

NATIONAL VOCATIONAL EDUCATION
AND TRAINING RESEARCH PROGRAM

OCCASIONAL PAPER

Economic vulnerability in Australia, 2002–12: an employment perspective

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John Stanwick

NATIONAL CENTRE FOR
VOCATIONAL EDUCATION RESEARCH



Australian Government
Department of Industry



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About the research

Economic vulnerability in Australia, 2002–12: an employment perspective

Michelle Circelli and John Stanwick, NCVET

This paper focuses on one aspect of disadvantage in regions, namely, economic vulnerability, using a series of simple indicators of labour market change over a ten-year period, 2002–12. This time period is sufficient to capture change in the labour market. For the purposes of this paper, regions refer to the Australian Bureau of Statistics (ABS) statistical regions.

We are ultimately interested in indicators of vulnerability, as they provide information on where and what type of assistance might be provided. Of relevance to the vocational education and training (VET) sector, this assistance will generally involve some level of training and retraining. As such, the paper also highlights initiatives that have been put in place to assist industries and individuals in the most economically vulnerable regions, noting that there is a dearth of robust information on their impact.

Five indicators were used to determine the economic vulnerability of regions: the change in the average hours worked per region; the change in the total hours worked in each region; the extent of population change in a region; a simple index of structural or industry shift within a region across two time periods; and an index of turbulence within a region; that is, the extent to which people move from employment to unemployment, and from unemployment to employment. To further inform the discussion, the three most dominant industries in a region in 2012 were derived, based on the total number of hours worked in the various industries for any given region. In addition, the change in average hours worked between 2002 and 2012 was calculated for the dominant industries in each region.

Key messages

- The manufacturing, health care and social assistance, and retail industries tend to dominate in the more economically vulnerable regions. On the other hand, mining and construction feature strongly in the least economically vulnerable regions, even though the cyclical nature of these industries can be seen as a challenge.
- Some vulnerable regions do not have clearly dominant industries but instead a broader mix of industries.
- The impacts of structural economic changes are broad and sustained and tend to affect all employment in the region.
- Training efforts need to be tailored to the needs of the region and, where an industry is in decline, may involve the retraining of workers and/or training and other assistance for the unemployed. These efforts can also assist in increasing labour mobility in these regions.
- The various assistance packages available in many of the more vulnerable regions were focused on improving employment in the region. However, there is very little evaluative data available on these packages by which to assess their success or otherwise, so their impact is not clear.

Rod Camm
Managing Director, NCVET

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Introduction

Economic upheaval, however it presents (plummeting financial markets at a global level, changes to the terms of trade and natural disasters are examples), is not an infrequent occurrence. How *vulnerable* communities are to the structural economic changes that such events prompt may be determined by their size, coupled with trends in population size, communities' ability to adapt to the change, or their economic diversity (Austrian Institute for Regional Studies and Spatial Planning 2011; Houghton 2012; Johnson 2006; McColl & Young 2005).

In this paper we are interested in ways by which to characterise the vulnerability of regions¹ to structural economic change, with particular regard to changes in employment within industries in a region over time. This is a more narrow view of what some refer to as community disadvantage,² a concept that encompasses the economic context of a community or region, as well as the social and environmental context.

We are interested in indicators of economic vulnerability, ultimately because they provide information on where, and potentially how, effort should be expended into addressing the impact of structural change. These efforts will generally involve measures aimed at ensuring that people in vulnerable areas are able to obtain the skills to gain employment, or if already employed, better employment. The efforts may involve retraining (and acquiring skills transferable to other industry sectors), where an industry or indeed a significant company is in decline. A case in point is a proposed assistance package for Holden workers,³ which will have as one of its foci the retraining of workers in Victoria and South Australia. However, there are others in vulnerable regions who are unemployed and for whom training and skills acquisition are equally important. This also has implications for labour mobility, in that workers in vulnerable regions may be able to obtain skills to allow them to move to other areas where there are better employment opportunities. Note that we have not specifically examined skills and qualifications in this paper. Rather we have focused on a set of indicators to identify those regions where assistance may be required.

The latter part of this paper provides examples of recent initiatives and how they attempt to assist vulnerable regions. As will be seen, training and skills acquisition feature in these initiatives. Note that, since we are looking at Australian Bureau of Statistics (ABS) region data, the analysis considers regions within cities, not solely regional Australia. As will be seen from the ensuing analysis, areas within cities too can be economically vulnerable.

How do we measure economic vulnerability?

This paper looks at possible indicators of economic vulnerability, such as the change in total and average hours worked in a region, population change and turbulence (defined later). We do acknowledge there are broader measures of vulnerability, such as levels of education or the number of people in receipt of income support; however, we have limited the indicators of focus to those relating to employment. The period of time we consider is 2002–12.

¹ The term 'regions' in this paper refers to the ABS statistical regions (see ABS 2011, 2013c for more information).

² Readers interested in the concept of community disadvantage in Australia may wish to refer to a recent synthesis piece on this topic by Price-Robertson (2011).

³ Holden announced in December 2013 that manufacturing of its cars in Australia will cease by 2017.

Changes in employment within industries can occur for various reasons. Industries can be particularly affected by cyclical factors, weather conditions or international prices. For example, construction is closely tied to the economic cycle. Similarly, agriculture is prone to periods of boom and bust, depending on weather and international prices. Other industries, notably manufacturing, are in seemingly long-term decline: from the ABS labour market statistics we can see that, while manufacturing accounted for 14.7% of all hours worked in 1994, by 2012 this industry accounted for only 9.3% of all hours worked (based on ABS 2013c).

If a region has a high proportion of its workforce in vulnerable industries, then this workforce may be more susceptible to fluctuations than if most of the workforce were in stable industries. Our aim in this paper is to derive indicators of vulnerability⁴ and, accordingly, we examine regional vulnerability and structural economic change in a variety of ways, these being:

- the change in average hours worked per region
- the change in total hours worked per region. Because we are focusing on employment as an indicator of economic vulnerability, total and average hours worked are used, as these provide a good measure of labour market activity. We cover full-time, part-time and casual employment, as well as unemployment
- the population change in a region (to the extent that this is available).⁵ We use this because, as an indicator of general growth, population growth tends to be related to labour market increases. This is not always the case, however, as the population of an area may increase for reasons other than employment (for example, lifestyle choices or because particular communities are located in a particular region)
- a simple index to explain the extent of structural or industry shift in a region across two time periods for each region. There are a few steps to calculating this index. Firstly, the difference between 2012 and 2002 for hours worked for each industry as a proportion of all hours worked in 2012 and 2002 is calculated and then divided by two. We then take the absolute value of these differences.⁶ These differences are then summed for all 19 industry groups, resulting in an index that ranges between 0 and 1, with 0 meaning there has been no structural change and 1 meaning that there has been total change
- an index of what we term 'turbulence' in a region, using ABS gross flows data. Our definition of turbulence is the extent to which people move from employment to unemployment, and unemployment to employment, in a region in a given month. For each region and for each month across the period January 2002 to January 2013, the numbers of people who moved from employment to unemployment and the numbers who moved from unemployment to employment are calculated as a proportion of the total number of people who are employed and unemployed. The average of the proportion for each month across the period of interest is the turbulence index, and ranges between 0 and 1, where 0 indicates no change and 1 would indicate a complete change (that is, all employed people in a region are unemployed, and all previously unemployed people are employed).

⁴ While we consider the measures of vulnerability used in this paper to reasonably encompass the concept, we do not consider them to be exhaustive.

⁵ A caveat applied here is that the data available to us captured individuals aged 15 years and older and so could include those who were not in the labour market.

⁶ If we don't take the absolute value the differences will sum to 0.

We examined how well these indicators related to each other and found stronger, positive correlations between the change in total hours and population change and, not surprisingly, between the change in average and total hours. Weaker, but positive, correlations were found between the change in average hours and the industry shift, turbulence and population change indicators (see table A1 for correlational data). The distribution of scores for these various indicators is shown in the appendix figures A1–5.

As shown in table A1, we considered an additional indicator, namely, cyclical vulnerability. This indicator attempted to capture any cyclical fluctuations in activities in industries. A cyclical index was calculated for each industry and was achieved by comparing hours worked in one period (t) with those of the previous period (t-1) and then taking this difference as a proportion of the hours worked in time t-1. These proportions were then summed across all the periods. This index was then applied to each region, using the average of the 2002 data. The proportion that each industry contributes to overall hours worked in a region was used as weightings against the industry index to obtain an overall index for each region. The very small and negative correlation between this and the turbulence indicator suggests that the cyclical indicator is measuring established variations rather than fundamental changes in labour markets. As a consequence this indicator was not included in further analyses.

To further inform the discussion, the three most dominant industries in a region in 2012 were derived, based on the total number of hours worked in the various industries for any given region. In addition, the change in the average hours worked between 2002 and 2012 was calculated for the dominant industries in each region.

The five indicators used should be sufficient to provide a picture of *change* in economic activity in a region over a ten-year period and therefore provide an indication of the vulnerability of a region. These indicators can therefore potentially be used to inform thinking about the form that initiatives focused on addressing economic vulnerability should take and where they should be implemented. We present some examples of initiatives implemented over the last ten years in response to structural economic change, and the impact of these, where that information is available.

As noted earlier, the indicators of vulnerability we have used here focus on employment and industry in a region. We do not look at other indicators, such as migration inflows or outflows, the proportion of individuals on income support, average household income, the proportion of individuals with physical or mental disabilities or the average level of educational attainment; the latter may be an important factor when considering how well an individual can adjust to industry restructuring. We acknowledge that the analysis presented in this paper may not fully cover the complexity and depth of disadvantage that regions may experience as a consequence of structural economic changes.

A note on data sources

The labour force regions are based on census data and are therefore subject to change after each census. This means that it is very difficult to obtain consistent labour force region data across multiple census periods. Furthermore, the ABS does not provide exact concordances for labour force regions across census periods. Consequently, our analysis for 2002–12 is based only on those regions where there was a reasonable (although not necessarily exact) concordance between census periods, which yielded a total of 48 regions across the ten-year period.

The next section examines in more detail our selected indicators of economic vulnerability.

Analysis

Based on the vulnerability indicators used in this analysis, table 1 presents the 12 statistical regions considered to be more 'vulnerable' to structural economic changes over the period of 2002–12.

Table A2 presents the vulnerability indicators for all 48 regions.

The indicators of economic vulnerability we have used cannot be considered independently, as this will not give the full picture of economic change in a region. To determine the most vulnerable, we first considered the change in average hours worked, then the change in total work hours and then population change; this was followed by the degree of industry shift and turbulence within the region. The change in average hours worked is used as the main (although not exclusive) indicator for establishing vulnerability, as it captures in one measure the level of labour market activity in a region. Total hours worked similarly captures labour market activity but needs to be considered with change in population in a region. (On average you would expect hours worked to increase in line with population increase.) The final two measures do not encapsulate labour market activity as such but can influence the change in average hours and total hours worked and so are considered in that context.

Table 1 Measures of regional vulnerability, 2002–12: most vulnerable regions

Statistical region	State	Change in average work hours	Change in total work hours	Population change	Industry change index	Turbulence
		%	%	%		
Gosford-Wyong	NSW	-8.4	7.1	13.2	0.124	0.022
Central Western Sydney	NSW	-8.1	12.1	16.6	0.091	0.022
Barwon-Western District	Vic.	-7.2	16.8	18.2	0.109	0.020
Canterbury-Bankstown	NSW	-6.7	1.9	10.6	0.113	0.024
Wide Bay-Burnett	Qld	-6.3	30.9	30.3	0.220	0.024
South Eastern Melbourne	Vic.	-6.1	21.1	27.8	0.132	0.022
Outer Eastern Melbourne	Vic.	-5.6	8.1	15.9	0.133	0.018
Loddon-Mallee	Vic.	-4.2	8.9	17.5	0.126	0.021
Fairfield-Liverpool	NSW	-3.9	2.7	12.7	0.119	0.021
Northern Adelaide	SA	-3.5	12.6	12.8	0.165	0.024
Central Highlands-Wimmera	Vic.	-3.3	18.5	17.1	0.152	0.023
Mersey-Lyell	Tas.	-2.9	5.4	10.0	0.174	0.025

Notes: Industry change: an index of industry or structural shift in a region across the two time periods, ranging between 0 (no structural shift) and 1 (complete structural shift); Turbulence: using gross flows data measures the extent to which people move from employment to unemployment and unemployment to employment in a region, ranging between 0 (no change) and 1 (total change).

Source: Based on ABS (2013a).

The 12 regions in table 1 represent both metropolitan and regional areas in Australia across five states. The five least vulnerable regions are shown in table 2. Of note, based on our measures of vulnerability, the statistical regions in Western Australia and the Northern Territory are considered to be among the least vulnerable (see table A2).

Table 2 Measures of regional vulnerability, 2002–12: least vulnerable regions

Statistical region	State	Change in total average work hours	Change in total work hours	Population change	Industry change index	Turbulence
		%	%	%		
Inner Melbourne	Vic.	1.8	46.4	28.9	0.116	0.021
Central Metropolitan	WA	2.8	46.4	28.3	0.114	0.018
East Metropolitan	WA	3.4	39.8	27.5	0.126	0.019
South-East Metropolitan	WA	3.9	43.8	27.9	0.153	0.021
Remainder – balance WA	WA	10.9	31.5	22.5	0.166	0.020

Source: Based on ABS (2013a).

The dominant industries, as determined by hours worked, in the 12 regions considered to be most vulnerable are shown in table 3. We can see here that manufacturing, health care and social assistance, and retail trade are the most common industries among the 12 regions, with manufacturing being the most dominant, in terms of hours worked, in half the regions.

During 2002–12 the change in population and total work hours was similar for four regions; namely, Barwon-Western District, Central Highlands-Wimmera, Northern Adelaide and Wide Bay-Burnett (table 1). The decrease in total average work hours seen in these regions may therefore be reflective of an increase in the part-time or casual workforce.

We can now look at what has been happening in some of these regions in more detail. The Barwon-Western District in particular, which includes Geelong, Warrnambool, Hamilton and Portland, experienced significant declines in the hours worked over the 2002–12 period in both the ‘health care and social assistance’ and ‘retail trade’ industries, while the decline in the manufacturing industry was minimal (table 4). But with the closure of the Ford car manufacturing plant in Geelong by October 2016, resulting in the loss of around 500 jobs, this is likely to significantly impact upon the manufacturing sector in this region. The loss of 260 jobs at the Geelong head office of a major national retailer in June 2013 (Australian Broadcasting Corporation 2013a) further compounds the employment declines experienced in the retail sector in the Barwon-Western District. The announcement by the federal government in June 2013 of the location of the headquarters of the national disability insurance scheme (DisabilityCare Australia) in Geelong may address labour market changes to some extent. The scheme is anticipated to create around 300 jobs in Geelong by the time it is fully operational by the 2019–20 financial year, although there is no guarantee that all jobs will be obtained by local residents (Australian Broadcasting Corporation 2013b).

For the remaining regions,⁷ the population change during the 2002–12 period was far greater than the change in total work hours (table 1), suggesting a marked decline in employment opportunities more generally. In these regions we see notable changes in the hours worked in the dominant industries (table 4). The ‘health care and social assistance’ and ‘retail trade’ sectors in particular experienced notable declines in total hours worked in a number of regions; namely, Gosford-Wyong, Canterbury-Bankstown and Loddon-Mallee. It is interesting to note that the almost 10% increase in hours worked in the construction industry in the Gosford-Wyong region is more likely a result of major building and construction projects over the last ten years, including three tourist resorts and a gas-fired power station (Wilkinson 2012). Of further note is the substantial decline in the total hours worked in the

⁷ Canterbury-Bankstown, Fairfield-Liverpool, Gosford-Wyong, Loddon-Mallee, Mersey-Lyell, Outer Eastern Melbourne, South-Eastern Melbourne.

'agricultural, forestry and fishing' industry in the Mersey-Lyell region in Tasmania. The initiatives implemented in this region as a means of countering this decline are discussed later.

In the Canterbury-Bankstown region, which encompasses the inner western suburbs of Sydney, including Bankstown, Hurstville, Kogarah and Lakemba, we see a significant slump in the retail sector (table 4). There are major transport infrastructure projects worth \$6.4 billion planned for completion over the next five years and the implications of these projects, not just for employment during the construction phase, but the practical implication of the employment opportunities that better transport infrastructure (better roads, efficient rail systems) can bring, should be seen in the coming years. It is anticipated that regions such as Canterbury-Bankstown and Fairfield-Liverpool will benefit from these projects.

But not all regions that undergo structural economic change — as evidenced through our measures of industry change and turbulence — experience negative impacts on their income or employment growth. For example, the South-East Metropolitan statistical region in Western Australia⁸ had a similar industry change and turbulence profile to that of the Northern Adelaide and South-Eastern Melbourne statistical regions (see table A2). Indeed, the population growth of the South-East Metropolitan and South-Eastern Melbourne statistical regions during 2002–12 was the same. Yet the change in the total hours worked during this period in the Western Australian statistical region was about 1.5 times that of its population growth contributing to a change in the total average hours worked of around 4%. Comparing regional areas, the Lower Western statistical region of Western Australia had one of the larger indices of industry change and turbulence (see table A2), not terribly different from that for the Mersey-Lyell statistical region in north-western Tasmania. The difference, however, between the two statistical regions in terms of population change, total hours and average hours is stark, presumably pushed by the mining industry in the Western Australian region (see tables A3 and A4).

⁸ The South East Metropolitan statistical region covers the areas of Armadale, Belmont, Canning, Gosnells, Serpentine-Jarrahdale, South Perth and Victoria Park.

Table 3 Dominant industries, by hours worked in 2012: most vulnerable regions

Statistical region	First dominant industry	%	Second dominant industry	%	Third dominant industry	%
Gosford-Wyong	Construction	15.8	Retail trade	12.0	Health care and social assistance	11.5
Central Western Sydney	Health care and social assistance	11.9	Manufacturing	10.5	Professional, scientific and technical services	9.3
Barwon-Western District	Manufacturing	15.6	Health care and social assistance	10.9	Retail trade	10.1
Canterbury-Bankstown	Transport, postal and warehousing	10.2	Construction	10.1	Retail trade	10.1
Wide Bay-Burnett	Health care and social assistance	12.6	Retail trade	10.6	Education and training	10.1
South-Eastern Melbourne	Manufacturing	19.7	Construction	10.6	Health care and social assistance	9.5
Outer Eastern Melbourne	Manufacturing	13.8	Construction	12.6	Retail trade	12.1
Loddon-Mallee	Agriculture, forestry and fishing	14.1	Manufacturing	10.4	Health care and social assistance	9.4
Fairfield-Liverpool	Manufacturing	15.9	Construction	11.2	Retail trade	10.7
Northern Adelaide	Manufacturing	13.0	Health care and social assistance	11.8	Retail trade	10.5
Central Highlands-Wimmera	Manufacturing	14.0	Health care and social assistance	10.1	Agriculture, forestry and fishing	10.0
Mersey-Lyell	Health care and social assistance	13.4	Manufacturing	11.0	Agriculture, forestry and fishing	10.1

Note: Dominant industry determined by hours worked.

Source: Based on ABS (2013a).

Table 4 Change in average hours worked in dominant industries, 2002–12: most vulnerable regions

Statistical region	Industry one	% change	Industry two	% change	Industry three	% change
Gosford-Wyong	Construction	9.5	Retail trade	-12.8	Health care and social assistance	-7.8
Central Western Sydney	Health care and social assistance	-3.0	Manufacturing	-5.2	Professional, scientific and technical services	0.9
Barwon-Western District	Manufacturing	-0.7	Health care and social assistance	-9.8	Retail trade	-8.3
Canterbury-Bankstown	Transport, postal and warehousing	-0.8	Construction	-3.3	Retail trade	-14.4
Wide Bay-Burnett	Health care and social assistance	4.4	Retail trade	-0.2	Education and training	10.4
South-Eastern Melbourne	Manufacturing	-6.7	Construction	-5.7	Health care and social assistance	6.1
Outer Eastern Melbourne	Manufacturing	-9.3	Construction	-2.7	Retail trade	-4.9
Loddon-Mallee	Agriculture, forestry and fishing	-4.4	Manufacturing	-1.6	Health care and social assistance	-17.9
Fairfield-Liverpool	Manufacturing	-3.0	Construction	4.6	Retail trade	5.5
Northern Adelaide	Manufacturing	-2.7	Health care and social assistance	-0.2	Retail trade	0.0
Central Highlands-Wimmera	Manufacturing	-2.4	Health care and social assistance	-16.0	Agriculture, forestry and fishing	12.2
Mersey-Lyell	Health care and social assistance	3.5	Manufacturing	0.7	Agriculture, forestry and fishing	-13.0

Note: Dominant industry determined by hours worked.

Source: Based on ABS (2013a).

Comparison with Priority Employment Areas

How do our economically vulnerable regions line up with the federal government's Priority Employment Areas? The list of Priority Employment Areas is comprised of 21 regions⁹ (Gillard 2013) identified as most vulnerable to present and future unemployment; the impetus for their identification was the lessons learned from the outcomes of past recessions, in that some regions were affected more significantly than others. Five main indicators were used to identify the degree of disadvantage in areas. These were: high unemployment rates; the increase in unemployment beneficiaries since the global recession; the proportion of the working-age population in receipt of income support payments; low levels of educational attainment; and industry composition (for example, regions with a high concentration of manufacturing or finance) (Senate Standing Committee on Education, Employment and Workplace Relations 2009).

The Priority Employment Areas display close parallels to our list of vulnerable regions, even though the level of analysis is different (local government areas versus the ABS statistical regions) and slightly different measures were used to construct the lists (see table 5). The main measure common to both sets of analysis is industry composition. However, the average hours and turbulence measures used in this paper do indirectly capture movements in the level of unemployment. The priority employment areas, which incorporate measures relating to unemployment benefits and income support, perhaps look more at the concentration of social vulnerability. Our measures are more directly concerned with structural change and the demand for workers.

Table 5 Comparison of vulnerable regions and Priority Employment Areas

Statistical region	Priority Employment Area
<i>Matched:</i>	
Gosford-Wyong (NSW)	Central Coast-Hunter
Canterbury-Bankstown/Fairfield-Liverpool (NSW)	Canterbury-Bankstown and South Western Sydney
Central Western Sydney (NSW)	Sydney West and Blue Mountains
South-Eastern Melbourne (Vic.)	South-Eastern Melbourne
Loddon Mallee/Central Highlands-Wimmera (Vic.)	Ballarat-Bendigo
Wide Bay-Burnett (Qld)	Southern Wide Bay-Burnett/ Bundaberg-Hervey Bay
Northern Adelaide (SA)	Northern and Western Adelaide
Mersey-Lyell (Tas.)	North-West and Northern Tasmania
Barwon-Western District (Vic.)	Geelong

⁹ There were originally 20 Priority Employment Areas, with Geelong being added in June 2013.

Statistical region	Priority Employment Area
<i>Unmatched:</i>	
Outer Eastern Melbourne (Vic.)	Illawarra (NSW)
	Richmond-Tweed and Clarence Valley (NSW)
	Mid-North Coast (NSW)
	North-Western Melbourne (Vic.)
	North-Eastern Victoria (Vic.)
	Ipswich-Logan (Qld)
	Caboolture-Sunshine Coast (Qld)
	Cairns (Qld)
	Townsville-Thuringowa (Qld)
	Port Augusta-Whyalla-Port Pirie (SA)
	South-West Perth (WA)

The next section provides details of a number of initiatives implemented over the last ten years in response to the structural economic change in regions, including some regions now identified as Priority Employment Areas.

Supporting vulnerable regions

In response to structural economic changes over the last ten years, the federal and state and territory governments have implemented various strategies designed to help revitalise industries, assist disadvantaged individuals to find work, or help retrenched or redundant workers to find other jobs. The following discussion highlights examples of some of the initiatives that have been implemented in various regions, including in some of the vulnerable regions we have identified.

The assistance for individuals can take many forms, including specific support payments, intensive employment services such as career advice, job search training and assistance (for example, résumé preparation, access to telephones, computers and stationery) or specific training opportunities to gain new skills or upskill. For example, the more recent 'Building Australia's Future Workforce' (Australian Government 2012) supports the implementation of initiatives in highly disadvantaged areas aimed directly at getting unemployed people into work. These initiatives include job and skill expos, where job seekers can meet with prospective employers, education and training providers and government agencies; and job-seeker workshops, which focus on topics such as local or out-of-area labour market opportunities and job-searching techniques. Assistance for industries or enterprises may be in the form of funding to support job-creation opportunities, or for innovation or investment. Table A5 provides examples of assistance programs and packages.

The Mersey-Lyell region covers the western and north-western areas of Tasmania and includes the regional towns of Burnie, Devonport, Queenstown and King Island. As shown in table 4, the agriculture, forestry and fishing industry in this region has experienced significant declines in the hours worked over the period 2002–12. This decline has been caused by a number of factors, including a reduced demand for timber products, a declining share in international markets together with increased competition in particular international markets, and the appreciation of the Australian dollar. The decline was compounded in late 2010 when the state's largest processor of timber products (Gunns Limited) announced a major operational restructure (Australian National Audit Office 2013). To help counter the decline in employment in the forestry sector, a 15-year \$277 million Tasmanian Forests Intergovernmental Agreement was signed in 2011 (Department of the Environment 2013). Among the initiatives the agreement covers are employment and training support for affected workers¹⁰ including help for redundant workers to relocate to find new work in other areas (Australian Government 2011). Up to \$25 million in federal funding has been allocated for employment and training programs. The Tasmanian Government has reported that many workers have registered for employment assistance support, with over 220 displaced workers having found new jobs through the assistance program to date (Tasmanian Forests Agreement 2012a). Further, over 300 former forest workers who were employed by Gunns Limited or its identified contractor companies working with native forest timber have received help through a \$15 million transition support program funded by the Tasmanian Government, as part of the intergovernmental agreement.

Manufacturing, primarily steel production, has had a long history in Wollongong and today is still one of the dominant industries in that region (see table A3), accounting for around 85% of the total manufacturing turnover in the Illawarra region (Wilkinson 2011). However, the manufacturing industry in Wollongong in particular was affected significantly by the worldwide recession during the early 1980s: from 1981 to 1996 the number of workers employed at the Port Kembla steel works decreased

¹⁰ Those made redundant on or after 1 June 2011 due to restructuring of forestry industry (see Tasmanian Forests Agreement 2012b).

by around 14 000. Since that time, the manufacturing industry in the Illawarra region as a whole has experienced only modest increases in employment, with the number of people employed in the manufacturing industry increasing by 5% over the ten years from 2001 (Wilkinson 2011). With the reduction in production at BlueScope Steel's Port Kembla plant in 2011 – resulting in 800 redundancies at BlueScope Steel and a few hundred jobs lost from related suppliers and contractors (Robinson 2012) – there is even less likelihood of the manufacturing industry in this area growing.

A number of federal and state government initiatives have been implemented as a means of mitigating the labour market impact of these declines in the steel manufacturing industry. In 1999 the New South Wales Government established the Illawarra Advantage Fund. The aim of this fund was to stimulate existing businesses and attract new industries to the region. Between 1999 and 2011, \$19 million was provided to 170 companies or organisations, leading to the creation of around 4300 jobs (NSW Department of Trade Investment and Regional Infrastructure Services 2011, cited in Wilkinson 2011). The current New South Wales Government has replaced the Illawarra Advantage Fund with a Regional Industries Investment Fund (RIIF), which is open to all regional New South Wales. As with its predecessor, the focus of this fund is on business growth and job creation (Wilkinson 2011).

In 2011 the Illawarra Region Innovation and Investment Fund, an initiative jointly funded by the federal and New South Wales governments and BlueScope Steel, was implemented in response to the BlueScope Steel redundancies. Similar to the Illawarra Advantage Fund, the focus of this fund is innovative job-creation projects, particularly in manufacturing and related services. To help workers made redundant by the BlueScope Steel restructuring, the federal government also established the \$10 million BlueScope Steel Labour Adjustment Program, which provided expedited access to Job Services Australia (the federally funded national employment service). This program included training assistance, as well as financial assistance for relocation to other employment if required (Swan 2011).

For some vulnerable regions, such as Gosford-Wyong or Canterbury-Bankstown, the absence of a clearly visible 'anchor' or dominant industry, from both a political and community perspective (like steel manufacturing in the Illawarra region), or their proximity to other regions may make the identification and implementation of appropriate assistance packages more complex. The Gosford-Wyong region, for example, has a narrow job base, with the key employing industries being health, retail and construction (Regional Development Australia 2012; see also table 3). It is under-represented in knowledge and business services (business services, professional services, technical services and finance; Regional Development Australia 2012) – the more progressive, innovative service industries. As noted earlier in this paper, over the last ten years employment in the construction industry in this area has increased due to sizeable projects, including the development of the Colongra Gas Power Station (Wilkinson 2012). Yet for the same period, hours worked in the other dominant industries of health and retail have slumped significantly (table 4), possibly increasing its vulnerability to further deteriorations in labour market conditions. Indeed, the Central Coast Regional Economic Development and Employment Strategy (Buchan Consulting 2009) identified that 45 000 additional jobs are needed in the Gosford-Wyong region by 2031 to ensure its economic sustainability.

The proximity of the Gosford-Wyong region to Sydney adds a level of complexity to the issue of determining the rates of employment within the Gosford-Wyong area. Given the relatively short distance between Sydney and the Gosford-Wyong region, commuting to the capital for work is not uncommon. Based on 2006 census data, it is estimated that around a quarter of the working-age population commutes to jobs outside the region (Regional Development Australia 2012), with many residents who are employed in the knowledge and business services sectors commuting to Sydney for work (Regional Development Australia 2012, p.4).

In an attempt to counter this movement away from the region and to achieve the needed job growth, the Central Coast Regional Economic Development and Employment Strategy (Buchan Consulting 2009) developed a number of strategies, including improving training and skills development opportunities (pp.22–6). Because it is a Priority Employment Area, federally funded initiatives such as the Local Employment Coordinator and job skills expos are likely to help with the implementation of the strategies (Ritchie 2012).

How effective have various forms of assistance been?

There is very little publicly available literature where the success of these packages is evaluated. Evaluations are important to gaining insight into whether assistance packages have been effectively targeted, or what actions need to occur to ensure they are effectively targeted, or indeed whether there has been any sustained impact on opportunities for those affected.

In some cases it may not be possible to undertake evaluations of various assistance programs as they may have been implemented without an evaluation framework having been established at the outset. Without a framework and clearly defined objectives against which the program outcomes can be measured makes it difficult, post-implementation, to determine the program's effectiveness, efficiency and value for money. Further, trying to gain a sense of how well assistance packages work for those they are intended to help can be difficult if there are no flags or indicators of the targeted individuals whereby they can be tracked as they move from unemployment to (hopefully) employment. From a VET perspective it is important to determine how assistance programs have helped people to gain new skills, the type of training they undertook, whether they gained employment following the training and, if so, whether or not it was in the same industry in which they were originally employed.

It needs to be noted here that evaluations of various components of the 'Building Australia's Future Workforce' package have already been planned. There will be a focus on the opinions and experiences of the individuals who have participated in place-based initiatives such as the job and skills expos (Australian Government 2013a). An evaluation of the degree of business engagement with the package is also being undertaken: this involves business and industry groups (for example, industry skills councils), employers and training providers (Australian Government 2013b).

Conclusion

This paper has constructed several measures by which to identify regions vulnerable to employment decline, primary among them being the change in average hours worked in a region. While the paper is limited in scope, several regions could nevertheless be identified as being 'vulnerable'. These regions also bear some resemblance to the federal government's list of Priority Employment Areas. The analysis has shown that the more vulnerable regions have been affected by notable downturns in the retail and manufacturing industries. On the other hand, in some of the least vulnerable regions – primarily those in Western Australia – we can see the positive impact that the growth in the mining industry has had over the last ten years for the labour markets in related industries such as construction. Further, the measures derived might form part of an impact assessment process for programs intended to address the impact of structural economic changes.

This paper has also examined some initiatives and assistance packages that are in place to support vulnerable regions. A key issue this paper highlights is the dearth of publicly available information that elucidates how useful or successful various assistance packages have been for those who have lost their jobs, or for generating investment leading to job creation. In particular, the take-up of vocational education and training following job loss and the impact of this training in helping individuals to transition to new jobs, either in the same industry or in different industries, is not clear. This has also not been addressed by our analysis because of its limited scope.

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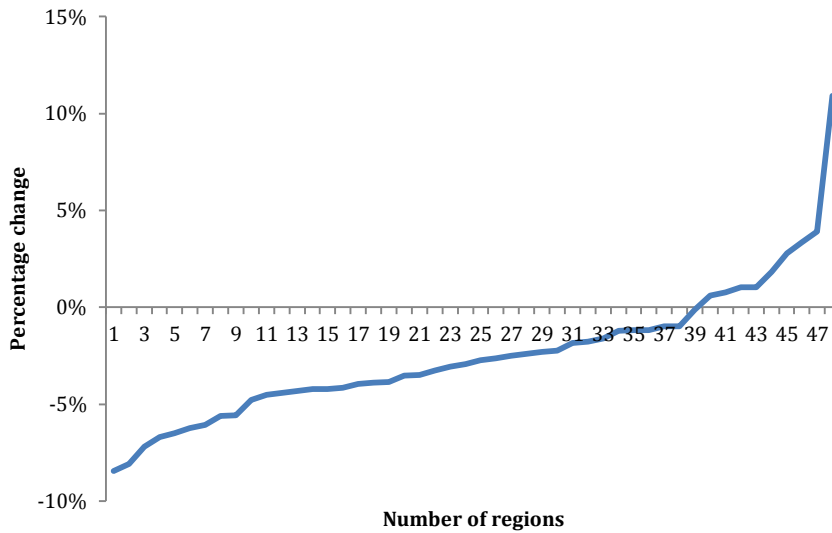
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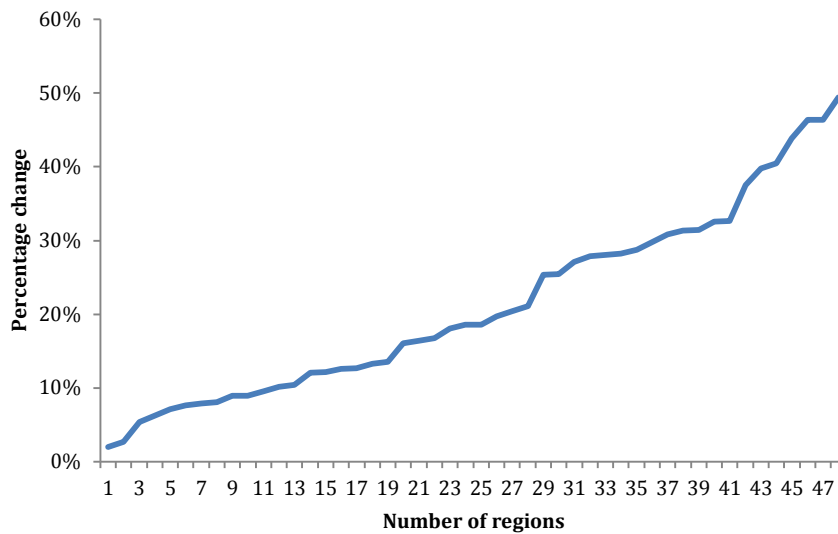
Appendix

Figure A1 Distribution of scores across regions for change in total average hours, 2002–12



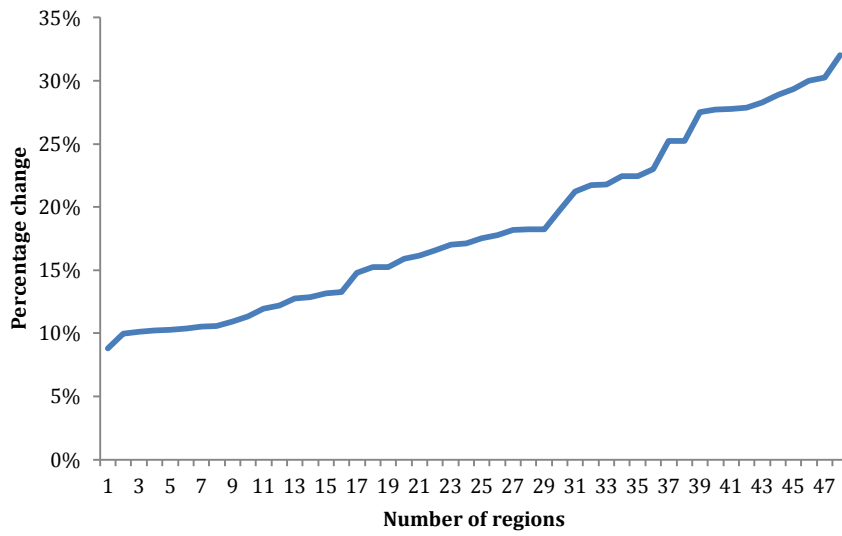
Source: Based on ABS (2013a).

Figure A2 Distribution of scores across regions for change in total hours, 2002–12



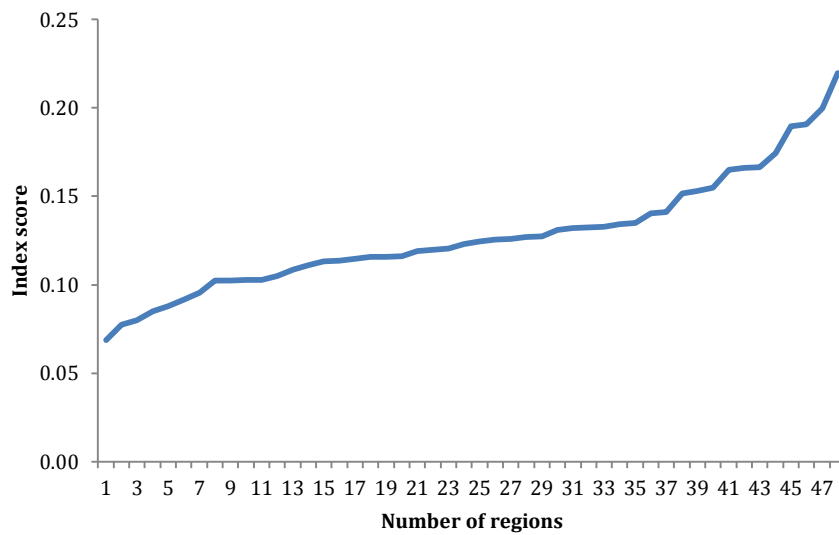
Source: Based on ABS (2013a).

Figure A3 Distribution of scores across regions for change in population aged 15 years and above, 2002–12



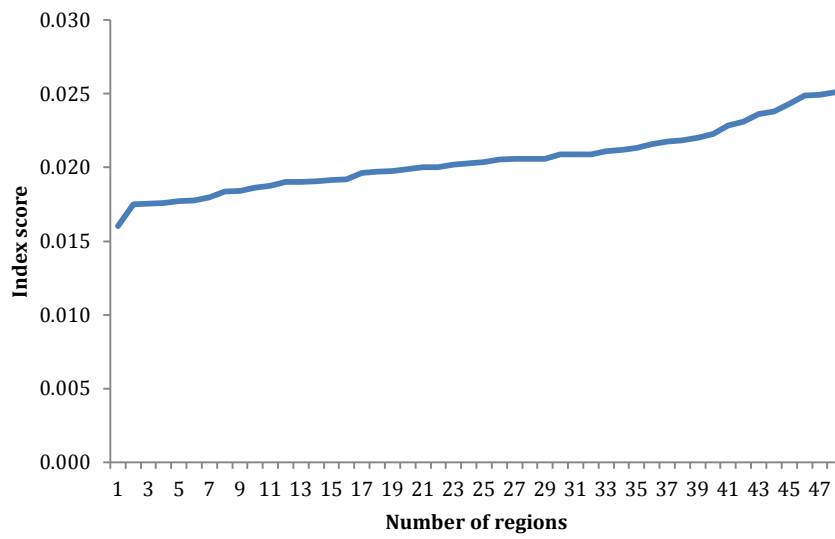
Source: Based on ABS (2013a).

Figure A4 Distribution of scores across regions for industry change index, 2002–12



Source: ABS (2013a).

Figure A5 Distribution of scores across regions for turbulence index 2002–12



Source: Based on ABS (2013a).

Table A1 Correlations between indicators of regional vulnerability

Change in total hours and population change	Change in average hours and total hours	Change in average hours and population change	Change in average hours and industry change	Change in average hours and turbulence	Industry change and turbulence	Cyclical vulnerability and turbulence
0.8618364	0.5936958	0.4327615	0.2167242	0.1129674	0.2117341	-0.0797639

Table A2 Measures of regional vulnerability, 2002–12

Statistical region	State	Change in average hours (%)	Change total hours (%)	Population change (%)	Industry change index	Turbulence
Gosford-Wyong	NSW	-8.4	7.1	13.2	0.124	0.022
Central Western Sydney	NSW	-8.1	12.1	16.6	0.091	0.022
Barwon-Western District	Vic.	-7.2	16.8	18.2	0.109	0.020
Canterbury-Bankstown	NSW	-6.7	1.9	10.6	0.113	0.024
St George-Sutherland	NSW	-6.5	9.5	11.4	0.088	0.017
Wide Bay-Burnett	Qld	-6.3	30.9	30.3	0.220	0.024
South-Eastern Melbourne	Vic.	-6.1	21.1	27.8	0.132	0.022
Outer Eastern Melbourne	Vic.	-5.6	8.1	15.9	0.133	0.018
Lower Northern Sydney	NSW	-5.6	12.7	12.2	0.120	0.019
Southern Adelaide	SA	-4.8	16.4	10.9	0.105	0.019
Northern statistical region	Tas.	-4.5	12.1	10.5	0.140	0.019
Western Adelaide	SA	-4.4	13.5	8.8	0.111	0.020
All Gippsland	Vic.	-4.3	31.3	18.2	0.134	0.021
Loddon-Mallee	Vic.	-4.2	8.9	17.5	0.126	0.021
Inner Eastern Melbourne	Vic.	-4.2	8.9	14.8	0.085	0.019
North-Eastern Melbourne	Vic.	-4.2	18.0	17.8	0.127	0.021
North-Western Melbourne	Vic.	-3.9	28.2	21.7	0.069	0.025
Darling Downs-South-West	Qld	-3.9	28.1	22.5	0.191	0.016
Fairfield-Liverpool	NSW	-3.9	2.7	12.7	0.119	0.021
Northern Adelaide	SA	-3.5	12.6	12.8	0.165	0.024
Greater Hobart	Tas.	-3.5	18.6	10.4	0.096	0.018
Central Highlands-Wimmera	Vic.	-3.3	18.5	17.1	0.152	0.023
Southern Melbourne	Vic.	-3.1	20.4	16.2	0.115	0.020
Mersey-Lyell	Tas.	-2.9	5.4	10.0	0.174	0.025
Southern and Eastern SA	SA	-2.7	16.1	15.2	0.080	0.018
Goulburn-Ovens-Murray	Vic.	-2.6	10.1	18.3	0.116	0.020
Eastern Adelaide	SA	-2.5	7.9	11.9	0.077	0.018
Mackay-Fitzroy-Central West	Qld	-2.4	32.7	27.7	0.190	0.021
Eastern Suburbs	NSW	-2.3	10.4	10.3	0.102	0.018
Northern Beaches	NSW	-2.2	6.2	10.2	0.141	0.018
Inner Sydney	NSW	-1.8	29.8	21.2	0.131	0.020
Newcastle	NSW	-1.8	28.7	15.2	0.102	0.021
Brisbane City Inner Ring	Qld	-1.6	32.5	25.3	0.132	0.021
North Metropolitan	WA	-1.2	40.5	30.0	0.120	0.021
Wollongong	NSW	-1.2	7.6	13.2	0.116	0.019
Outer Western Melbourne	Vic.	-1.2	27.9	25.2	0.103	0.023
Mornington Peninsula	Vic.	-1.0	27.1	19.7	0.155	0.020
Brisbane City Outer Ring	Qld	-1.0	25.4	23.0	0.103	0.020
Richmond-Tweed and Mid-North Coast	NSW	-0.1	19.7	17.0	0.135	0.025
Northern Territory	NT	0.6	25.4	21.8	0.123	0.020
Lower Western WA	WA	0.8	37.5	32.0	0.200	0.022
South-West Metropolitan	WA	1.0	49.4	29.3	0.127	0.022
Northern and Western SA	SA	1.0	13.3	10.1	0.166	0.019
Inner Melbourne	Vic.	1.8	46.4	28.9	0.116	0.021
Central Metropolitan	WA	2.8	46.4	28.3	0.114	0.018
East Metropolitan	WA	3.4	39.8	27.5	0.126	0.019
South East Metropolitan	WA	3.9	43.8	27.9	0.153	0.021
Remainder – balance WA	WA	10.9	31.5	22.5	0.166	0.020

Notes: Industry change: an index of industry or structural shift in a region across the two time periods, ranging between 0 (no structural shift) and 1 (complete structural shift); Turbulence: using gross flows data measures, the extent to which people move from employment to unemployment and unemployment to employment in a region.

Source: Based on ABS (2013a).

Table A3 Dominant industries, by hours worked in 2012

Statistical region	First dominant industry	%	Second dominant industry	%	Third dominant industry	%
Gosford-Wyong	Construction	15.8	Retail Trade	12.0	Health Care and Social Assistance	11.5
Central Western Sydney	Health Care and Social Assistance	11.9	Manufacturing	10.5	Professional, Scientific and Technical Services	9.3
Barwon-Western District	Manufacturing	15.6	Health Care and Social Assistance	10.9	Retail Trade	10.1
Canterbury-Bankstown	Transport, Postal and Warehousing	10.2	Construction	10.1	Retail Trade	10.1
St George-Sutherland	Professional, Scientific and Technical Services	10.8	Retail Trade	10.2	Health Care and Social Assistance	8.9
Wide Bay-Burnett	Health Care and Social Assistance	12.6	Retail Trade	10.6	Education and Training	10.1
South-Eastern Melbourne	Manufacturing	19.7	Construction	10.6	Health Care and Social Assistance	9.5
Outer Eastern Melbourne	Manufacturing	13.8	Construction	12.6	Retail Trade	12.1
Lower Northern Sydney	Professional, Scientific and Technical Services	20.7	Financial and Insurance Services	12.2	Health Care and Social Assistance	9.4
Southern Adelaide	Health Care and Social Assistance	12.8	Construction	10.4	Retail Trade	10.2
Northern statistical region	Health Care and Social Assistance	12.6	Construction	10.6	Manufacturing	9.6
Western Adelaide	Health Care and Social Assistance	12.7	Construction	11.5	Manufacturing	11.3
All Gippsland	Construction	11.5	Agriculture, Forestry and Fishing	10.8	Retail Trade	10.6
Loddon-Mallee	Agriculture, Forestry and Fishing	14.1	Manufacturing	10.4	Health Care and Social Assistance	9.4
Inner Eastern Melbourne	Professional, Scientific and Technical Services	15.3	Health Care and Social Assistance	11.5	Retail Trade	9.1
North-Eastern Melbourne	Health Care and Social Assistance	11.8	Construction	10.1	Retail Trade	10.1
North-Western Melbourne	Manufacturing	14.9	Retail Trade	9.2	Construction	9.1
Darling Downs-South-West	Agriculture, Forestry and Fishing	16.0	Health Care and Social Assistance	11.8	Education and Training	9.1
Fairfield-Liverpool	Manufacturing	15.9	Construction	11.2	Retail Trade	10.7
Northern Adelaide	Manufacturing	13.0	Health Care and Social Assistance	11.8	Retail Trade	10.5
Greater Hobart	Health Care and Social Assistance	14.3	Public Administration and Safety	11.8	Retail Trade	9.9
Central Highlands-Wimmera	Manufacturing	14.0	Health Care and Social Assistance	10.1	Agriculture, Forestry and Fishing	10.0
Southern Melbourne	Professional, Scientific and Technical Services	16.0	Manufacturing	12.4	Health Care and Social Assistance	10.4
Mersey-Lyell	Health Care and Social Assistance	13.4	Manufacturing	11.0	Agriculture, Forestry and Fishing	10.1
Southern and Eastern SA	Agriculture, Forestry and Fishing	17.8	Manufacturing	12.9	Retail Trade	9.3

Statistical region	First dominant industry	%	Second dominant industry	%	Third dominant industry	%
Goulburn-Ovens-Murray	Agriculture, Forestry and Fishing	18.2	Manufacturing	15.5	Health Care and Social Assistance	10.5
Eastern Adelaide	Health Care and Social Assistance	13.6	Professional, Scientific and Technical Services	12.6	Education and Training	9.9
Mackay-Fitzroy-Central West	Construction	13.5	Mining	12.6	Retail Trade	9.4
Eastern Suburbs	Professional, Scientific and Technical Services	18.1	Health Care and Social Assistance	10.8	Financial and Insurance Services	9.8
Northern Beaches	Professional, Scientific and Technical Services	14.8	Construction	13.7	Retail Trade	9.6
Inner Sydney	Professional, Scientific and Technical Services	21.5	Financial and Insurance Services	9.1	Health Care and Social Assistance	8.7
Newcastle	Health Care and Social Assistance	12.6	Manufacturing	11.1	Construction	9.0
Brisbane City Inner Ring	Professional, Scientific and Technical Services	16.2	Health Care and Social Assistance	10.8	Public Administration and Safety	9.0
North Metropolitan	Construction	13.7	Mining	9.6	Health Care and Social Assistance	9.0
Wollongong	Retail trade	12.0	Construction	10.9	Manufacturing	10.9
Outer Western Melbourne	Transport, Postal and Warehousing	12.0	Manufacturing	11.4	Construction	9.4
Mornington Peninsula	Manufacturing	13.9	Construction	12.5	Retail Trade	12.4
Brisbane City Outer Ring	Health Care and Social Assistance	11.8	Professional, Scientific and Technical Services	9.8	Construction	9.2
Richmond-Tweed and Mid-North Coast	Health Care and Social Assistance	13.3	Retail Trade	11.9	Construction	11.3
Northern Territory	Public Administration and Safety	13.6	Construction	11.9	Health Care and Social Assistance	10.3
Lower Western WA	Construction	15.4	Manufacturing	12.0	Mining	11.9
South-West Metropolitan	Construction	10.3	Manufacturing	10.2	Health Care and Social Assistance	9.6
Northern and Western SA	Agriculture, Forestry and Fishing	19.2	Health Care and Social Assistance	10.4	Retail Trade	9.6
Inner Melbourne	Professional, Scientific and Technical Services	19.2	Health Care and Social Assistance	9.2	Financial and Insurance Services	8.4
Central Metropolitan	Professional, Scientific and Technical Services	18.0	Health Care and Social Assistance	12.4	Accommodation and Food Services	7.9
East Metropolitan	Construction	11.4	Mining	9.7	Manufacturing	9.0
South East Metropolitan	Construction	9.8	Professional, Scientific and Technical Services	9.3	Mining	9.0
Remainder – balance WA	Mining	20.8	Agriculture, Forestry and Fishing	17.5	Construction	8.4

Note: Dominant industry determined by hours worked in that industry.

Source: Based on ABS (2013a).

Table A4 Change in hours worked in dominant industries, 2002–12

Region	Industry one	% change	Industry two	% change	Industry three	% change
Gosford-Wyong	Construction	9.5	Retail Trade	-12.8	Health Care and Social Assistance	-7.8
Central Western Sydney	Health Care and Social Assistance	-3.0	Manufacturing	-5.2	Professional, Scientific and Technical Services	0.9
Barwon-Western District	Manufacturing	-0.7	Health Care and Social Assistance	-9.8	Retail Trade	-8.3
Canterbury-Bankstown	Transport, Postal and Warehousing	-0.8	Construction	-3.3	Retail Trade	-14.4
St George-Sutherland	Professional, Scientific and Technical Services	-4.8	Retail Trade	-1.3	Health Care and Social Assistance	-8.6
Wide Bay-Burnett	Health Care and Social Assistance	4.4	Retail Trade	-0.2	Education and Training	10.4
South-Eastern Melbourne	Manufacturing	-6.7	Construction	-5.7	Health Care and Social Assistance	6.1
Outer Eastern Melbourne	Manufacturing	-9.3	Construction	-2.7	Retail Trade	-4.9
Lower Northern Sydney	Professional, Scientific and Technical Services	-8.7	Financial and Insurance Services	-10.2	Health Care and Social Assistance	-2.3
Southern Adelaide	Health Care and Social Assistance	-4.0	Construction	1.4	Retail Trade	-0.7
Northern statistical region	Health Care and Social Assistance	-5.5	Construction	1.3	Manufacturing	-2.2
Western Adelaide	Health Care and Social Assistance	-1.1	Construction	-10.0	Manufacturing	-3.9
All Gippsland	Construction	13.2	Agriculture, Forestry and Fishing	-0.2	Retail Trade	-3.9
Loddon-Mallee	Agriculture, Forestry and Fishing	-4.4	Manufacturing	-1.6	Health Care and Social Assistance	-17.9
Inner Eastern Melbourne	Professional, Scientific and Technical Services	-5.5	Health Care and Social Assistance	-6.0	Retail Trade	4.8
North-Eastern Melbourne	Health Care and Social Assistance	1.6	Construction	-5.5	Retail Trade	4.8
North-Western Melbourne	Manufacturing	7.4	Retail Trade	-3.8	Construction	-4.6
Darling Downs-South-West	Agriculture, Forestry and Fishing	-10.7	Health Care and Social Assistance	16.1	Education and Training	9.1
Fairfield-Liverpool	Manufacturing	-3.0	Construction	4.6	Retail Trade	5.5
Northern Adelaide	Manufacturing	-2.7	Health Care and Social Assistance	-0.2	Retail Trade	0.0
Greater Hobart	Health Care and Social Assistance	-2.9	Public Administration and Safety	5.5	Retail Trade	-8.3
Central Highlands-Wimmera	Manufacturing	-2.4	Health Care and Social Assistance	-16.0	Agriculture, Forestry and Fishing	12.2
Southern Melbourne	Professional, Scientific and Technical Services	-3.5	Manufacturing	-0.5	Health Care and Social Assistance	4.8
Mersey-Lyell	Health Care and Social Assistance	3.5	Manufacturing	0.7	Agriculture, Forestry and Fishing	-13.0
Southern and Eastern SA	Agriculture, Forestry and Fishing	1.7	Manufacturing	-6.5	Retail Trade	-6.1
Goulburn-Ovens-Murray	Agriculture, Forestry and Fishing	5.1	Manufacturing	1.5	Health Care and Social Assistance	-8.7

Region	Industry one	% change	Industry two	% change	Industry three	% change
Eastern Adelaide	Health Care and Social Assistance	4.3	Professional, Scientific and Technical Services	-4.7	Education and Training	-15.2
Mackay-Fitzroy-Central West	Construction	2.3	Mining	-13.2	Retail Trade	-1.0
Eastern Suburbs	Professional, Scientific and Technical Services	-2.6	Health Care and Social Assistance	-3.1	Financial and Insurance Services	-1.1
Northern Beaches	Professional, Scientific and Technical Services	-4.5	Construction	-2.9	Retail Trade	11.2
Inner Sydney	Professional, Scientific and Technical Services	1.5	Financial and Insurance Services	-1.9	Health Care and Social Assistance	-8.1
Newcastle	Health Care and Social Assistance	-6.3	Manufacturing	2.2	Construction	12.0
Brisbane City Inner Ring	Professional, Scientific and Technical Services	-4.9	Health Care and Social Assistance	-2.6	Public Administration and Safety	6.9
North Metropolitan	Construction	2.9	Mining	-5.8	Health Care and Social Assistance	-7.5
Wollongong	Retail Trade	1.1	Construction	7.1	Manufacturing	0.1
Outer Western Melbourne	Transport, Postal and Warehousing	-2.4	Manufacturing	-1.8	Construction	3.3
Mornington Peninsula	Manufacturing	5.6	Construction	-9.0	Retail Trade	6.4
Brisbane City Outer Ring	Health Care and Social Assistance	0.4	Professional, Scientific and Technical Services	0.3	Construction	7.2
Richmond-Tweed and Mid-North Coast	Health Care and Social Assistance	-3.5	Retail Trade	-2.1	Construction	-1.3
Northern Territory	Public Administration and Safety	17.5	Construction	-7.4	Health Care and Social Assistance	-3.5
Lower Western WA	Construction	2.2	Manufacturing	2.9	Mining	8.6
South-West Metropolitan	Construction	-7.1	Manufacturing	1.7	Health Care and Social Assistance	6.9
Northern and Western SA	Agriculture, Forestry and Fishing	-11.6	Health Care and Social Assistance	15.2	Retail Trade	18.2
Inner Melbourne	Professional, Scientific and Technical Services	-6.4	Health Care and Social Assistance	4.3	Financial and Insurance Services	10.8
Central Metropolitan	Professional, Scientific and Technical Services	11.0	Health Care and Social Assistance	4.9	Accommodation and Food Services	2.9
East Metropolitan	Construction	13.4	Mining	-5.4	Manufacturing	-0.1
South-East Metropolitan	Construction	5.1	Professional, Scientific and Technical Services	-5.2	Mining	25.7
Remainder – Balance WA	Mining	-4.4	Agriculture, Forestry and Fishing	9.3	Construction	4.2

Note: Dominant industry determined by hours worked in that industry.

Source: Based on ABS (2013a).

Table A5 Examples of assistance packages

Package/program name	Website/s
<p>BlueScope Steel Labour Adjustment Program</p> <ul style="list-style-type: none"> ▪ \$9.9 million from 2011–15 for workers made redundant at Port Kembla Plant (NSW) and Hastings Plant (Vic.) ▪ provides for immediate access to the services of Job Services Australia and training assistance to help redundant workers find new jobs. 	<p><http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2011/096.htm&pageID=003&min=wms&Year=2011&doctype=0> http://www.budget.gov.au/2012-13/content/ministerial_statements/rural_and_regional/html/rural_and_regional-08.htm (see 'Job Services Australia and redundant workers')</p>
<p>Live Cattle Exports Assistance Package</p> <ul style="list-style-type: none"> ▪ \$0.9 million from 2011–14 to support workers made redundant due to federal government's temporary suspension of live cattle exports to Indonesia; assistance for employees and small business owners. 	<p><http://www.daff.gov.au/liveexports/assistance></p>
<p>Tasmanian Forests Intergovernmental Agreement</p> <ul style="list-style-type: none"> ▪ \$277 million from 2011–26; includes but it not limited to the following: <ul style="list-style-type: none"> – \$120 million toward economic diversification initiatives – Up to \$25 million for employment and training support – Up to \$20 million for workers who wish to voluntarily leave the industry. 	
<p>Automotive Industry Structural Adjustment Program</p> <ul style="list-style-type: none"> ▪ The labour market adjustment support component of this program provides assistance to redundant workers via access to the services of Job Services Australia. 	<p><http://www.innovation.gov.au/industry/automotive/InitiativesandAssistance/Pages/AISAP.aspx></p>
<p>Building Australia's Future Workforce package</p> <ul style="list-style-type: none"> ▪ \$45.2 million over two years to extend the Priority Employment Area initiative, Jobs and Skills Expos and Local Employment Coordinators until 30 June 2013 ▪ an additional \$15.7 million to expand the initiative until 30 June 2014. 	<p><http://www.afr.com/rw/2009-2014/AFR/2011/05/10/Photos/35d721e0-7af8-11e0-bc7f-bb46724e6fa4_Place-Based_Initiatives.pdf> <http://www.budget.gov.au/2011-12/content/bp2/html/bp2_expense-08.htm> <http://www.budget.gov.au/2013-14/content/bp2/html/bp2_expense-09.htm></p>
<p><i>Priority Employment Areas</i></p> <ul style="list-style-type: none"> ▪ Twenty-one priority employment areas have been identified against a range of indicators as vulnerable to labour market disadvantage and requiring extra assistance. 	
<p><i>Local Employment Coordinators</i></p> <ul style="list-style-type: none"> ▪ Local Employment Coordinators are involved with each Priority Employment Area to find local solutions to local labour market issues. The coordinators implement a Regional Employment Plan and work with the Regional Development Australia Committees, Regional Education, Skills and Jobs Coordinators (where these align) and other stakeholders to ensure strategic and coordinated responses. They also help retrenched workers and other job seekers to connect with employment and training opportunities and help local employers and industry to access government services. 	
<p><i>Jobs and Skills Expos</i></p> <ul style="list-style-type: none"> ▪ These help connect job seekers with employment and training opportunities and give local employers the chance to promote local jobs to local people. Expos provide information about local jobs and pathways, employment and training service providers and can also include workshop sessions on job readiness and other government and community services. ▪ About 50 Jobs and Skills Expos will also be held across Australia up to 30 June 2014. 	

Note: The examples provided in this table are not an exhaustive list of initiatives.

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The NVETR Program aims to improve policy and practice in the VET sector. The research effort itself is collaborative and requires strong relationships with the research community in Australia's universities and beyond. NCVET may also involve various stakeholders, including state and territory governments, industry and practitioners, to inform the commissioned research and using a variety of mechanisms such as project roundtables and forums.

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