflexible or where geographic mobility is restricted (Shah & Burke 2003). Without an indication of location, it is impossible to determine whether the relocation of workers is a possible cause of or solution to the shortage.

The availability of timely and reliable information on the nature, location and scope of skill shortages is critical to responding to skill shortages. Because of the scale of the data required, and the public good nature of the information, governments are well placed to fill this role (Shah & Burke 2003). However, providing this information at an appropriate level of aggregation and detail would require significant resources and may not be cost effective or practical to implement. Nevertheless, an important step has been made with the recent COAG decision to establish new arrangements for sharing of labour market information relevant to skill shortages (COAG 2006).

Summary

- There are a number of differing opinions and perspectives on what constitutes a skill shortage.
- Skill shortages are defined as: *“A skill shortage exists when the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available and willing to work under existing market conditions.”*
- Also reported are recruitment difficulties, the situation where firms find it difficult to recruit and retain staff, and skill gaps, where existing staff do not have the skills required to complete tasks.
- The impact of skill shortages on the economy is not well defined, but can include lower production and the delay or cancellation of new projects.
- The most detailed information on skill shortages is generated by the Department of Employment and Workplace Relations.
- There are few detailed data available on the geographic distribution of skill shortages.

CHAPTER 3 DRIVERS OF SKILL SHORTAGES

There is no one single cause of skill shortages. Many case studies have identified one or two key causes impacting on a region¹. However, the cause of a particular shortage is often a combination of many factors. The diversity of causes of shortages means that the treatments that work in one case will not necessarily work in another (Miles et al 2004). Some shortages are industry wide, and only treatments that work on a national scale will be effective in these cases.

There have been a number of attempts to identify the drivers of skill shortages. The list of causes identified is usually influenced by the perspective of the author, and often does not capture a full sense of the complexity of the problem. This chapter intends to bring together these perspectives into a single model. In addition to the previous work conducted on identifying the causes of skill shortages, many of the drivers in the BTRE model are drawn from the case studies discussed in Chapters 5 and 6.

McKenzie (2004, also see DSE 2005) provides a framework with two different perspectives of skill shortages. The first is an industry, occupational or national focus (subsequently referred to as an ‘industry focus’), the second a location focus.

The industry focus is the view usually taken by government agencies. There is often a good understanding of the extent of shortages nationally and of the industry drivers of those shortages. Extra training is usually seen as the solution to such skill shortages (McKenzie, 2004). However, it should be noted that training will not sustainably resolve shortages in industries where wastage (discussed below) is a significant problem².

The location focus aims to identify the local drivers of skill shortages. These drivers are usually the main concern of local governments and regional development organisations.

Industry or occupation wide shortages (subsequently referred to as ‘industry wide shortages’) can also have a spatial impact. Anecdotally we know that industry wide shortages can have an intense impact on particular regions, and can affect regional areas before becoming evident in metropolitan areas. For rural and remote communities, industry wide shortages can be devastating, leaving some areas with no access to trades or professionals. The BTRE is currently investigating the spatial distribution of the costs of living across Australia. The research team has found examples of communities that are unable to obtain the services of trade professionals, regardless of how much the community is prepared to pay (personal communication 2006).

There may be a few reasons why the regional impact of skill shortages is greater than in metropolitan areas. When an occupation or skill is in demand, skilled workers are able to make choices about where they locate. Wage incentives, type of work, lifestyle

¹ See “Attracting and retaining skilled people in regional Australia: A practitioner’s guide” (SCORD 2004) for examples of this kind of case study.

² See the discussion of Nurses in Chapter 6 for an example of such an industry.

choices and infrastructure are all factors that are considered when choosing a work location. Some regions may not meet skilled workers' requirements on these factors. A location focus is required to incorporate these factors into the analysis.

Another reason for the difference between regional and metropolitan areas is the size of the local markets. A small market can feel the absence of one or two skilled personnel where a large market may not react to such a small loss.

Treating skill shortages at a local level does not usually resolve industry wide shortages. A region that is able to recruit and retain skilled workers by wage incentives or by other means (sometimes referred to as "poaching" the worker) is usually relocating the shortage from one location to another. However, in a competitive labour market, where skill shortages occur, "poaching" may be the only way that smaller regions can address local shortages.

DEST (2002) has investigated the drivers of skill shortages in six industries:

- Engineering
- Electrotechnology
- Retail Motor (automotive trades)
- Commercial Cookery (chefs, cooks and pastrycooks)
- Building and Construction
- Rural – wool, production horticulture, viticulture and cotton.

Although the report found that there were a number of differences between the trades, some key factors influencing skill shortages were found.

- Persistence of skill shortages – the business cycle and shocks of the national economy do have an impact on many skill shortages. However, some shortages have persisted over the 20 year period studied.
- Growth in demand for skills – in most of the six skill areas there has been growth in demand for skills, associated with the effects of globalisation and international competition, structural change, new technology and the cyclical nature of business.
- Age profile – a key concern in skill shortage areas is the ageing of the workforce and the impact this may have on the future supply of skills.
- Workers not using their skills – also known as wastage.
- Migration.
- New skill requirements – a change seen in many industries means that core or generic skills, such as team working, computer literacy and business skills, are more important. Many existing employees do not have the required generic skills.

Taking a location focus, SCORD (2004) identified six factors that influence skill shortages in regional Australia. These factors are health; education and training; housing; jobs and career opportunities; infrastructure; and perceptions of lifestyle and community.

The BTRE model of drivers of skill shortages brings together these reports as well as drivers identified from individual industry and location case studies. Many of these drivers are also identified in McKenzie (2004). There are four main factors that are the causes of skill shortages from an industry focus. These are:

- Training—the number of people entering the occupation.
- Wastage—the number of people who are trained in a skill or occupation, but do not work in that field.

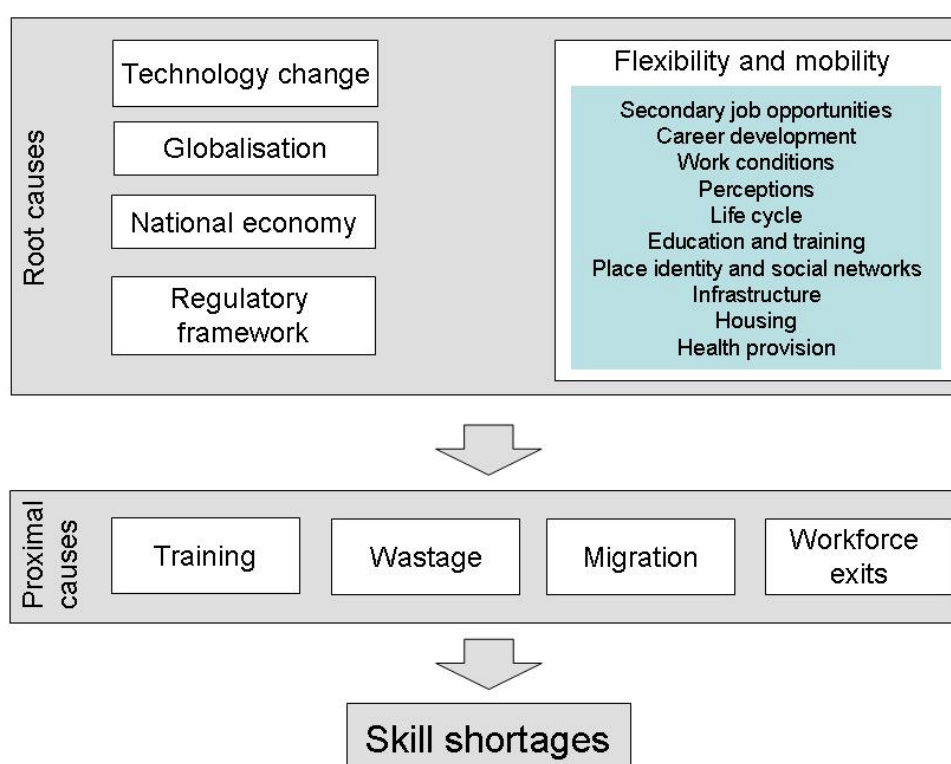
- Migration—Australia's place in a global labour market. Australia is a net importer of skills (PC 2006), so migration has a positive impact on skill shortages. However, most migrants are concentrated in the metropolitan areas.
- Work force exits—people permanently leave the workforce for a number of reasons, mostly through retirement.

Identifying the drivers of shortages in this way is useful because they are measurable. We call these four drivers the proximal causes. However, successful treatment of skill shortages requires an understanding of the root causes. Root causes have been classified into two broad categories in Figure 3.1.

The first category includes drivers of a macro-economic or global nature—technology change, globalisation, the national economy and the regulatory framework. These drivers tend to reflect the demand side of the labour shortage equation, although they may also impact on the supply of labour. Of these, only the regulatory framework is easily influenced by governments in respect to skill shortages.

The second category relates to the flexibility and mobility of workers and hence the labour market. These drivers represent the supply side of the labour shortage equation. It is this second category that is most relevant to regional areas when attempting to treat skill shortages, as these drivers can be more readily influenced.

FIGURE 3.1 DRIVERS OF SKILL SHORTAGES



Source: BTRE analysis

Technology change

Changes in production processes and the introduction of new technology can have a significant local impact on skill shortages and the labour market as a whole (Trendle 2005). The introduction of new technology means that local workers may not have the

skills required to work with the new processes. It also may induce unemployment, as low skilled workers are replaced by workers skilled with the new technology. These changes in technology mean that improving the skills of the existing workforce is just as important as training new entrants.

One effect of technology changes is seen in the recent shift to a knowledge and service based economy. This shift requires a higher level of skills than a traditional economy, particularly in the area of information technology use.

Globalisation

The Australian labour market and economy does not exist in isolation and changes in the global economy impact on the domestic availability of skills (Shah & Burke 2003). Global demand for Australian products and services drives the need for labour.

Australian workers in many professions are highly valued overseas, and many Australians leave to take work opportunities in other countries, while overseas trained workers are also migrating to Australia.

National economy

Skill shortages are often only apparent at times when the national economy is growing strongly (SEWRERC 2003). It is at this time that demand for labour is at its highest, and employers start to encounter capacity constraints (Richardson 2005). While skill shortages are most apparent in times of strong economic growth, they may still occur in times of economic downturn. The business cycle in each industry is also a key driver of shortages (DEST 2002).

Regulatory framework

If the labour market was fully flexible, skill shortages would only be a temporary feature as the market would adjust (Shah & Burke 2003; Trendle 2005). Wages are not particularly flexible as many workers are under enterprise-wide agreements or industry-wide awards, which require a long lead time for wage negotiations. The Australian Government's WorkChoices package, introduced in 2006, aims to increase the flexibility of the wage system for both employers and employees (DEWR n.d.). Drafting of this working paper took place before WorkChoices was implemented, and it is too early to assess the impact of WorkChoices on skill shortages.

There also are limitations on the flexibility of wages within an occupation. Sub-specialisations within an occupation may be in demand, and this could potentially be solved by higher wages. However, it is culturally and legislatively difficult to pay these higher wages to only the sub-specialisation. These problems are particularly noted in industries such as education and health care, where governments are often the key employer.

Flexibility and mobility

The mobility of workers can help reduce geographical imbalances of skills. However, the mobility of workers has both a negative and a positive impact on skill shortages. The ability of workers to move into a region is also balanced by the ability to move from a region. There are a number of reasons why people choose not to move to another region even when they have poor employment prospects in their current location.

Changes in population can influence the occurrence of skill shortages (McKenzie 2003). Areas of population decline experience difficulties as skilled people move to other regions. However, regions with large population growth can also experience

shortages. This is particularly the case if the new arrivals demand a new or expanded range of services but do not contribute greatly to the workforce. An example is the greater range of health services demanded by retirees moving to a lifestyle region.

Career development

There is a risk of some regions being treated as “professional nurseries”. These regions are able to attract graduates but as soon as they gain experience they leave for city or coastal areas. Other regions are able to attract professionals but are unable to provide the opportunities or support for future development (Miles et al 2004).

Career development is further hampered as many professionals who wish to undertake further training and study need to move to the major centres. These studies often can not be taken by distance education or at regional universities. Professionals who move to undertake extra training often do not return to the regional area (Lannin & Longland 2003).

Secondary job opportunities

For some skilled workers, the availability of employment opportunities for spouses or children is as important as personal opportunities (Miles et al 2004; McKenzie 2003). Many workers are unwilling to relocate unless employment opportunities are available for spouses, particularly if that spouse is also a professional. For many regions, this means attempting to find employment for another professional, possibly where that skill is not in demand.

Work and pay conditions

The conditions of work—including wages, working hours, flexibility, freedom from harassment and many others—are a key factor in skill shortages (Richardson 2005; Buchanan and Considine 2002). The definition of skill shortages we are using includes the qualifier “...and willing to work under existing market conditions”. This is a key point for many skill shortage situations, as illustrated in the NSW nurses study (Buchanan & Considine 2002). Buchanan (quoted in Standing Committee on State Development 2005) states “I am pretty sceptical of the idea of skill shortages being a pervasive problem. I think there is more a problem of decent jobs, there is not a shortage of skilled workers.”

Perceptions

The perceptions of skilled workers and employers can both have an impact on skill shortages, particularly within regional areas. Many skilled workers view experience in regional locations as inferior to metropolitan areas, despite evidence to the contrary. Regional areas are also seen as providing less employment and social opportunities.

For young people the choice between entering a trade or tertiary education can be influenced by perceptions of appropriate career choices. In some areas, completing a trade apprenticeship is seen as a lower status choice than entering tertiary education.

The perception of some employers that workers will remain in a position “for life”, means that appropriate succession planning is not undertaken (Miles et al 2004). There is also a perception among employers that skill shortages and training are not their problem, and can only be fixed by governments (Office of Regional Affairs 2005).

Government perceptions, based on traditional economics, additionally assume that workers will move to another area to gain employment opportunities. This is not necessarily the case, with many skilled workers having a strong preference to remain in their existing community.

Life cycle

An understanding of the relocation trends of people according to their stage in the life cycle is important for succession and career planning (Miles et al 2004).

- Young people tend to relocate to major regional centres to undertake training and education.
- They may return to regional areas (though not necessarily to the area where they grew up) in their late twenties and early thirties, sometimes with young families.
- As the children reach secondary schooling age, the family may move to the regional centres again.
- Once the children have left home the skilled worker may move back to the region until retirement, or may later move to another, possibly coastal area as a retiree.

Many employers assume a skilled worker will remain in that region for their entire working life. This is no longer the case, and many skilled workers no longer plan to accept a job “for life”. If regions plan and allow for these cycles, constant access to a professional can be obtained (Miles et al 2004).

Education and training

Occupations where training is easily obtained should quickly adjust to shortages. The area of focus should be on occupations that have a long training period and where there is no ready supply of suitably skilled people who are not using their skills in that occupation (Richardson 2005).

Some employers fail to recruit skilled workers because the applicants lack the “soft” skills, such as communication, initiative, work ethic and presentation (Richardson 2005). The inclusion of these skills in any training programme may provide a solution to many skill shortage problems.

The number of commencements of new apprenticeships declined after 1991. This has been especially noted in the electrical industries in Victoria (Worland & Doughney 2002) where utilities which were formerly government owned (such as power stations) have been privatised. The authors report that the overall number of apprentices employed by private industry in Victoria has fallen from that previously employed by the Victorian government, while the government now employs effectively no apprentices. However, more recent data shows a turn around with the number of apprenticeships in Australia increasing since 2000 (NCVER 2006a).

Buchanan (quoted in Standing Committee on State Development 2005) has suggested that the increased emphasis on maximising shareholder value on a quarterly basis has training being seen as expensive and expendable.

Another consideration for skilled workers with families is the education of their children. With the modern focus on the knowledge economy, the quality of primary and secondary education is regarded as having an impact on a child's success (McKenzie 2003). Skilled workers with secondary age children tend to relocate to major centres to provide that education while keeping the family together (Miles et al 2004).

Place identity and social networks

The concept of place plays an important part in shaping a person's identity. Our sense of self is shaped by our experiences and by those around us. Place is the physical setting of those experiences. The implication of this is that threats to self-identity can occur if we are put in alien environments (Falk & Balatti 2004). For some young people, relocation is an important part of defining who they want to be.

Place identity can also be an important component of training and education. A person who relocates to undertake education may associate their new skills with the new location. For those undertaking skill based courses, time spent in industry placements enhances the association of occupation and place (Falk & Balatti 2004). If those placements are only in one city location, then that location becomes associated with the occupation.

People who do relocate are unlikely to move for employment reasons alone. Hugo et al (2005) shows that 11.3 per cent of people move for lifestyle reasons and 10.3 per cent move to be nearer to friends and family. However, it is not clear how many of these moves are for people of working age. Of all moves, only 6.6 per cent relocate to take a new job.

Related to the idea of place and identity is social capital. Social capital can be defined as “networks, together with shared norms, values and understandings that facilitate cooperation within or among groups” (BTRE 2005). Social networks and norms can influence the social and economic development of communities. For an individual, these networks can be used to achieve economic outcomes. Some indicators of social capital are community involvement, support and frequency of social contact. Miles et al (2004) noted that migrants to a region may find it difficult to remain in a community without these supporting networks.

Infrastructure

The availability of infrastructure in a region can determine whether a skilled worker will locate in a region. The availability of three phase power and communications infrastructure are examples of these infrastructure needs.

The provision of smaller scale infrastructure such as work sheds or health clinics may also entice a skilled worker to a region. The SCORD *Practitioner's guide* (2004) provides some examples where this kind of infrastructure has been effective in recruiting workers to fill specific shortages.

Housing

Appropriate housing needs to be available before a skilled worker can move to a regional area (SCORD 2004; Miles et al 2004). The availability of quality housing can be an attractor for skilled workers moving to a region (McKenzie 2003). The demand for housing is also increased by the decline in average household size seen in Australia. Many areas have a limited amount of rental housing, causing high rental prices. Newcomers are reluctant to buy houses due to the perceived difficulties in selling them later. The size, type and quality of housing can also be a concern for professionals, particularly for those with families.

Even in industries where accommodation is provided, such as nursing, the quality and appropriateness of that accommodation is forcing some skilled workers to move elsewhere. Nurses' quarters are often single rooms with shared facilities, yet couples and even young families often live there (Hegney et al 2002).

Health provision

The link between health care provision and regional development has been acknowledged (PC 2005; SCORD 2004). The availability, quality and level of health care is an important consideration for those relocating to regional areas. Yet, for health care professionals, other regional factors, such as infrastructure or lifestyle, are a consideration. This link was recognised by the mining companies BHP Billiton and Dampier Salt in South Hedland, Western Australia (SCORD 2004). The community had been without a doctor for two years after the local practice closed its doors. The companies' ability to attract professionals was limited because of a lack of medical services for the families of employees. In this example, a partnership between the

companies and the state and local governments was formed to provide an incentive package and attract a doctor.

Summary

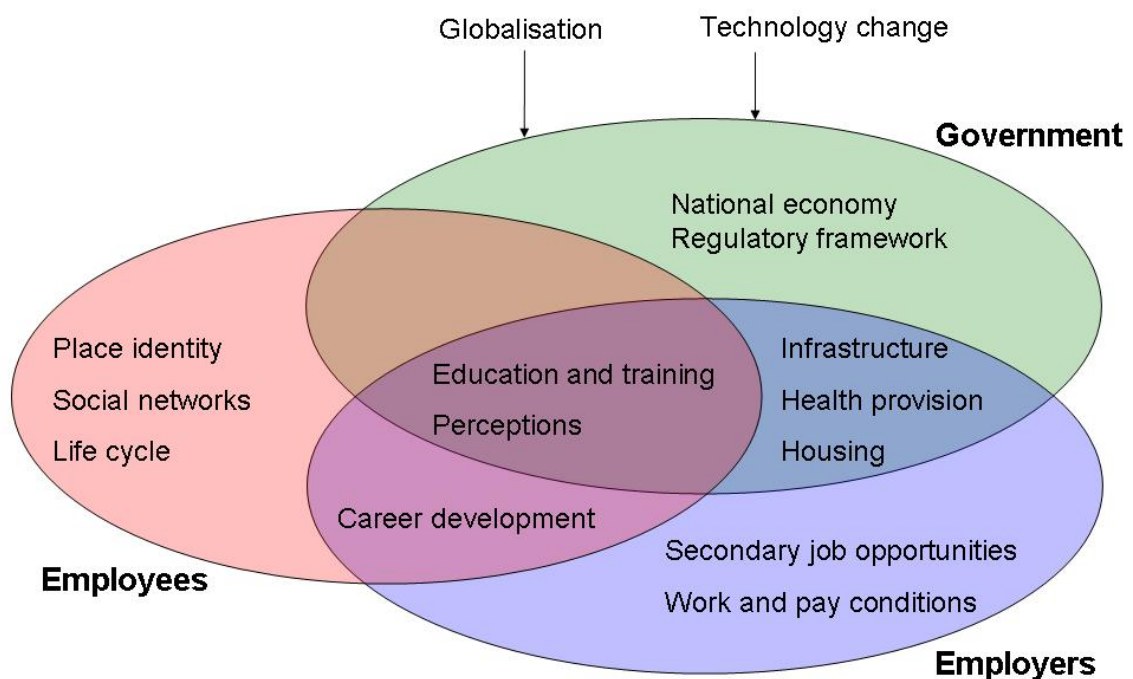
- The causes of skill shortages are diverse and vary across regions.
- There are two main perspectives of skill shortages: an industry or national focus and a location focus.
- There are four main proximal causes of skill shortages: training, wastage, migration and workforce exits.
- Identifying the root causes of skill shortages is important in identifying appropriate treatments. The root causes are: technology change, globalisation, the national economy, the regulatory framework and the flexibility and mobility of workers.
- The flexibility and mobility of workers is most relevant to regional areas when attempting to treat skill shortages, as these drivers can be more readily influenced.

CHAPTER 4 ROLES AND RESPONSIBILITIES

Identifying the causes of a skill shortage in a certain situation is often a complex problem, complicated by a lack of information. Identifying the causes is, however, a necessary step before determining steps to treat the problem. An understanding of the drivers and who the key players are that can influence the drivers is an important first step.

The roles and responsibilities of the key players in the BTRE model have also been drawn from the case studies in chapters 5 and 6. Figure 4.1 shows the drivers of skill shortages and the key players that influence these drivers. A summary of some of the programmes already in place illustrating some of these influences can be found in chapter 7.

FIGURE 4.1 KEY PLAYERS THAT INFLUENCE SKILL SHORTAGES



Source: BTRE analysis

There are some factors that are very difficult to control when considering skill shortages, mainly globalisation and technology change. However, the other identified drivers are all influenced by the spheres of employee, employer and government. While

addressing any one of these drivers may have an impact on skill shortages, a broader approach may be required.

Government

The health of the national economy can have a direct impact on skill shortages. However, we do not argue that the need to ameliorate skill shortages should outweigh maintaining a healthy economy. Rather, governments need to be aware of the impact of the economy on skill shortages and take action through other avenues.

A more relevant sphere of influence for governments lies in the regulatory framework surrounding the employment and working conditions of skilled workers. For example, a flexible wage system assists employers in recruiting available skilled workers.

Employer

The employer, in cooperation with other employers, can take an important role in supplying job opportunities for spouses of skilled workers. However the key area that employers can examine to alleviate skill shortages is the setting of appropriate work conditions. Work conditions and salary can serve as a competitive advantage for attracting skilled workers to firms. A satisfying job environment where available workers are compensated for their skills can minimise shortages. This is particularly so for employers who are experiencing recruitment difficulties when there is not a wider skill shortage.

Employee

The personal characteristics of an employee, such as their age, sense of place and social networks, will determine their willingness to work in an industry, to train, or to relocate. While these are factors that are not easily influenced by external parties, an understanding of them, and the ability of employers to seek opportunities within these factors, may influence the employee's decisions. For example, the provision of a local social support network may compensate for the loss of existing networks when the employee relocates.

Government and Employer

Many successful solutions to skill shortages have come about where governments and employers have come together. The key areas where this has happened are in health, housing and infrastructure.

The provision of health care services can be enhanced by local employers investing in local services, or by providing "top up" incentive packages above the standard government wages.

The provision of infrastructure, such as health clinics or worksheds, can also motivate individuals with demanded skills to relocate. There may also be provision for industry and governments to work together in providing large scale infrastructure such as three phase power, transport or communication access.

The provision of housing is another form of infrastructure that can be provided by governments or employers. Local government, in particular, has invested in housing developments to alleviate housing shortages. Employers may also provide housing as part of a salary package, or by subsidised rents, to offset the high cost of rentals in some parts of regional Australia.

Employer and Employee

Career development is a keen concern for employees. An employee will seek development and progression opportunities elsewhere unless they can be found locally.

If employers are able to provide those opportunities, they are more likely to retain the employee.

Government, Employer and Employee

The area that has received the most focus is training and education. Here, all three spheres need to work together to determine acceptable outcomes. The provision of appropriate training and targeted education lies primarily between governments and employers. However, the training desires of employees need also be considered, as employees will relocate to gain the desired training. Training and education need not be limited to trade or qualification skills, as the “softer” skills such as communication, initiative and work ethics are also desired by employers.

Possibly the most complex area lies where all three spheres intersect. The perceptions of all three spheres may be the most difficult to treat, as they not necessarily compatible. These perceptions will only change by communication between all three spheres, and an acceptance that their perceptions may be inaccurate.

Summary

- An understanding of the drivers and who are the key players who can influence the drivers of skill shortages is necessary to implement treatments.
- The interaction between the drivers of skill shortages requires an integrated cross-sectoral approach.

CHAPTER 5 THE LOCATION FOCUS

When skills are in demand, skilled workers choose their location based on a number of personal preferences. Understanding why skilled workers choose to locate in a region can help regional employers provide incentives to attract workers in a competitive labour market. Identifying local shortages also allows regions to target recruitment strategies.

The following case studies all focus on the local aspects of skill shortages. Apart from the Queensland study, they are all focused on a small area. This reflects the nature of the organisations conducting these studies. Many of the studies presented here have been commissioned and supplied by the Area Consultative Committees (ACCs).

Area Consultative Committees are non-profit, community-based organisations funded by the Australian Government under the Regional Partnerships programme. There are 56 ACCs across Australia servicing regional and metropolitan communities. ACCs are the key regional stakeholders to build networks and partnerships between business and government to find local solutions to local problems (DOTARS 2005a).

Many of the regional case studies show similar themes, although the detail may differ between regions. Many regions are experiencing difficulties in recruiting and retaining professionals. Health professionals are in particular demand, but teachers and other professionals are also scarce. Tradespersons are also in demand, with the type of trade required often dependant on the industry of the region. The case studies also identify shortages in several relatively low skilled occupations—these are more appropriately referred to as labour shortages rather than skill shortages.

Another common theme is the reason why applicants are not suitable for vacant positions. While a lack of qualifications is a concern for employers, it is often a lack of experience or a lack of the soft skills (presentation, communication and work ethic) that is more commonly cited as the main reason why applicants were not suitable.

QUEENSLAND

Miles et al (2004) surveyed a number of professionals and conducted focus groups in a number of regions to establish the pattern of skill shortages. The survey asked respondents to rank the key issues that affected the ability to attract and retain professionals. The study found that each region had different concerns, but generally there was a shortage of most professions in regional Queensland (i.e. outside the south-east corner). This is especially the case for regions outside the main coastal lifestyle regions. A key finding was that there were significant variations in the experience of the regions. All regions identified medical, allied health, information technology/computer, engineering, finance/accountancy, teaching legal, management level, and community and social service professionals as being difficult to attract and retain. Additional shortages of environmental professionals, pharmacists, veterinarians and guidance counsellors, were identified in some regions. The authors note that the shortage of professionals is expected to worsen as the ageing workforce begins to retire.

The two main issues identified as inhibiting the ability to attract and retain professionals were career opportunities and lifestyle. Salary levels were ranked third.

The perception of limited availability of professional development opportunities is seen as a major cause of professionals not moving to, or leaving, regional areas. In the cases where a region has attracted a professional, they are often graduates who use the region as a “professional nursery” and leave once they have gained some experience. Experience in a regional area is seen as less valuable than experience gained in a major city. The problem is further compounded by the “poaching” of professionals between regions.

Another aspect of limited development opportunities is that many areas lack professionals to provide a supervisory role for new entrants. Often, the local market can support only one professional; if there is someone available to provide the supervision, then the new entrant is not required. The need to update training and gain support from like professionals poses difficulties, with many professions required to travel to major centres for long periods to undertake further education and training. The difficulties of finding a locum to cover these periods makes further training harder to obtain.

Communities' expectations of professionals often do not match the realities of a changing labour market. Young professionals do not look for a “job-for-life” as was the case in the past. Even professionals that stay in a region for a period of time may wish to relocate at various stages of their lifecycle. A young person may move to a city to gain education and experience. They then may move to a regional area to establish a young family. Once secondary education is required, the family may move to a major centre. Once the children are mature, the older professional may return to the regions.

The second issue raised for attracting professionals is lifestyle considerations. Lifestyle choices of older professionals mean retirement or winding back for many. This may be difficult in a region where there is no one to take over. The local market also may not support more than one professional. The “liveability” of the region is also a consideration for young and retirees alike.

Family issues are another concern for professionals. The availability of social support is important for all families. Some professionals that have been recruited to a region from overseas have left because of lack of support, and alleged racism and persecution.

The availability of medical services is a concern for younger families, and the availability of secondary education becomes a concern as the children grow. Professionals with partners are often concerned about the job and career opportunities available for them, especially if the partner is also a professional. The availability of appropriate rental accommodation is often also a concern.

BROKEN HILL

In late 2005, the Outback NSW Area Consultative Committee (OACC) conducted a survey of 275 businesses to determine their perceptions of skill shortages in the Broken Hill region (OACC 2005). The survey indicated that 39 per cent of businesses had previously had difficulties in attracting appropriately skilled job applicants. The three most frequently mentioned occupations were: Tradespersons and Related workers (45% of businesses who reported difficulties), Intermediate Clerical, Sales and Service Workers (32%) and Elementary Clerical, Sales and Service Workers (25%).

In regards to Tradespersons and Related Workers, the skills most difficult to find in job applicants were qualified Fitters/Boilermakers, Electricians and Mechanics and Panel Beaters/Spray Painters.

For Elementary Clerical, Sales and Service Workers, half of the businesses stated that customer service skills were missing from applicants, along with a work ethic and communication skills.

Of all the businesses surveyed, 17 per cent currently had vacancies, and 68 per cent of these indicated that they were having problems filling these vacancies. The two highest responses for occupations that are difficult to fill were Tradespersons & Related Workers and Professionals.

The majority of businesses who stated that they were having difficulties attracting Tradespersons & Related Workers came from the Mining Industry. The majority of businesses who stated that Professionals were hard to attract to positions came from the Health & Community Services Industry.

The three most frequently mentioned reasons businesses provided for having difficulties in filling vacant positions were a lack of qualifications, a lack of work ethic and an inability to offer competitive wages.

The report made a number of recommendations to help alleviate the local shortages. With two thirds of businesses indicating that additional training in customer service skills was needed, short courses focused on customer service in the Retail and Accommodation, cafes and restaurants sectors were recommended.

Other common issues raised were a lack of work ethic and applicants having an inappropriate personal profile for the industry. The report recommended short courses in motivational techniques for both employers and employees, and a support/mentoring scheme for potential workers to address work ethic issues. The report also recommends personal profiling of people entering training to ensure that people are suited to working in the industry they are qualified in. This is a particular issue for aged care positions.

A number of businesses are having difficulties attracting tradespersons and professionals. To attract these people to Broken Hill, the report recommends a marketing campaign promoting the lifestyle advantages of Broken Hill. The report also recommends businesses promote themselves as employers of choice by offering employment packages with attractive working conditions to compete with higher wages offered in some areas.

Another way to increase the number of tradespersons is to increase the number of apprenticeships available. This could be done by organising businesses to share an apprentice, or by encouraging the upskilling of mature aged workers.

Finally, the report recommends a public education campaign to raise awareness of:

- industry specific job opportunities both now and in the future;
- businesses' expectations and requirements for new employees; and
- opportunities for local businesses to be involved in new innovative recruitment, retention and training programs.

LIMESTONE COAST

In December 2001, the Limestone Coast Regional Development Board and local councils, as part of the Skilling Up for Business Growth Project, conducted a survey of businesses in the Kingston, Naracoorte, Lucindale and Tatiara Council Areas (Limestone Coast Regional Development Board 2002). A total of 456 businesses were asked questions relating to their business, current employment, training needs and future employment plans.

The survey asked whether the business believed that there were any skills in shortage in the industry. The results indicated that motor mechanics, both generalists and specialists, are in high demand across the whole region as were retail assistants and administration/clerical staff. Other occupations in demand were heavy machinery

operators, heavy truck drivers, real estate agents, stock agents, agronomists, environmental scientists, accountants, nurses, doctors, building trades, hairdressers and labourers. The report also identified 400 potential job vacancies over the next two years for specific occupations based on future needs projections.

Employers reported difficulty in attracting apprentices and trainees of suitable aptitude and attitude, as the employers cannot compete with the wages paid in the vineyards and meat works.

The availability of employment opportunities for partners as well as accommodation and facilities were identified as important concerns for applicants from outside the region. The issue of appropriate housing was also identified.

The report recommends the Job Network Members and Employment Agencies within the region target some of their efforts towards recruiting skilled trades and professionals from outside the region. This would include the development of an attraction package, addressing housing and partner employment opportunities, and selling the excellent facilities and lifestyle available in the region.

MILDURA

The Department for Victorian Communities (DVC) and the Department of Employment and Workplace Relations (DEWR) have joined together to develop and implement the *Regional Skills Shortage Survey* (RSSS) Project. The project aims to identify skill shortage issues across a number of Victoria's regions (Department for Victorian Communities 2006). Mildura is the first region's report to be finalised.

About a third of the sample of businesses surveyed in Mildura had troubles filling vacancies. In total, 9 per cent of all vacancies advertised in the previous 12 months remained unfilled. The occupations difficult to fill covered many fields, but included health professionals, teachers, trades, truck drivers and child care workers. There was an average of 2.2 applicants for each position, with less than one applicant being considered suitable for each vacancy.

The main reasons applicants were considered not suitable for positions included:

- lack of experience
- inadequate qualifications
- lack of relevant technical skills
- poor attitude or presentation.

Many businesses also reported difficulties retaining staff, and had offered higher remuneration packages in order to retain experienced staff.

HUNTER

AIG (2004) conducted a survey to determine the extent of skill shortages within the manufacturing, engineering and related service sectors of the Hunter region. Of the 300 firms initially surveyed, 61 firms responded. A follow-up of the firms that did not respond found that managers had taken on extra tasks to fill gaps left by labour shortages. These managers felt that they did not have time to complete the survey.

Of the businesses that did respond, the survey found that there were 467 current vacancies, with more predicted in the next three months. This represented one vacancy for every 8 workers. Small business (less than 30 employees) was experiencing the most severe shortages, with a vacancy for every 4 workers compared with a vacancy for every 10 workers in large businesses (100+ employees).

This skilled labour situation has evolved rapidly in the Hunter. In 2001, a survey conducted by the Australian Industry Group found that the availability of skilled labour was the most cited advantage of locating in the Hunter. The study reports anecdotally that this shortage of skilled labour has meant that businesses have not tendered for as many contracts as they otherwise would have.

The reasons given for the difficulty in recruiting skilled workers are distributed evenly across: no applicants; a lack of specific skills; and a lack of employability skills (such as teamwork, attitude and a liking for the work).

The businesses surveyed believed that employing more apprentices was the only long term solution to the skill shortage. However, small businesses were finding it more difficult to attract apprentices than large businesses, with 70 per cent of the businesses that identified apprentice recruitment difficulties being small business. To help increase the number of apprentices, businesses recommended pre-apprenticeship training, improved financial incentives and workplace training delivery.

Skilled migration was identified as a short term solution. The report also recommended upskilling of the existing workforce and of currently unemployed people.

Summary

- Understanding why skilled workers choose to locate in a region can help regional employers provide targeted incentives to attract workers in a competitive labour market. Identifying local shortages also allows regions to target recruitment strategies.
- Many regions are experiencing difficulties in recruiting and retaining professionals. Health professionals are in particular demand, but teachers and other professionals are also in shortage.
- Tradespersons are also in demand, with the type of trade required often dependant on the industry of the region.
- A lack of experience or a lack of the soft skills (presentation, communication and work ethic) is most often cited as the main reason why applicants were not suitable for vacant positions.

CHAPTER 6 THE INDUSTRY FOCUS

The industry focus identifies the causes of a skill shortage within a single industry or occupation. This chapter summarises the findings of a range of studies with an industry focus. Industry focused studies typically do not consider the impact of such shortages on specific regions, although the results of some studies with a spatial dimension are reported in this chapter. An understanding of the industry or occupational drivers of shortages is important in treating skill shortages in any region.

HEALTH PROFESSIONALS

A shortage of health professionals is significant in regional Australia, though it also is apparent across Australia. Many professionals, especially health professionals, see practice in regional areas as inferior to working in the major cities. In reality, rural practice often requires a greater diversity of skills. Rural patients tend to have higher rates of multiple illness and higher rates of hospitalisation. Combined with the reduced numbers of practitioners in rural areas, this means that many practitioners have higher case loads than their urban counterparts. As such, experienced rural practitioners tend to have higher levels of organisation and administrative skills with a greater emphasis on the prioritisation of cases (Lannin & Longland 2003).

The characteristics of practitioners in rural practice affect the retention rates of these professionals. Generally, new graduates that do not have the organisation skills required for rural practice are recruited (Lannin & Longland 2003). Because of this, they perceive the case load as higher than a more experienced practitioner, and tend to leave for lighter loads in urban areas.

There are many studies on different occupations in the health sector, and these are discussed below. Nursing is an area of critical shortages across Australia, so there have been many detailed studies conducted in this field. As such, nursing is treated separately in the following section.

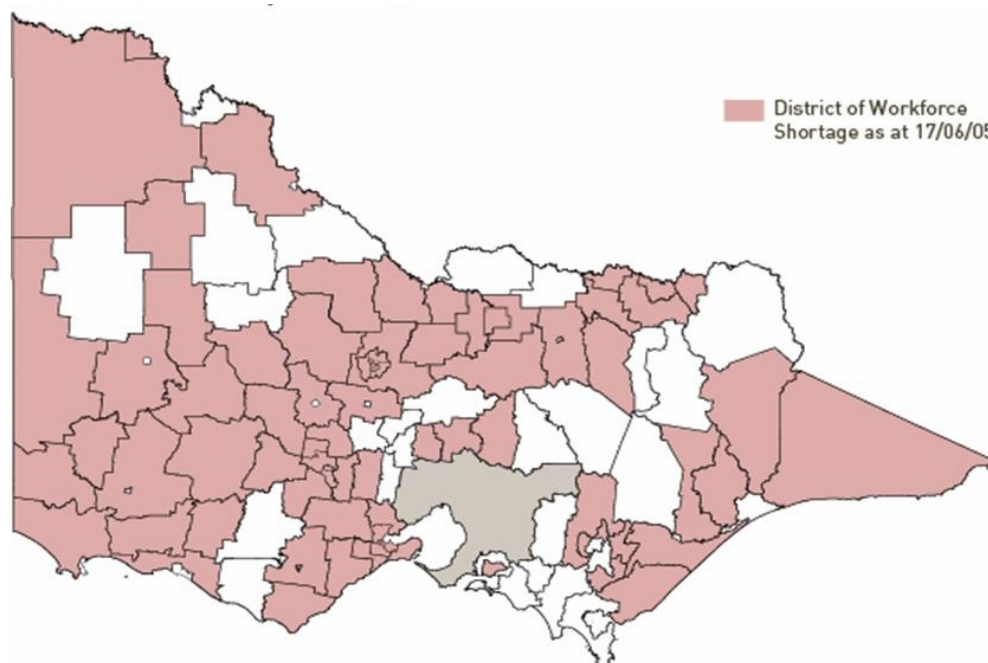
It is estimated that in 2002, there was a shortage of between 800 to 1200 General Practitioners (GPs) in Australia (PC 2005). There is also a shortage in most specialties such as obstetrics, pathology, psychiatry and emergency medicine. These shortages are even more pronounced in regional and remote areas and Indigenous communities.

The Department of Health and Ageing regularly assesses access to medical services across Australia. Districts of Workforce Shortage are communities that are identified as having a lower level of access to medical services than the general population. Overseas trained doctors face restricted access to Medicare provider numbers, but may be exempted from these restrictions providing they work in an area identified as being in shortage (DHA 2004).

Figure 6.1 shows the Statistical Local Areas (SLAs) of Victoria identified as Districts of Workforce Shortage in June 2005. Generally the areas in shortage are more remote, and are not major regional centres. The lifestyle regions on the coast and in the Victorian Alps are not areas in shortage. The Melbourne metropolitan area, in grey, is excluded because of the focus of the publication *Regional Matters* (DSE 2005)

exclusively on regional areas in Victoria. However, Melbourne is not an area of shortage of medical services.

FIGURE 6.1 SLAS IDENTIFIED AS A DISTRICT OF WORKFORCE SHORTAGE IN REGIONAL VICTORIA, 2005



Source: DHA, District of Workforce Shortage Searchable Database, map published in DSE 2005.

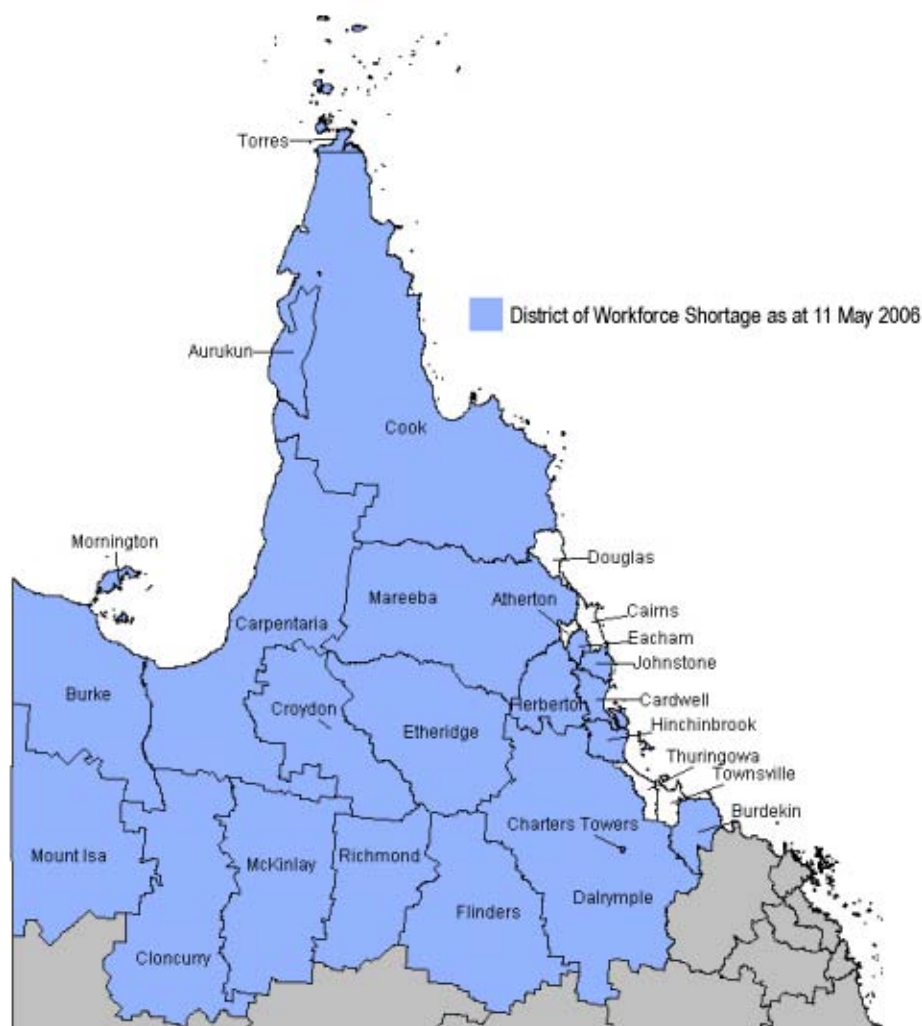
While Victoria shows a definite distributional pattern, it does not fully illustrate the extent of the problem experienced by remote areas. Figure 6.2 shows the LGAs identified as Districts of Workforce Shortage in North Queensland for May 2006. Much of North Queensland is considered to be in shortage. The major centres of Cairns and Townsville/Thuringowa are not areas of shortage. Also excluded are the lifestyle regions of Douglas (where Port Douglas is situated) and Atherton (the Atherton Tablelands). Cooktown is also not a community in shortage, but all other locations in the Cook Shire are identified as a District of Workforce Shortage, so the whole LGA has been classified as in shortage for this map.

Traditionally, GPs in regional areas have worked long hours, averaging 70-80 hours a week, and have been on call 24 hours. Miles et al (2004), found that younger GPs are not willing to work these hours, so often two GPs are required to replace the one retiring GP, compounding the shortage.

Another important aspect of the changing attitudes of GPs in regional areas is the tendency of younger GPs to deskill (Miles et al 2004). A GP in a regional area is expected to have procedural skills: the ability to conduct minor surgery; deliver babies; and administer anaesthetics. Graduate GPs are often choosing not to acquire these skills as part of their training. Recent rises in indemnity and insurance costs are intensifying this trend with some GPs downgrading their insurance cover and refusing to conduct these services.

Other health professionals are also experiencing shortages. For example, urban communities have three times as many occupational therapists per capita as rural communities (Lannin & Longland 2003).

FIGURE 6.2 LGAS IDENTIFIED AS A DISTRICT OF WORKFORCE SHORTAGE IN NORTH QUEENSLAND 2006



Source: BTRE Estimates based on DHA District of Workforce Shortage Searchable Database

Note: Cooktown is not an identified District of Workforce Shortage, however all other communities in the Cook Shire are Districts of Workforce Shortage.

NURSES

Nursing is a profession that is often noted as having severe shortages (Miles et al 2004; Hegney et al 2002; Buchanan & Considine 2002). The impact of shortages is most keenly felt in regional and remote areas where nurse turnover rates are high and accessibility to services is low (Hegney et al 2002). However, the shortage is also apparent in major metropolitan centres (Buchanan & Considine 2002).

The Senate's 2002 inquiry into nursing received evidence of critical shortages of nurses in all areas of the health care system, and found that problems due to nurse shortages in aged care and mental health nursing were particularly acute (SCARC 2002). Shortages in the specialist areas of aged care, operating theatre and mental health nurses are evident in all Australian States in 2006 (DEWR 2006a).

Part of the cause of the shortage is the large number of trained nurses not working in the nursing field. Following a survey showing that 30 000 people registered with the New South Wales (NSW) Nurses Registration Board are not working as nurses,

Buchanan and Considine (2002) conducted further surveys and focus groups to determine why so many nurses have left the profession.

The key finding from the survey was that changes in the way hospitals are managed has been a major cause of nurses leaving. These changes have led to what many nurses perceive as a more stressful and less rewarding work environment. Higher stress levels have in turn induced many nurses to leave the profession, leaving many areas understaffed.

Buchanan and Considine (2002) note three main aspects of the change in management practices. The first is a shift to a “cost control” or profit making approach to managing illness. This approach has meant that there has been an increase in patient throughput coupled with an increase in the acuity of patients.

The second aspect, a change in patient management, has resulted in increased nursing activity without an increase in staffing levels. This has been compounded by a decrease in support staff. Nursing staff are then required to take on more responsibility and more duties, sometimes out of their area of training, to cover understaffing. There have also been increased administrative requirements, and this has changed the roles of senior staff, particularly Nurse Unit Managers, to include less active nursing.

The third impact of these management changes is that nurses are reported to have less capacity to provide quality care and support for each other. Other factors include increased violence/harassment from patients and senior staff, increased pressure from reduced social and community services and rising levels of co-morbidity due to the ageing population. Combined with the long standing issues of shift work, limited career prospects and limited recognition of the value of nursing from the health sector and the community, these factors appear to be encouraging nurses to leave the profession in large numbers.

SCARC (2002) argued that the major factors contributing to nurses leaving the profession were inadequate pay and unsympathetic and inflexible working conditions. Buchanan & Considine (2002) found that many nurses believed that the level of pay was only an issue because of the amount of work and the level of responsibility required of today's nurses. Many stated they were in nursing because of job satisfaction. If job satisfaction is not forthcoming, then nurses look at the pay rates of sales, administration and other roles outside of nursing as being more attractive

Compounding the problem is the ageing of the work force. In Queensland, 50 per cent of the nursing work force is over 40 and new nurses are not replacing those retiring. SCARC (2002) notes that a relatively small proportion of Australian nurses are aged under 30, and a significant number of nurses are lost to the profession in the first year after graduation.

Hegney et al (2002), in a study of former nurses, found that there were many factors that influenced nurses to work in or leave rural and remote areas. Nurses chose to remain in rural and remote nursing because of both professional and rural lifestyle reasons. Many nurses enjoy the lifestyle of rural and remote regions. In particular they gain satisfaction from being part of and contributing to the community.

Rural and remote nurses are expected to undertake an advanced generalist role. Without the nearby availability of specialists, nurses are expected to cover a larger range of conditions, and as a consequence are given a higher level of autonomy and responsibility than metropolitan nurses. However, the advanced role requires a higher level of education and the need for ongoing training and development. This can come at a high cost to nurses with families, if the nurses have to travel great distances with little back-up support in the community (SCARC 2002, Hegney et al 2002).

Quite often rural and remote nurses are part of a small health care team, or may be the sole health service provider. Services are generally not as well funded as in

metropolitan centres. The availability of support and mentoring from other nurses is often limited. Many areas are unable to take on new nurses as there is no one available to supervise the new starter. The infrastructure and equipment available to these nurses is often limited and outdated. Appropriate accommodation of a sufficient quality is also difficult to find or too expensive for many health professionals. This is especially so for nurses with families (Hegney et al 2002).

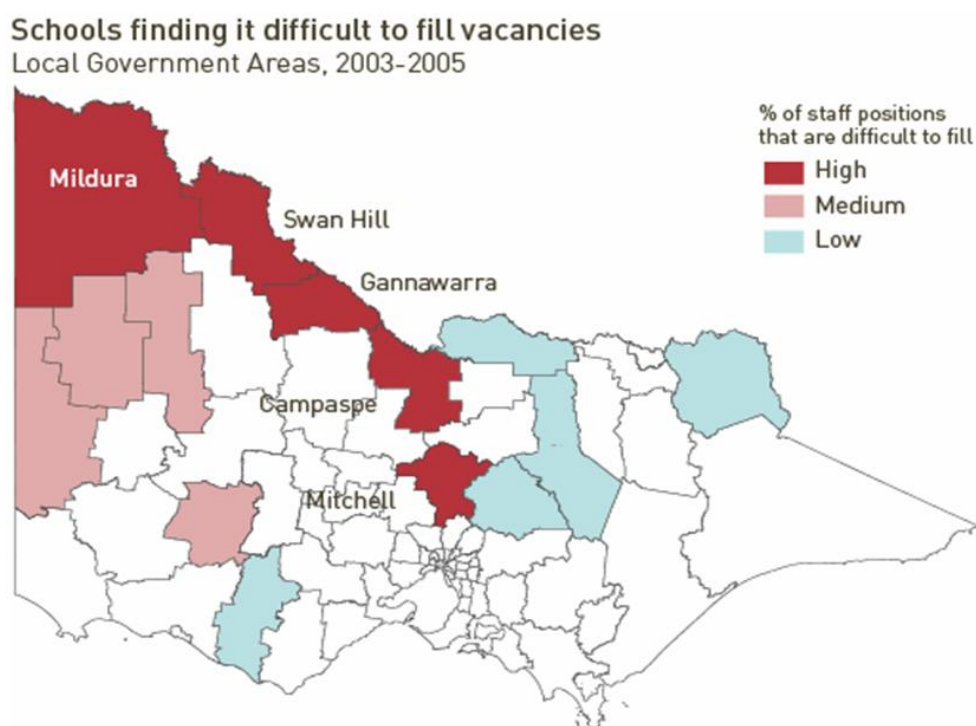
Nurses with young families are often forced to leave the profession, due to the lack of understanding from management that nurses have roles outside of the hospital. Many nurses also have roles on a farm or in a small business as well as their family responsibilities. The lack of family friendly policies and lack of consultation with nurses when preparing rosters means that some nurses are unable to find child care, and are unable to work as a result (Hegney et al 2002).

EDUCATION

Teacher shortages and recruitment difficulties are common across Australia, particularly in regional areas and in some specialised subjects (such as maths, science and LOTE—Languages Other Than English) (DEWR 2006a). In Victoria, some 59 per cent of schools are finding it difficult to fill staff vacancies in secondary schools, compared to 22 per cent in primary schools (DSE 2005).

Figure 6.3 illustrates the distribution of these difficulties, highlighting the problems that the more remote areas are having.

FIGURE 6.3 VICTORIAN SCHOOLS FINDING IT DIFFICULT TO FILL VACANCIES BY LOCAL GOVERNMENT AREAS 2003-2005



Source: Teacher Supply and Demand Reference Group 2003

As part of the fieldwork for the BTRE's ongoing cost of remoteness study, secondary school principals and deputy principals are being interviewed in a large number of regional centres throughout Australia. In May and June of 2006, information was gathered from 18 non-metropolitan secondary schools in Western Australia. Many of the educators interviewed said that they were having difficulty attracting appropriate staff. However, not all regional locations in Western Australia experienced this problem—the educators interviewed in coastal towns have typically not encountered difficulties recruiting staff as the towns are considered attractive postings. One school in a coastal town indicated that potential teachers “come knocking”. DEWR (2006a) lists secondary teachers as being an occupation experiencing recruitment difficulties in regional Western Australia, but not in the Perth metropolitan area. The BTRE research further suggests these recruitment difficulties are not faced universally throughout regional Western Australia, and are much less common in coastal communities.

One aspect of the teaching labour market that needs to be considered is the segmentation of the market (Webster, Wooden & Marks 2005). One kind of teacher is not substitutable for another, such as a primary school teacher for a high school science teacher. This means that the supply of teachers is not only based upon the number of people completing education degrees, but also the number of people completing other degrees, such as science. When faced with a shortage, schools respond by limiting the number of subjects students can take, thereby reducing the breadth and quality of education available to them.

Webster, Wooden and Marks (2005) has also identified a “...*strict adherence to rigid pay scales...*” as being a cause of the shortage of maths and science teachers in particular. The authors note that maths and science graduates are more motivated by earnings than arts graduates, who enter teaching for more altruistic reasons. This is mostly because maths and science graduates can earn more in occupations outside teaching. Webster, Wooden and Marks (2005) recommend that this be recognised and teaching employers consider introducing different pay scales or incentive payments for maths and science graduates.

CHILD CARE

DEWR (2006a) has identified child care coordinators and workers as an area of shortage across most of Australia. Warrilow and Fisher (2003) have found that low student intake, the high number of staff leaving the profession (quoted as between 33 and 40 per cent annually) and increased demand for services, has created a shortage of qualified staff. This is particularly so for long day care centres in metropolitan regions. However, of the 25 approvals between June and December 2001 for a NSW centre to have a not suitably qualified person in the position of teacher, 18 were for non-metropolitan regions, indicating the problem may be more widespread.

As part of their study, Warrilow and Fisher (2003) surveyed qualified staff both in and outside of the child care profession. Accreditation of centres and early childhood teachers was not seen as a contributing factor to child care skill shortages by most survey respondents, however many thought that more students should be encouraged to enter early childhood education. Several respondents felt that child care regulations should not be diminished in any way to solve skill shortages.

The high number of staff leaving child care is a concern for the profession. Surveys of child care staff identify a number of reasons for this high loss (Warrilow & Fisher 2003):

- The status of early childhood teachers is lower than for other qualified teachers. This is reflected in the pay scales, where early childhood teachers receive

between \$2000 and \$4000 per year less than infant and primary school teachers.

- Many staff felt that the conditions of work caused high stress levels and burnout, resulting in a high attrition rate. Conditions include long hours, poor family friendly policies, pressure from parents, high child to staff ratios and a high administrative workload that must fit around caring duties.
- The career development opportunities available to child care workers are limited, especially in smaller institutions.

TRADES

There are many trades experiencing skill shortages across Australia. Buchanan (quoted in Standing Committee on State Development 2005) is of the view that an increased emphasis on maximising shareholder value on a quarterly basis has had an impact on the numbers of new apprentices. Training is seen as expendable and expensive in the short term, so employers are not investing in new apprentices or other training schemes. However, more recent data shows a turn around with the number of apprenticeships increasing since 2000 for Australia as a whole (NCVER 2006a).

Electrical

In the electrical trades, Worland and Doughney (2002) have shown that the in-training ratio has fallen over recent years, partly driven by a dramatic decrease in the number of new apprenticeships in Victoria, and compounded by more people leaving the profession. This situation is expected to worsen as the remaining tradespeople age and eventually retire.

Worland and Doughney suggest that much of the decrease in new apprenticeships is due to the corporatisation and privatisation of government owned enterprises during the 1990s. This can be seen in the number of apprentices employed by the public sector, which was less than 1 per cent in Victoria in 1998 compared with 6.6 per cent nationally. The decline in manufacturing has also contributed to the decline in new apprenticeships.

The growing trend of self-employment and sub-contracting has also contributed to the declining number of new apprenticeships (Worland & Doughney 2002). The self-employed and small and medium enterprise sectors do not believe that they have the capacity to take on new apprentices and see the role as falling to the large enterprises.

Transport and logistics

This is a view echoed in the freight sector (Office of Regional Affairs 2005). It is only the large or multinational firms that are willing to recruit and train young people, while small business wants fully trained drivers. In South Australia 98 per cent of all operators are small businesses. The shortfall in trained drivers is already being felt in some regions, with the Limestone Coast region reporting that on any night 15–20 trucks are unable to move. This problem is expected to worsen with a doubling of the Australian freight task predicted between 2000 and 2020 (DOTARS 2004).

Automotive

The Productivity Commission (PC) in 2002 noted that skill shortages were not a current concern in the automotive trades, but that there were some indications that

problems were developing. DEWR in 2006 identified shortages of motor mechanics, auto electricians and many other fields across all of Australia.

The PC (2002) argued that responsibility for many of the emerging issues lay with industry, for example, improving the negative image of the industry. However, the PC identifies some shortcomings in the system, mainly in the relationship between training organisations and the industry. The industry noted concerns about training organisations, including universities and TAFEs, not providing training of the appropriate skills required for an increasingly sophisticated sector. Employees believed that training and equipment had not kept pace with industry developments. They also argued that university courses did not give sufficient emphasis to workplace management issues.

Building

The Housing Industry Association (HIA) considers the building industry to be “facing an acute shortage of skilled labour” and argues that it is the building and construction industry which is the sector most severely affected by skills shortages (HIA 2005). The ageing workforce, difficulty in attracting new entrants and declining apprenticeship numbers are all cited by industry participants.

PC (2004) felt that it was not surprising that shortages were being experienced in a rapidly growing sector, and this was the responsibility of industry associations, trade unions and educational institutions to respond to the increased demand.

However, the regulatory framework, mostly administered by state governments, was identified as an area of concern. Each state has different licensing arrangements, often tied to training requirements. The HIA also argued that efforts to improve the flexibility of training were being limited by union and trade associations. This was mainly related to the linking of training qualifications to award classifications.

INFORMATION AND COMMUNICATION TECHNOLOGY

The information and communication technology (ICT) market is well studied (Shah & Burke 2003). The ICT market is very dynamic, so the situation can go from shortage to surplus and back to equilibrium in a very short period of time. The flexibility of wages in ICT seems to play a role in this rapid adjustment. This rapid adjustment means that any data relating to ICT shortages should be treated with caution. However, shortages in some specialisations, such as network security, persist even in times of surplus. Many regional areas also have persistent recruiting difficulties.

Summary

- Some occupations are in shortage throughout Australia, while other skill shortages are specific to particular geographic areas.
- Understanding industry wide skill shortages is required because national shortages in a particular industry can be more pronounced in regional areas than in metropolitan areas. The appropriate treatment differs depending on whether a shortage is industry wide or region specific.
- There are many reasons for an industry wide skill shortage. The work conditions, especially conditions such as flexible hours and management practices, are considered inadequate in many occupations. Other causes of shortages include a poor perception of the industry and a lack of appropriate training.

CHAPTER 7 CURRENT PROGRAMMES AND RESPONSES

Governments at the state and national level have been responding to the skill shortage problem for some time. A number of programmes are in place, and more are likely to come as the February 2006 Council of Australian Governments' meeting, discussed below, shows (COAG 2006). Industry has also attempted to solve local shortages in a number of ways, often in partnership with local and state governments. A number of programmes are considered below.

IMMIGRATION

Australia is a net importer of skills from other countries (PC 2006), so immigration has a positive impact on skill shortages. Internal or domestic migration also impacts on skill shortages and is discussed later in this chapter.

There are a number of visa sub classes allowing skilled migrants to live and work in Australia³. Many of these sub classes are regionally or state sponsored, and require applicants to work in a designated regional area⁴ for a minimum period of two years.

All skilled migrant applicants get bonus points for skills or occupations that are listed in the Department of Immigration and Multicultural Affairs (DIMA) Migrant Occupations in Demand List (MODL). This list is compiled and updated by the Australian Government on a 6 monthly basis.

The immigration of skilled workers, particularly to regional Australia, has had mixed results. Immigration to regional areas can have large impacts on local labour markets. However, around 83 per cent of immigrants settle in major cities where their impact is lessened. In general, immigrants earn more per hour worked than equivalent Australian born workers. This difference is greater in regional areas where immigrants earn about 3 per cent more than their Australia born counterparts. However, this higher wage is dependant on the immigrant's English speaking ability (PC 2006).

Individual case studies of skilled migrants has shown they can have a positive impact on the community, fill a local shortage, and settle permanently in regional areas (SCORD 2004). DIMIA (2005) in a 2004 survey found that 91 per cent of Regional Sponsored Migration Scheme applicants between January 2000 and December 2003 remain within their initial region, with unemployment rates of less than 1 per cent.

The Productivity Commission (PC 2006) found that immigrants under all schemes have relatively better employment outcomes in regional areas compared to immigrants in major cities. However, immigrants tend to have poorer employment outcomes than the Australian born population in all areas except remote Australia. The PC has also

³ See Gambaro (2003) for a good summary of the visa types and conditions.

⁴ The designated areas differ according to the visa type, but are generally most of Australia excluding Sydney, Newcastle, Wollongong, Melbourne, Perth, Brisbane and the Gold Coast (DIMIA 2005).

noted that skilled designated area sponsored immigrants have been shown to have worse labour outcomes 6 months after arrival than other skilled immigrants (2006).

DOTARS (2005b) undertook case studies of four regional communities (Kalgoorlie, Griffith, Robinvale and Shepparton) and found evidence that due to social exclusion, communities were failing to utilise the skills of immigrants, particularly recent refugees. BTRE (2005) reports evidence of a low tolerance of diversity in some small Australian communities, while Miles et al (2005) found that some immigrants were not welcomed into Queensland rural communities. These studies suggest that any approach to filling vacancies with overseas workers should be accompanied by support programmes for the new immigrants to help them settle and remain in regional areas. It is possible that an assessment of the region's capacity to welcome immigrants may be required as part of this support process.

Another concern of industry in relation to the skilled migration programme is the skill level of Australian educated overseas students (PC 2006). Under the Skilled Independent Overseas Student visa category, the work experience requirement is waived for Australian educated students. Students accepted under this scheme primarily come from the fields of accounting and computing, occupations that attract the maximum number of points. Under this system, applicants can reside permanently in Australia without any experience, while qualified overseas educated applicants must meet difficult work experience and certification requirements before entering Australia. This is seen as inequitable and inappropriate in many fields.

COAG

The outcomes of the February 2006 Council of Australian Governments' meeting included a number of initiatives to help alleviate skill shortages (COAG 2006).

The COAG National Reform Agenda has three streams—human capital, competition and regulatory reform. The skill shortages initiatives fit within the human capital stream, which is focused on improving health and education outcomes, and encouraging and supporting work. The outcomes of the meeting include establishing mutual recognition agreements for trade qualifications across the states, which will allow people with trade qualifications to move more freely. COAG has also agreed to new arrangements to allow migrants to work as soon as they reach Australia, including establishing off-shore skills assessment processes.

A new regional programme will commence in July 2006, which aims to address the supply of skilled labour to industries and regions of strategic importance to the Australian economy. Integrated strategies will be developed to identify solutions to labour market needs in the selected regions and industries.

Training and apprenticeships are to be made more flexible, by allowing apprentices to demonstrate competencies without having to wait out a set time. School-based apprenticeships are to be made available nationally. Processes for the recognition of skills are to be enhanced, with new funding to be provided to training organisations to develop or improve these processes. In the construction and property services industry, new nationally recognised certificate level qualifications are to be developed.

In the health sector, the Australian Government will increase the number of student places available, and the cap on full fee paying places for medical students will be lifted from 10 to 25 per cent of HECS places. COAG also agreed to a new national assessment process for overseas qualified doctors and to increasing the workforce available to address mental health issues.

COAG has also agreed that all governments will share labour market information to identify and understand the location and extent of skill shortages.

TRAINING AND DEVELOPMENT

Many calls for government intervention on skill shortages ask for more publicly funded training. While public funding is considered by some as efficient and equitable, training to satisfy employers' needs may not be appropriate (Richardson 2005). Trendle (2005) argues that increasing training is only an appropriate solution if there has been a decline of the "in-training" ratio, which is the number of people in training or education as a proportion of the number employed in that occupation. However, this view does not account for significant growth in the occupation through increased demand.

Training is also not a sustainable solution in industries where wastage is a significant cause of the skill shortage. Supplying extra training places for people who may not work in the industry is not a cost-effective approach, particularly in cases where the lead time for training is long. Training for skills where the lead time is long, such as with tertiary qualifications, means that training is often not a short-term solution.

Buchanan (quoted in Standing Committee on State Development 2005) argues that the need for appropriately trained staff requires a long term view, and many companies are much more focused on short term profits maximising shareholder value. Training is costly and too easily expendable in the short term. Training is also often subject to cyclical downturns, causing a reduction in the number of training places offered by employers (DEST 2002). This downturn then affects training completions years later, often when demand for skills is strong.

A more effective approach may be to encourage a culture of training among industry (Shah & Burke 2003), especially for firms providing contractors (Hall et al 2000). Introducing this culture will require employers to take a longer-term perspective on training and profits. However, there is an understandable concern of employers that do provide training about the investment they place in trainees who may be "poached" by free-riding employers. Briggs & Kitay (2000) argue that the declining importance of internal labour markets has meant that employers have strong incentives to provide narrow, enterprise based skills rather than portable, occupation based skills, and that this has the effect of reducing the overall scale and effectiveness of training.

Regional placements as part of the education process may have an influence on regional skill shortages. While the evidence on appropriate timing is mixed, Lawrence (2004) found that medical students who are exposed to regional and rural practice as part of their studies are more likely to later work in regional or rural areas. This tendency is enhanced if the students have received specific training in rural medicine. These findings are also reflected in nursing.

Training subsidies

There are a number of subsidies available for employers who take on trainees or apprentices. Employers can receive a subsidy of up to \$1250 for employing a new apprentice (DEST n.d.). If the employer is in a regional area and the training is in an identified skill in demand area, the employer will receive an additional \$1000 when the apprentice moves from certificate II to certificate III/IV training.

Bonded education

There are a number of programmes where the education of a skilled worker is subsidised in return for working a set period of time in an organisation or region. An example of this is the Medical Rural Bonded Scholarships (DHA 2005). Medical students receive an annual scholarship, but are contracted to work in rural and remote Australia for six years following completion of basic medical and post-graduate education.

REGIONAL DEVELOPMENT AND DOMESTIC MIGRATION

McKenzie (2003) notes that there is a persistent assumption that population growth equals economic development, and vice versa. Seeking population growth as a solution to skill shortages can be inappropriate unless the incoming skills are matched to the skills demanded.

Conversely, seeking job opportunities by attracting new industries is not necessarily a long term solution. While it may be possible to attract footloose industries through subsidies, the business may relocate once the subsidy is complete. The industry also may not be successful unless the local pool of skilled workers matches the skills demanded by the industry.

The case studies suggest that some shortages occur only locally. In this case the problem could be resolved if individuals relocated from areas with a surplus of skilled employees to areas experiencing shortages. While some workers will relocate to find work, many workers will not relocate due to social needs (McKenzie 2003). However, if a shortage is prevalent across Australia, domestic migration is not a permanent solution. If regions attract skilled workers from another region, the immediate problem of unfilled vacancies is merely transferred from one region to another.

The attraction of professionals, particularly health professionals, to a region is important to maintain the presence of other skilled workers. An example where industry in conjunction with the local council has supported recruitment of a general practitioner can be seen at South Hedland (SCORD 2004). BHP Billiton and Dampier Salt contributed to the refurbishment of the local practice. BHP Billiton also committed to supplying housing and a vehicle as part of the salary package for doctors.

RESEARCH AND INFORMATION

The National Centre for Vocational Education Research (NCVER) has a number of projects in their 2006 strategic plan that addresses some of the issues relating to skill shortages (NCVER 2006b). These projects include investigating skill shortages directly as well as several projects that investigate the link between training and employment.

DEWR is in the process of conducting a large number of regional surveys of skills in demand throughout 2006 and 2007.⁵ The results of these surveys are presented at Better Connections Workshops, which bring together employment services providers, government agencies and the local chamber of commerce to develop solutions to local employment issues. The workshops aim to improve labour market effectiveness by addressing labour supply and skill shortage issues, increasing labour market participation and reducing unemployment (DEWR 2006c).

⁵ Results from the Mildura survey were discussed in Chapter 5. Detailed results for the surveyed Victorian regions are available from <www.employment.vic.gov.au>. For other surveyed regions, refer to <www.workplace.gov.au/bcw>.

Summary

- There are a number of responses to skill shortages already in place, and more are planned.
- Immigration is a solution to many regional skill shortages, but the labour force outcomes of immigrants are mixed.
- Governments are often asked for more publicly funded training as a response to skill shortages, however industry led training is often more effective. Extra training is not an effective solution where wastage is a significant cause of the skill shortage.
- Encouraging the domestic migration of workers can provide a solution to specific local shortages, but if the skill shortage is industry wide, this will simply create shortages elsewhere.

CHAPTER 8 CONCLUSION

Skill shortages are a common problem across Australia. Skill shortages are most common at times of high economic growth and low unemployment. However, shortages can occur in times of high unemployment, when there is a mismatch between the skills available and the skills demanded. Skill shortages may be occupation wide, such as in nursing, or they may only occur in certain geographic areas. Skill shortages in one region can coexist with skill surpluses in another.

The causes of skill shortages are complex. There are many drivers that could be causing a shortage in a region or occupation. No two situations are alike, and what works in one region or occupation may not work in another. Each shortage needs to be assessed individually, and treatments need to be tailored to the situation.

One reason labour markets do not adjust quickly to resolve skill shortages is the wage system. Wages are generally not flexible enough to adjust the labour supply accordingly. Part of this inflexibility comes from the wage setting system and regulatory framework, where sub-specialisations in demand are not paid more than those in surplus. The other is the reluctance of employers to raise the wages of skilled workers in demand.

The popular belief is that more publicly funded training is required to alleviate skill shortages. Publicly funded training may not always be an effective solution and is unlikely to match future demand and supply. The exception is for skills that have a long training time and where there is no pool of workers not using their skills. In many cases, industry must take the lead on training and development.

Working conditions and wages also play an important role in skill shortages. In occupations where there are poor conditions or wages, the problem may not be in the supply of labour, but rather in the willingness of labour to take up positions. Governments as employers, particularly in the areas of health and education, need to take a leading role to establish appropriate conditions.

Timely and accurate national information capable of being disaggregated to a regional scale is an important element when responding to skill shortages. This information needs to be available on a geographic basis so that the location of shortages can be pinpointed. The February 2006 COAG meeting agreed that governments would establish new arrangements for sharing of labour market information to enable appropriate responses to skill shortages (COAG 2006).

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACC	Area Consultative Committee
ACCI	Australian Chamber of Commerce and Industry
AIG	Australian Industry Group
ASCO	Australian Standard Classification of Occupations
BTRE	Bureau of Transport and Regional Economics
COAG	Council of Australian Governments
DEST	Department of Education, Science and Training
DEWR	Department of Employment and Workplace Relations
DHA	Department of Health and Ageing
DIMA	Department of Immigration and Multicultural Affairs
DIMIA	Department of Immigration and Multicultural and Indigenous Affairs
DOTARS	Department of Transport and Regional Services
DVC	Department for Victorian Communities
GP	General Practitioner
HECS	Higher Education Contribution Scheme
HIA	Housing Industry Association
ICT	Information and Communication Technologies
LGA	Local Government Area
LOTE	Languages Other Than English
MODL	Migration Occupations in Demand List
NAB	National Australia Bank
NCVER	National Centre for Vocational Education Research
NSW	New South Wales
OACC	Outback NSW Area Consultative Committee
PC	Productivity Commission
SCORD	Standing Committee on Regional Development
SLA	Statistical Local Area

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