UNDERSTANDING REGIONAL SKILL SHORTAGES: A REVIEW OF RECENT AUSTRALIAN GOVERNMENT POLICY[1]

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ABSTRACT: In recent years, the issue of regional skills shortages has received growing attention among policy makers in Australia. This attention has come from a variety of agencies, such as those dealing with: regional development, industry and employment, training and education. There is also interest from agencies with specific labour force focus such as health departments concerned about access to medical services in regional areas. The involvement of many different types of agency has led to different understandings and responses to skills issues, depending upon the focus of the agency in question and the portfolio of policies for which it does (or does not) have responsibility. This paper aims to clarify these different interests, roles and understandings in order to then develop a more holistic framework in which regional skills issues can be better understood. It is hoped that this more integrated approach will allow policy makers to better understand the full range of causal factors involved in regional skills issues, the different responses to the issue, and ways in which spatial perspectives can inform industry-based approaches and vice versa. The paper also highlights the data and information available to those wishing to investigate skills issues further, and critically examines the degree to which data gaps can limit our understanding of regional skills issues.

1. INTRODUCTION

Three years ago, a group of professionals representing Victoria's eight state government departments met to discuss 'regional issues'. This group was part of an inter-agency project, the Regional Atlas, which aimed to present information on non-metropolitan Victoria, based around a number of existing and emerging issues (Victorian Government, 2002). Roundtable discussion of key regional issues highlighted concerns about skills shortages in a variety of contexts. From the viewpoint of the Atlas Project team it was heartening to have found an issue that represented a 'whole-of-government' concern, as this was the type of issue we were aiming to raise and explore. However, 'skills shortages' was generally ill-defined. The skills issue(s) meant different things across and within departments:

- What is the skills base of the region and how can it be enhanced?

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[1] This paper was presented to the Australian and New Zealand Regional Science Association International (ANZRSAI) Conference, Wollongong NSW, Sept-Oct 2004.

[2] The views expressed in this paper are those of the author and should not be regarded as representing the views of the Victorian Government nor the Department of Sustainability and Environment.

- What skills are needed in a region or by an industry?
- Are there seasonal variations in demand? How can seasonal labour be obtained in the right place and at the right time?
- What skills are in short supply - is it a problem of shortage or a mismatch between labour force supply and demand?
- How can labour with the right skills be attracted to regional areas? How can skilled labour be retained within a regional area? (McKenzie, 2002, p.16).

This paper reviews recent Federal government policy responses to issues of regional skills shortages, taking in to account the various perspectives and interests listed above. Apart from providing an inventory of key studies which may prove a useful resource for those dealing with the issue, the paper aims to critically highlight the assumptions and perspectives from which these works have been developed. From this, a clearer typology of approaches can be presented.

2. DEFINING REGIONAL SKILL SHORTAGES

Skills shortages are defined by the Department of Employment and Workforce Relations (DEWR) as follows:

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, 2003)

While this definition holds up well as a general description, it does not represent the range of characteristics and causes which skills shortages can embody. For example, skills shortages may refer to:

- Specific industry needs at a point in time, especially in rapidly expanding sectors – a shortage of computer professionals during the 1990s for example.
- Specific industry needs at a particular time of year – harvest labour is a case in point where the needs may be both in terms of numbers of people for relatively unskilled work (general picking and packing) as well as specific skilled work (pruning vines; shearing sheep).
- Specific locations of need – remote regions or regions perceived as 'unattractive' may have difficulty filling vacancies across a range of work types. Attracting professionals and highly skilled labour can be a particular problem especially for areas where dispersed populations and limited services may reduce the level of desired amenity.

Interestingly, skills shortages may occur in regions of either growth or decline (demographic or economic), thus highlighting the many facets of the phenomenon.

3. THE EMERGENCE OF SKILLS ISSUES IN PUBLIC DEBATE

The issue of regional skills shortages has been the subject of increasing focus in recent years. It is quite instructive to revisit the agenda for the Regional Australia Summit of 1999 and review the key themes identified, as they reflect the regional concerns of the time. While issues of access to skills and retention of skills were included under the 'Education and Training' theme, the background papers and final report do not really address regional shortages in a broad way, but rather focus more on education and training.

Since the Regional Summit, a variety of economic and regional analyses have emerged from the Federal Government which pick up the issue of regional skills shortages in more detail. The main reports reviewed in this paper are listed in Table 1. The table also outlines some of the main interests of selected departments and agencies in relation to skills issues. Some immediate comments can be made arising from the table:
concern about skills shortages has emerged from a number of different sections of Government;

- the perspectives which these agencies bring to the issue are varied;
- while some recent analyses present multi-faceted perspectives on the issue, there is no single clear framework in which a broad discussion of regional skills shortages can easily take place;
- an understanding of the overall scale of the problem is therefore not yet possible;
- some agencies have worked with issues of skills shortages over a long period, however these are generally related to industry-specific shortages, they do not have a spatial perspective, and the key policy response is through workforce training mechanisms; and,
- a greater number of agencies have become interested in regional skills shortages in recent years, reflecting, in part, the spatial manifestation of specific skills issues (for example, the shortage of doctors in many regional areas).

Because of the complexity of perspectives and involvement in skills issues, it is useful to present a framework within which the varied perspectives can be understood. Figure 1 does this in terms of two key approaches: industry focus and location focus.

4. UNDERSTANDING SKILLS SHORTAGES

4.1 Industry-Based Approaches

For agencies dealing with workforce and training matters, skill shortages are often seen within an industry-based, non-spatial context, so causal factors tend to be seen in mostly economic terms:

- occupational wastage through non-completion of training or exit of qualified workers from occupation (DEWRSB; DEST);
- business cycle (DEST);

Table 1. Federal Government Departments for Whom Skills Shortages have Relevance

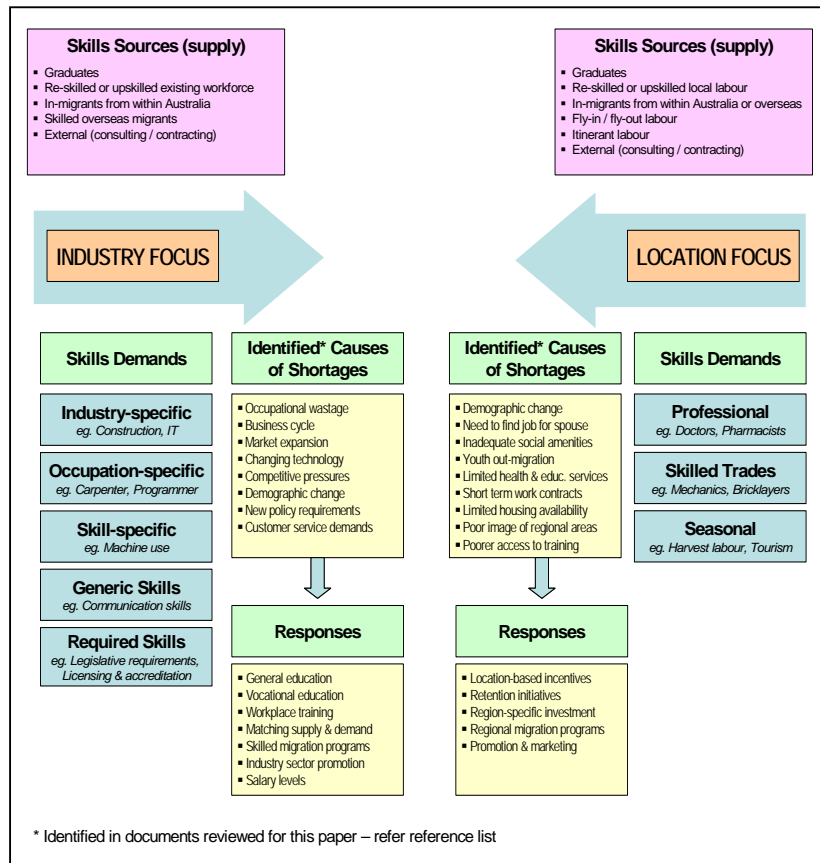| Department/ Agency	Relevant Themes Approaches	Relevant Reports/ Documents	Examples Of Policy Initiatives
DoTaRS Dept. of Transport & Regional Services *Related agencies:* ACCs - Area Consultative Committees RBDAP - Reg. Business Devt Analysis Panel SCORD – Standing Committee On Reg. Devt.	Regional Promotion/ Regional Development/ Investment Attraction/ Regional Infrastructure/ Regional Economic Growth	2002, *Regional Business Development Literature Review* 2002, *Regional Growth and the Skilled Labour Force Forum,* (GGTACC) 2003, *Regional Business. A Plan for Action*, (RBDAP) 2004, *Attracting and Retaining Skilled People in Regional Australia: A Practitioner's Guide,* (SCORD)	Regional Partnerships Program
BTRE Bureau of Transport & Regional Economics	Research & analysis of regional change	2004, *Focus on Regions No. 1: Industry Structure* 2004, *Focus on Regions No. 2: Education, Skills and Qualifications*	
NATSEM National Centre for Social & Economic Modelling	Economic modelling & analysis	2003, *Analysis of Options for Attracting Skilled Labour for Regional Business Development*	
DEWR Dept. of Workplace Relations (formerly DEWRSB)	Workforce skills/ Business Needs/ Employment issues/ Matching skills supply & demand/ Industry focus	1999, *Status of Skill Shortages in the Trades* Skilled Vacancy Report (Quarterly) National and State Skills Shortages Lists (Annual)	Australian Job Search Harvest Trail Guide
DEST Dept. of Science & Technology	Workforce skills / Education & training / Matching skills supply & demand	2002, *Nature and Causes of Skills Shortages. Reflections from the Commonwealth National Industry Skills Initiative Working Groups*, (& DEWR, NCVER)	National Skills Shortages Strategy National Industry Skills Initiative
ANTA Australian National Training Authority	Administration and advice for Vocational Education & Training (VET)	2003, *National Skills Report. A Discussion Paper on the Drivers of Industry Skill Needs* 2004, *National Industry Skills Report*	

Table 1 (continued)

Department/ Agency	Relevant Themes Approaches	Relevant Reports/ Documents	Examples Of Policy Initiatives
DHA Department of Health and Ageing	Attracting medical professionals to regional areas		Rural Retention Program for GPs Rural & Remote Pharmacy Workforce Development Program Rural Health Support, Education & Training Program Workforce Support for Rural GPs Rural Workforce Agencies
DFACS Dept. of Family & Community Services			Labour Market Assistance Stronger Communities – Community Support
DIMIA Dept. Of Immigration Multiculturalism & Indigenous Affairs	Attracting Skilled Migrants to regional areas	2003, *Fact Sheet 26. State/Territory Specific & Reg Migration*	Regional and State-Specific Migration Schemes
DCITA Dept. of Communications, Information Technology & the Arts	Industry-specific research	1998, *Skills Shortages in Australia's IT&T Industries. Discussion Paper*, (& DETYA; DEWRSB; DIMA)	
ABS Australian Bureau of Statistics	Statistical collection/ Statistical analysis	2004, *Workforce Planning Project Report. Using Census Data to Inform Workforce Planning*	

- increased demand for skills through employment growth and market expansion (DEST; ANTA);
- new skills required in response to changing technology (DEWR; DEST; ANTA);
- competitive pressures creating need for higher level skills (DEST; ANTA);
- age profile and demographic change (DEST; ANTA);
- new policy requirements such as OH&S awareness, accreditation, licensing, etc. (DEST; ANTA); and

- consumer and customer service demands (ANTA).

(Sources: DEWRSB, 1999, Skills Shortages in the Trades; DEST, 2002, Nature & Causes of Skill Shortages; ANTA, 2003, National Skills Report).

In general these approaches are non-spatial, although there is a limited recognition of regional issues in some documents which list (but do not discuss in detail) "location of work" (ANTA, 2003, p.8) or "rural to urban migration" (DEST, 2002, p.8; ANTA, 2004, p.25) as a factor in skills shortages. Nevertheless these shortages are often seen as "regional mismatches" between supply and demand (DEWR, 2003) rather than being geographically determined.

Figure 1. Framework for Understanding Public Policy Responses to Skills Shortages

An underlying assumption in the industry-based approaches to skills shortages is that training and education can be used to successfully address many situations in which there is mismatch between supply of and demand for skilled labour. Many programs such as Vocational Education and Training (VET) are based upon this view. Nevertheless, the most recent analysis of skills shortages from the Australian National Training Authority, which has broad responsibility for VET policy, does recognise that not all skills shortages can be dealt with through training (ANTA, 2004, p.24).

The industry-based analyses of skills shortages generally display a good information base both in terms of quantification and understanding of non-spatial causal factors. Because there is a long standing purpose for estimating skills needs for training purposes, the data is relatively robust and time-series data are available for trend analysis, for example through the DEWR Vacancy Report series. Forecasting and modelling of economic change and likely sectoral demand for skills training is also evident (used in ANTA, 2004; DCITA 1998).

Non-government bodies like the Australian Chamber of Commerce and Industry (ACCI) also have time-series survey data assessing business needs and concerns. Concern about worker attraction and retention has risen in recent years and, in July 2004, became the number one concern among ACCI members surveyed – the first time this had occurred since the survey began (ACCI Survey of Investor Confidence, 1999-2004).

4.2 Regional Development Approaches

A less industry-based approach can be seen through agencies such as the Department of Transport and Regional Development (DoTaRS). Although skills issues are generally not the main focus of regional development policies or analysis, the issue is raised across a number of reports and, more recently, has become the focus of some specific investigations (for example, SCORD, 2004).

The Keniry report (RBDAP, 2003) is an important document which discusses in some detail the issue of regional skills shortages. Based on 50 regional visits, meetings with relevant bodies and the receipt of around 200 submissions, the Panel has distilled its findings and presented a recommended set of actions covering issues relating to regional business. A key assumption in the Panel's approach is:

> *Kick-starting regional business growth will help to create vibrant communities that will attract more skilled people, leading to a diverse economy and population, further enhancing communities until they become self-sustaining (RBDAP, 2003, p.8).*

This view is typical of the regional economic development and promotion school which assumes that getting the economy growing will address many problems. Hence many of the recommended actions are economic in nature: improving access to finance for regional businesses; improving the flow of investment capital into regional Australia; enhancing competitiveness and maintaining competitive advantage, and addressing taxation anomalies. In relation to skills shortages, recommended actions include attracting skilled

people to regional Australia through regional marketing strategies, and making use of business migration initiatives (RBDAP, 2003, p.8).

There is also an emphasis placed upon promoting a positive image of regional Australia:

governments and regional networks [should] act together to promote the positive features of regional Australia, especially the investment opportunities and its lifestyle advantages.

A positive image is as important for attracting people as it is for attracting investment. (RBDAP, 2003, pp. 8, 37)

The report recognises a number of constraints faced by regional business, for example:

- regional businesses wanting skills enhancement have poorer access to education and training;
- negative perceptions of regional locations are held in both metropolitan and regional areas;
- infrastructure decline is occurring in many regional areas;
- the short-term nature of many private and government funded employment contracts creates a transient population unwilling or unable to make a commitment to regional Australia;
- an increasing requirement on the part of employers to find employment for the spouse of their new recruit;
- the inadequacy of social amenities such as child care and recreation facilities; and,
- perceptions of inadequate health and education services.(RBDAP 2003, pp. 5-6, 37)

However, having recognised some of the wider factors impinging on regional skills shortages, the Keniry report struggles to provide a satisfactory solution:

The people issues are often the hardest ones to address because they deal with the complexities of human beings. We have considered a range of options, but ultimately, the complex nature of many of the issues ... will require all levels of government, along with regional communities themselves, to work together. (RBDAP, 2003, p.37).

This statement is devoid of any real action to address the "perceived" people crisis. However, to be fair, the Keniry Report is not alone in hitting a brick wall when it comes to formulating responses in the face of a wide array of causal factors and issues inherent in regional skills shortages.

A more specific example of skills issues being addressed through DoTaRS can be seen in the Report by the Standing Committee on Regional Development (SCORD) *Attracting and Retaining Skilled People in Regional Australia*, released in 2004.
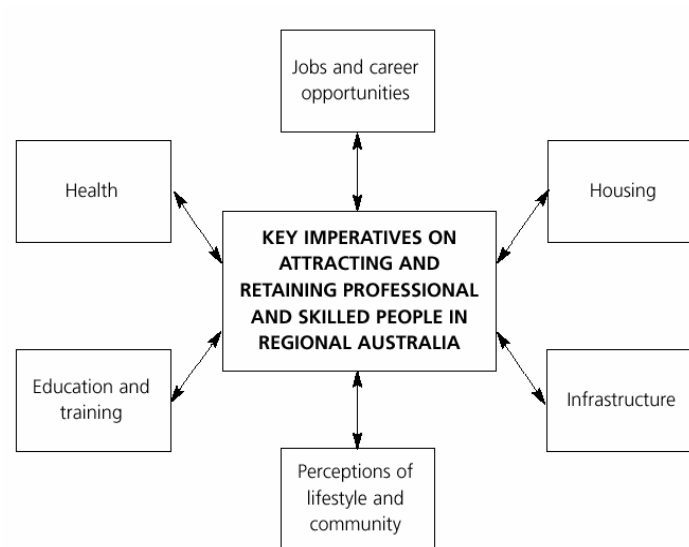
This report aims to:

- demonstrate a range of solutions and options that communities have employed to address attraction and retention issues;
- inform communities and practitioners about government programs and initiatives that may be relevant; and,

- encourage and inspire communities and practitioners by providing examples of where communities facing similar problems were successful, or partly successful (SCORD 2004, p.2).

The report recognises the multifaceted nature of skills attraction and retention as well as the importance of learning from case studies in order to give direction to communities facing skills attraction and retention issues. Learnings from these case studies provide a very good summary of potential responses (discussed in the following section) and a set of key imperatives arising from these learnings is presented (refer Figure 2).

Figure 2. Key Imperatives Associated with the Attraction and Retention of Skilled People to Regional Areas

Source: SCORD (2004), p. 4.

Despite the usefulness of this analysis, a more objective evaluation of the value of some of the case studies presented, raises the following public policy concerns:

- *Scale of impact.* A small town gained funding from local, state and federal government to build factory units and subsidise housing to attract tradespeople to the town (population < 400). Two tradespeople have subsequently been attracted over a four year period. The scale of the impact seems small in relation to the level of investment and effort (although there is no costing provided in the case study).
- *Cost-benefit issues.* In one case, Government subsidisation of $70,000 was used to attract one doctor to a regional municipality in Tasmania (population

2,200). Is this the most effective use of government resources to provide health services?

- *Sustainability of success.* The use of overseas migration programs is provided in several of the case study examples. It is not clear, however, whether these migrants will stay in the region or whether a rolling process of getting new placement every 3-5 years is needed as part of the local employment strategy.

- *Impact of promotional strategies.* One of the case studies outlined an initiative to bring prospective employees to a regional factory. The outcome of this was somewhat ambiguous, as indicated in an evaluation of the 21 students who undertook the tour:

> *"The comments suggested that, while they would not actively seek work in the country, they would consider a position if it was offered, which appeared not to have been the case before the study tour."*
> *(SCORD, 2004, p.25) [emphasis added by author].*

- *Size of the problem.* Many of the case studies presented involve attracting 1-3 people for specific jobs. However, anecdotal evidence suggests that the regional skills attraction problem may be much larger than this (Miles *et al*. ,2004; GGT ACC, 2002).

4.3 The National Skills Strategy – A More Integrated Appraoch

The National Skills Shortages Strategy established by the Department of Education, Science and Technology (DEST) in 2004 presents an interesting development from its predecessor, the National Skills Initiative. Earlier work within the Department had focused on skills shortages from an industry-based perspective. However the latest work recognises the spatial dimension of skills shortages:

Since 1999, the Australian Government has approached skill shortages on an industry by industry basis... But today, skills shortages are not just felt on an industry by industry basis. Today, skill shortages occur on a region by region basis... Under the National Skills Shortages Strategy, the Australian Government will undertake regional skills pilots to identify and develop practical strategies to address a region's current and future skills.

> *In each pilot, the Australian Government will work with regional stakeholders such as industry, education providers and the broader community to:*
> - *profile existing and potential industries in a region;*
> - *identify common factors and solutions to skills issues;*
> - *engage relevant national, state and local industry and training bodies;*
> - *identify skills and training needs; and,*
> - *pilot practical strategies that could be used in other regions. (DEST, 2004, Fact Sheet 2)*

Given the recency of this initiative, it is difficult to evaluate the degree to which spatial dynamics are incorporated within the understanding of skills shortages, or the development of policy responses. It will also be interesting to

see what degree of convergence might result from policies in DEST and in DoTaRS in relation to regional skills issues.

5. RESPONDING TO THE REGIONAL SKILLS SHORTAGES

A comprehensive list of possible strategies for the attraction and retention of skilled workers is provided in the SCORD Report *Attracting and Retaining Skilled People in Regional Australia* (SCORD, 2004, p.50):

Action/ strategic plan	Informative materials produced
Advertisements placed outside local area	Online study developed
Work experience outside local area	Partnership – govt, business, education
Assistance from professional organisation	Promotion of benefits of regional lifestyle
Attraction package offered	Arrangement of regional visits
Community consultation / needs surveys	Publicity
Community commitment	Recruitment consultant
Council support – salary/ housing subsidy	Redevelopment / revitalisation of town
Development Group created	Regional Development Organisation Support
Funding from State/Aust Govt programs	Skilled migration program
Industry/ employer support	Support to new families
Placement opportunities for students	Students targeted
Local training opportunities	University support

It is beyond the scope of this paper to review all these approaches. Instead, just one of the options, Regional Skilled Migration Schemes, administered by the Department of Immigration, Multiculturalism and Indigenous Affairs (DIMIA) will be examined.

5.1 Regional Migration Initiatives

Utilising overseas migration initiatives for regional skills enhancement is not new, as can be attested by the Snowy Mountains Scheme of the 1950s (McKenzie, 1996). However, renewed interest in regional migration schemes has re-emerged in the past decade with initiatives such as the Regional Sponsored Migration Scheme (RSMS) and Skilled Independent Regional (SIR) visa (refer Annex for further details of these and other regional migration schemes).

While specific objectives vary between the different schemes, the following excerpts indicate the role of some of these initiatives in addressing regional skills shortages:

The Regional Sponsored Migration Scheme (RSMS) [introduced in 1996] helps employers in regional and less populated areas of Australia to fill skilled vacancies that they have been unable to fill through the local labour market.

The regional temporary business visa (subclass 457) initiative [introduced in 2003] aims to encourage a greater dispersal across Australia of skilled overseas persons with abilities in demand, and to provide support, in the

form of improved access to skilled temporary labour, for state and regional development projects.

The Skilled-Independent Regional (Provisional) (SIR) visa [introduced in 2004] ... is designed to assist regional areas attract, and retain, skilled migrants to fill skill shortages, boost development in regional communities, and counter the population decline in rural areas. (DIMIA, 2003, 2004)

Such initiatives can be critical at a local level for filling specific vacancies. Their impact in creating longer term population redistribution is probably more questionable. Retention of these migrants has also been raised as an issue. The Joint Steering Committee on Migration in their review of regional migration mechanisms in 2001 found:

A more significant concern was that employees would leave before their two-year contract had been completed. .... A national survey of RSMS showed that 'a minimum of 30 per cent left within the two years', and that one third of those (ie about one in ten of all employees using RSMS) stayed with their sponsor for fewer than six months. ... The Committee concluded that employers' fears that their nominees would not fulfil their contracts was justified. (Australian Parliament, 2001, pp.32-33).

Unfortunately, it is very difficult to quantify some of the regional impacts of the regional migration schemes because the definition of 'regional' varies considerably between schemes. Immigration data on these schemes is often aggregated to the category of "State/Territory Specific and Regional Migration Initiatives" (DIMIA, 2002). Yet within this category, several definitions apply, as shown in Table 3. It is therefore difficult to determine the impact of regional migration schemes on specific regions, or even in terms of a metropolitan-non-metropolitan split.

6. WHAT IS MISSING IN THE DEBATE

In reviewing the work of various Federal Government Departments, a range of information and perspectives can be brought together in order to gain a broader understanding of skills issues in general and regional skills shortages more specifically. However, despite the plethora of material, there are still gaps which limit our ability to quantify and understand the dynamics of regional skills shortages. These gaps include appropriate information and data, and a better understanding of geographic and demographic dynamics.

6.1 Information and Data

In previous sections, the difference between industry-based and regional development based approaches was highlighted. To some extent, the differences in approach are also reflected in the different types and sources of data brought into respective analyses, as shown in Table 4. In particular, industry-based approaches use vacancy rate and jobs forecasting data sources to a greater extent – sources which have limited geographical detail. Regional migration initiatives rely on immigration data collected mostly by the DIMIA itself and these data also have geographic limitations as discussed previously.

Table 3. Geographical Definitions under Selected Migration Program Initiatives

Geographical definition of regional migration initiatives	Migration Category & Year of Introduction
Regional and less populated areas of Australia "All areas of Australia . . . except Brisbane, the Gold Coast, Newcastle, Sydney, Wollongong, Melbourne and Perth"	* Regional Sponsored Migration Scheme (RSMS) – 1996
Designated areas "Designated areas are identified by individual State and Territory Governments. Currently all parts of Australia except Sydney, Newcastle, Wollongong, Perth and Brisbane are designated areas."	* Skilled – Designated Area Family Sponsored – 1996 * Skilled-Designated Area Sponsored Overseas Student Category – 2003 * Regional Established Business in Australia (REBA) – 1997
Regional or low-population growth metropolitan area of Australia " .. anywhere in Australia except in Sydney, Newcastle, Wollongong, the NSW Central Coast, Brisbane, the Gold Coast, Perth, Melbourne or the ACT."	* Skilled Independent Regional (Provisional) visa (SIR) – 2004 * General Skilled Migration – Points-Tested Categories – 2003
Regional or low-population growth areas of Australia " .. anywhere in Australia except Sydney, Brisbane, the Gold Coast, Perth or Melbourne."	* Temporary Entry Initiatives (subclass 457) – 2002
States and Territories where skills are in demand "The South Australian, Victorian and Tasmanian Governments currently use the STNI scheme."	* State/Territory Nominated Independent Scheme (STNI) - 1997 * Skill Matching Scheme - 1996 * Skill Matching Visa – 1999

Sources: DIMIA, 2003, *Fact Sheet 26. State/Territory Specific & Regional Migration;* DIMIA, 2004, "Employer and State/Territory Government Sponsored Migration", and DIMIA, 2004, Business Employment Section, personal correspondence 19th August.

Consultation and survey approaches are important to both industry based and regional development approaches, but are lacking in some other economic analyses. This difference is potentially significant. The analyses which rely exclusively on secondary data seem to 'miss' the issue of regional skills shortages. For example, the ABARE report *Country Australia. Influences on Employment and Population Growth* manages to miss the issue of skills shortages despite its analysis of both demographic and economic trends in

regional Australia. And the *State of the Regions Report* produced by National Economics (2003) which aims to

> *"provide a coherent framework for analysis and understanding of regional development and provide the foundations for planning and policy direction" (SOR 2003, Preface)*

is also notable for its lack of discussion of the issue. In contrast, the Australian Industry Group, *Industry in the Regions* (2001) report or surveys such as those by the Australian Chamber of Commerce and Industry pick up the issue quite strongly when employers are directly surveyed about the issues they face.

Given that regional skills shortages seem to appear as either a major issue or don't appear as an issue at all in different regional economic analyses, the researcher is led to ask: Do skills shortages really exist? Are they of a significant enough scale to warrant widespread attention? Does the recognition of regional skills shortages only arise when certain data are being used?

This last question is significant and raises a much broader issue of the use of information to inform public policy – a subject unfortunately beyond the scope of this paper. Nevertheless, the review of Government documents seems to indicate that the issue of skills shortages comes through strongly where consultations, submissions, qualitative work and specific surveys asking about "issues" are involved whereas, those reports which did not raise the issue tended to be ones which focused on an analysis of collected statistical data. If this conclusion were true, it brings in to question the ways in which data is chosen for policy research purposes and, more importantly, highlights the value of harvesting local knowledge for the assessment of policy issues.

The example of the GGT ACC Report is instructive in this regard. Despite very limited statistical analysis of skills shortages, the report presents a wide range of causal factors as well as discussion on possible responses to the issue. Its value is in highlighting the inter-relatedness of these factors:

> "The need for additional and flexible support for VET and Apprenticeship / Traineeship programs was raised. Assistance with transport, housing and social programs would support these programs to encourage young people to take up opportunities in rural and regional areas" (GGT ACC, 2002, p.12).

This holistic approach is difficult within the context of separate and complex government Departments, although the move towards joint analysis (eg. DEST, DEWR & NCVER, 2002) and inter-disciplinary understanding (DEST, 2004) is a promising one. The point of caution within these exercises is that local views, local knowledge and qualitative information be considered as a legitimate and valuable element in understanding regional skills issues, even in high level analyses.

Table 4. Examples of Data Used in Selected Analyses relevant to Skill Shortages

Data/Information	Initiative/Report
1. INDUSTRY-BASED APPROACHES	
Consultation with: employers, industry, education and training providers, peak bodies	DEWR *National and State Skills Shortage Lists*
	DEWR *Vacancy Report*
	DEWRSB 1999, *Status of Skill Shortages in the Trades*
Survey of employers who have recently advertised vacancies for selected occupations.	DEST 2002, *Nature and Causes of Skills Shortages.* (& DEWR, NCVER)
ABS Labour Force Survey	DCITA 1998, *Skills Shortages in Australia's IT&T Industries.* (& DETYA; DEWRSB; DIMA)
ABS Census – industry, occupation, qualifications	ANTA 2004, *National Industry Skills Report*
Job Search Records (Skilled Vacancy Report)	ABS 2004, *Workforce Planning Project Report. Using Census Data to Inform Workforce Planning*
DEWR skills data by industry – 20 year series.	
Access Economics Forecasts of jobs growth & staff turnover	
2. REGIONAL DEVELOPMENT APPROACHES	
Interviews and submissions	RBDAP 2003, *Regional Business. A Plan for Action*
Case studies	SCORD 2004, *Attracting and Retaining Skilled*
ABS Census - Demographic statistics	*People in Regional Australia*
Local Knowledge	GGTACC 2002, *Regional Growth and the Skilled Labour Force Forum*
ABS Census - industry, occupation, qualifications	BTRE 2004, *Focus on Regions No. 2: Education, Skills and Qualifications*
ABS Census – occupation	NATSEM 2003, *Analysis of Options for Attracting*
ARIA Remoteness categories	*Skilled Labour for Regional Business*
HECS information	*Development*
3. REGIONAL MIGRATION	
ABS Migration Data	DIMIA 2003, *Fact Sheet 26. State/Territory Specific*
ABS Demographic Data	*& Reg Migration*
DIMIA Migration Program Management System (MPMS)	DIMIA 2002, *Population Flows: Immigration Aspects*
DIMIA Immigration Management Information Reporting System (IMIRS)	
Submissions	Aust. Parliament 2001, *New Faces, New Places.*
DIMIA Data	*Review of State Specific Migration Mechanisms*
4. REGIONAL ECONOMIC ANALYSES*	
Wide range of secondary sources and ABS /Govt agency data	National Economics 2003, *State of the Regions Report*
ABS Census & other Government agency data	ABARE 2001, *Country Australia. Influences on Employment & Pop. Growth.*

Note: The regional economic analyses listed under point 4 do not relate to skill shortages, but are included for discussion purposes.

6.2 Geographic and Demographic Dynamics

All of the initiatives and reports reviewed exist within both a geographic and demographic context with inter-relationships and feedback factors which ultimately affect the success of any initiative in regional Australia.

Australia is unique geographically and demographically. This affects all government policy and skills shortages are no exception. Skills shortages in Australia are fundamentally affected by: low population density; distance between centres and the primacy of capital cities. Furthermore, impacts of globalisation and technological change in the past two decades have strengthened the role of large cities in the modern economy and in our culture. Demographically, three elements are critical to issue of skills shortages: age structure; migration patterns, and natural increase.

6.2.1 Age Structure

Age structure receives some attention in the work of the Australian National Training Authority (ANTA 2003, 2004) in terms of the ageing of the workforce and impending retirement issues. Furthermore, "many of [the] occupations with the highest expected rates of retirement in the coming years are from the higher skilled end of the occupation category." (ANTA 2004, p. 16). Forecasts by Access Economics presented in the report estimate that around 12½ million additional people will be required over the next decade to address the effects of employment growth, staff turnover and retirement. (ANTA, 2004, p. 17).

Age structure, in this instance, is considered in a non-spatial way, so the differences in age structure between regional areas which generally have older age structures than metropolitan areas, are not factored into the analyses. Where age structure is considered in geographic terms, there are both supply and demand issues that arise. From the supply side, the net loss of young people from regional areas reduces available skilled labour while, from the demand side, ageing regional populations are seen to have increasing demand for specific services, such as health-related which require skilled labour to be adequately provided.

6.2.2 Migration Patterns

The assumption that 'people follow jobs' is held implicitly or explicitly by both industry-based and regional development approaches. This assumption, however, does not hold up well in the Australian context (O'Hagan, 2003, pp.22-23).

More detailed analysis of migration as a factor in regional skills shortages receive some attention from regional development agencies like DoTaRS rather than agencies dealing with workforce like DEWR or training like DEST. This gap in DEWR/DEST policy work is ultimately quite significant for two reasons. First, the failure to better understand regional aspects of attraction and retention issues limits a full understanding of industry shortages. Attraction of young professionals requires more than simply a job. Economic and social changes and globalisation are leading to lifestyle preferences which favour metropolitan rather than regional amenity. People change jobs and careers more often, they are

more mobile and they seek communities of diversity, tolerance, vibrancy and sophistication (Collits, 2002). In short, "these changes seem to favour places with scale and with global connectivity" (Collits, 2003, p.10). Second, a non-geographic response in training initiatives may mean that training "solutions" are less likely to succeed in regional areas because of the geographic realities of low population density and distances to be travelled.

The need for additional and flexible support for VET and Apprenticeship / Traineeship programs was raised. Assistance with transport, housing and social programs would support these programs to encourage young people to take up opportunities in rural and regional areas (GGT ACC, 2002, p.12).

6.2.3 Natural Increase

The third demographic factor – natural increase – is not addressed to any real degree within skills shortages debates. The significance of natural decrease (where numbers of deaths in a population outnumber births) is that it is a fundamental structural change in the population which has emerged over a 30 year period as a result of changing patterns of fertility and mortality. Although it affects the whole Australian population (and the populations of other developed countries), the impact is being felt earlier in many regional areas. In the absence of in-migration, a region experiencing natural decrease cannot increase its population.

To some extent, the concerns raised by natural decrease are often found though age structure analysis in terms of the shrinking of the working-age population. However, decreasing size of an entire population is not considered, especially among those agencies working on assumption that economic growth will inevitably lead to population growth. One has to look beyond national regional development policies to the State level where South Australia and Victoria in their work on population policies have highlighted these matters (SA Government, 2004).

7. CONCLUSION

While this paper has presented a critical review of recent federal government work on skills issues, it has done so with the aim of moving our understanding forward. Clearly, there are many sections of government along with business and community wishing to address the problem of regional skills shortages. In conclusion, therefore, I would present three areas in which further work could be focussed:

1. Quantifying the scale of the problem

Despite the many reports we have little real understanding of the scale of the regional skill shortage issue. Current data sources appear limited; the most comprehensive data (census, labour force, etc) do not actually inform us about *shortages*. Data that do reveal shortages as a major issue (business surveys, consultations) do not provide the quantitative rigour for us to assess the nationwide extent (in numerical terms) of regional skills shortages.

2. Developing a more integrated understanding.

There are some signs that a more integrated understanding of regional skills issues is emerging as industry-based approaches recognise the spatial dimension. However, this cross-linking seems at present to be somewhat superficial. There is a real need for *expertise* (geographic, labour force analysis, and demographic) to be brought together and more integrated understandings to be developed, rather than simply a fleeting reference being made to 'geographic' or 'demographic' factors as often occurs at present.

There is also a need to bring a wider group of *agencies* together to discuss the issue and develop appropriate responses. The Department of Health and Ageing for example (along with its State Government equivalents) has policies for the attraction and retention of medical skills in regional areas, yet, to date, there seems to have been little connection between this work and the work of Departments like DEWR, DEST or DoTaRS. Federal agencies would also do well to monitor the development of population policy documents in States like South Australia and Victoria as these more directly link demographic change with geographic outcomes in respect of skills shortages.

3. Balancing promotion strategies with realistic trend analysis and forecasting.

Should we plan on the basis of trends and forecasts or should we provide a normative vision to inspire success? This choice lies at the heart of many regional policy dilemmas. If we project population decline in a region, are we creating a self-fulfilling prophecy? If we present an optimistic vision, will this inspire the regional confidence to make it happen?

The profession of economic development officers is often based upon the optimistic school, yet for demographers, population growth can only come from natural increase or migration, both of which are determined by an array of social, economic and geographic constraints or opportunities. Promotional approaches which fail to recognise these factors are doing themselves a disservice and probably wasting or misdirecting a substantial amount of resources.

The balance between optimism and pessimism in regional development strategies and analysis is not simple or clear cut. In fact it is probably better to value the creative tension between the two rather than seeing them as mutually exclusive options. In the process of developing better data and more integrated dialogue across government domains, I hope that this creative tension can continue to fuel many debates on regional skills shortages in the near future.

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APPENDIX 1. FEDERAL GOVERNMENT – ADDITIONAL INFORMATION ON INITIATIVES

Harvest Trail (DEWR) http://jobsearch.gov.au/HarvestTrail/default.aspx
National Skills Shortages Strategy (DEST)
    www.getatrade.gov.au/fact_sheets/fact.htm
Regional Migration Initiatives (DIMIA)
    www.immi.gov.au/migration/regional/
Regional Partnerships Program (DoTaRS) www.regionalpartnerships.gov.au
Regional Summit Papers (DoTaRS)
    www.dotars.gov.au/regional/summit/program/themes/index.htm
Rural & Remote Pharmacy Workforce Development Program (DHA)
    www.ruralhealth.gov.au/workers/rrpwdp.htm
Rural Health Support, Education & Training Program (DHA)
    www.ruralhealth.gov.au/workers/rhset.htm
Rural Retention Program for GPs (DHA)
    www.ruralhealth.gov.au/workers/rrp.htm
Rural Workforce Agencies (DHA) www.ruralhealth.gov.au/workers/rwa.htm
Sustainable Regional Program (DoTaRS) www.sustainableregions.gov.au
Workforce Support for Rural General Practitioners (DHA)
    www.ruralhealth.gov.au/workers/wsrgb.htm

APPENDIX 2: REGIONAL AND STATE SPONSORED MIGRATION PROGRAMS

Can be used to deal with skills shortages in 'regional' areas. But what consititutes 'regional' for the purposes of the different programs varies considerably.

Migration Category	Year	Objective	Geographical Applicability
Regional Sponsored Migration Scheme (RSMS)	1996	The Regional Sponsored Migration Scheme (RSMS) helps employers in regional & less populated areas of Australia to fill skilled vacancies that they have been unable to fill through the local labour market	Regional and less populated areas of Australia All areas of Australia . . . except Brisbane, Gold Coast, Newcastle, Sydney, Wollongong, Melbourne & Perth
State/Territory Nominated Independent Scheme (STNI)	1997	The STNI Scheme enables States/ Territories to sponsor Skilled-Independent category applicants who are willing to settle in States/ Territories where their skills are in demand	The South Australian, Victorian and Tasmanian Governments currently use the STNI scheme."
Skilled – Designated Area Family Sponsored	1996	This category makes it easier for Australian citizens & permanent residents living in designated areas of Australia to sponsor their relatives for entry, while at the same time ensuring high skill levels are maintained"	"Designated areas are identified by individual State/Territory Governments. Currently all parts of Australia except Sydney, Newcastle, Wollongong, Perth & Brisbane are designated areas."
Skilled- Designated Area Sponsored Overseas Student Category	2001		Designated areas are identified by individual State/Territory Governments. Currently all parts of Australia except Sydney, Newcastle, Wollongong, Perth & Brisbane are designated areas.
General Skilled Migration – Points-Tested Categories	2003	From 1 July 2003, new incentives to study in regional Australia were introduced for students who are interested in applying for skilled migration Under the points test for general skilled migration, applicants may now be awarded 5 additional points for having lived & studied in regional Australia or a low population growth metropolitan area for at least two years.	Regional Australia or a low population growth metropolitan area. Regional Australia for this category is defined as any SD with a population at the 2001 Census < 200,000. In addition, metropolitan areas that have experienced low population growth between the 1996 & 2001 Censuses (less than 50 % of national average population growth) are included as part of this measure.
Regional Established Business in Australia (REBA)	1997	The Regional Established Business in Australia (REBA) category. allows people temporarily in Australia on Business (Long Stay) visas to apply for permanent residence if they have successfully established a business in a designated area of Australia.	Designated areas are identified by individual State & Territory Governments. Currently all parts of Australia except Sydney, Newcastle, Wollongong, Perth & Brisbane are designated areas.

Temporary Entry Initiatives	2003	The regional temporary business visa (subclass 457) initiative aims to encourage a greater dispersal across Australia of skilled overseas persons with abilities in demand, and to provide support, in the form of improved access to skilled temporary labour, for state & regional development projects	Regional and low-population growth areas of Australia: anywhere in Australia except in Sydney, Newcastle, Wollongong, the NSW Central Coast, Brisbane, the Gold Coast, Perth, Melbourne or the ACT."
Skilled Independent Regional (Provisional) visa	2004	"The Skilled-Independent Regional (Provisional) (SIR) visa is for skilled people who wish to live & work in a regional or low population growth area in Australia. The visa is designed to assist regional areas attract, & retain, skilled migrants to fill skill shortages, boost development in regional communities, & counter the population decline in rural areas.	Regional and low-population growth areas of Australia: anywhere in Australia except in Sydney, Newcastle, Wollongong, NSW Central Coast, Brisbane, Gold Coast, Perth, Melbourne or ACT."

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DIMIA, 2004, *Employer and State/Territory Government Sponsored Migration* www.immi.gov.au/migration/regional/regional1.htm.