Centre of Full Employment and Equity

Research Report

Red alert suburbs: An employment vulnerability index for Australia's major urban regions

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Executive summary

There can be little doubt that the current global economic crisis is going to lead to significant economic and social pain with the worst affected being the persons who lose their jobs.

The February Labour Force data from the Australian Bureau of Statistics confirms that official unemployment in Australia is now rising and full-time jobs are now being shed by the tens of thousands. While part-time employment is holding at present, as the downturn intensifies, thousands of those jobs will also evaporate. Australia is now following the global trend and we expect our labour market to deteriorate further through 2009.

Given the current economic crisis people in particular industry sectors (such as Construction; Manufacturing; Mining; Retail Trade; Accommodation, Cafes and Restaurants; Finance and Insurance; and Property and Business Services), those with low skills and those employed in casual or part-time positions will likely see their employment opportunities diminish faster than others.

For those who are unemployed the social and economic costs are significant. Being gainfully employed is an effective guard against abject poverty and social exclusion. Moreover self-dignity and physical and social well-being are violated by high rates of labour underutilisation. For the nation having a large percentage of the workforce marginally attached represents a waste of resources and huge losses in national income. An increase in unemployment and other types of labour force disadvantage is only going to exacerbate these issues and spread the burden across more sectors of society.

If the Federal government is serious about its social inclusion policy agenda then maintaining people in paid employment has to be its highest priority.

While at an aggregate level the impacts of increasing unemployment will be important, the increases in joblessness will also have important spatial dimensions. Even during the recent boom times our cities endured disadvantage 'hot spots' as individuals in particular suburbs have been unable to successfully negotiate the labour market.

This spatial concentration has resulted in an increase in multiple disadvantages and acts to further limit the opportunity of people living in these disadvantaged places.

This Report is concerned with developing an indicator of job loss potential at the level of suburbs for Capital cities and large non-metropolitan urban regions.

Our modelling has incorporated the characteristics of the types of jobs held by individuals at a suburb level to develop an *Employment Vulnerability Index* (EVI) which provides a national ranking of suburbs according to the level of vulnerability to job losses in the current economic climate.

The EVI allows us to consider the distribution of potential job loss suburbs across cities and within cities.

Consideration of the EVI within cities shows two broad types of suburbs:

1. Those that have traditionally been among the country's most disadvantaged places. These suburbs are the home to the real 'battlers' of the metropolitan areas and the regional centres. Some of these locales, mainly in the country's large cities, have achieved a high public profile as a result of media

stereotyping the social problems that are considered to be concentrated there which mostly reflect entrenched unemployment. Many of the suburbs have concentrations of multiple disadvantages whereby the problems associated with unemployment are compounded by other problems and issues. Recent years may have seen some small improvements, but by and large, these battling suburbs remain amongst the countries most deprived; and

2. Those that appear to represent new arenas of socio-economic disadvantage. These are suburbs that have developed in recent decades and tend to be on the periphery of the urban development.

The concentration of job losses in the first type of suburb means that the disadvantage that has been a part of these places will continue and worsen, placing more strain on the individuals and families that are located within them.

These suburbs will represent the new face of disadvantage across our regional landscape. They are likely to be places that have tended to have an association with old-economy manufacturing-based employment, but are not quite as disadvantaged as the most disadvantaged places in our cities. For the capital cities some of these localities are the places where families have chosen to live in an attempt to get a foothold in the housing market given that the recent property booms have further segregated the housing market across Australian cities.

Record low interest rates have helped keep these suburbs out of the highest level of housing-related disadvantage but they are also the places that Wayne Swan (2005) referred to when he stated that many families are being left behind in the race for prosperity.

These are suburbs where households are typically carrying high levels of debt and depend on two incomes to meet their nominal repayments. One of the household income earners is likely to be working in a part-time (and increasingly underemployed) capacity and total family income is highly dependent on the casual hours being maintained. One of the first casualties in a recession is the volume of part-time working hours that are available. With small changes in hours of work on offer, households in these suburbs will quickly enter financial crisis and the latent disadvantage will then manifest.

We emphasise that the underlying modelling used to compute the EVI takes into account both suburb and individual characteristics. As a result, any one person in a Red alert suburb may have little risk of job loss while any one person in a Low risk suburb might, in fact, be very vulnerable to job loss. But in aggregate, we expect the job losses to fall predominantly in the Red and Amber alert suburbs.

Some individuals and the families and communities will come out the other side of the current crisis only mildly scarred, others may not be so lucky.

Consideration of the EVI between cities shows that while all cities will witness an increase in jobless suburbs, some are more likely to have higher proportions of these suburbs.

The potential for job losses to be spatially concentrated raise several points relating to the current policy approach of the Federal and State governments.

The two important guiding points in this Report are:

1. **There is clearly not going to be enough jobs for everyone who wants to work.**
2. **When jobs do become available, the spatial patterns of labour markets and the concentration of joblessness in certain areas will act to ration possibilities.**

Labour markets in their current form do not adequately supply enough jobs. This has been the case for a significant period. Even during the so-called boom-times of the past decade or so the demand for labour has fallen far short of what is being supplied.

Despite the long period of economic growth that has now ended, the Australian economy still could only produced a labour market where at best 8.8 per cent of the willing workforce was underutilised. At the top of the boom there were still around 530,000 workers officially unemployed and more than 680,000 classified by the ABS as being underemployed.

The current economic situation will see these numbers deteriorate swiftly.

The appropriate policy response must focus on preventing unemployment from rising. Maintaining people in paid employment must be the policy priority of the Federal government.

A reliance on the recessed private market to create enough jobs is a flawed approach. Stimulus handouts to Australians will allow them to increase their saving and pay off debt. The flow into job creation spending is likely to be too small to make a significant dent in the rate of job loss. The Federal government has to take a leadership role via direct job creation if the job losses are to be contained.

The second guiding point refers to understanding the drivers of joblessness and other forms of labour market underutilisation. Eventually the economy will experience a resumption in jobs growth. However, once employment growth returns the operation of spatial labour markets and the concentration of joblessness in certain localities will mean that some of the patterns we have noted in this Report will continue to exist.

The very fact that there have existed distinct spatial patterns of unemployment across our cities for a significant period of time, even before the current situation, means that the operation of the spatially defined local labour market that one lives in is important in determining employment outcomes.

Taking this further, the problems for those living in high unemployment suburbs or labour markets are likely to be further exacerbated because of what sociologists and others refer to as concentration effects. For the unemployed, concentration effects are likely to occur in terms of a lack of employed role models or a lack of information about jobs through social networks.

So there is a double whammy; people in poorly performing spatially-based labour markets are likely to be disadvantaged because of inefficiencies in the operation of the market, but are also disadvantaged because they may lack information about job possibilities.

The impact of increasing job losses thus requires decisive policy action.

To remedy the negative job impacts of the current economic crisis we advocate the introduction of a **Job Guarantee**, where the Federal government offers unconditionally a job at the minimum wage to anyone who is without work.

Modelling at the Centre of Full Employment and Equity (CofFEE) shows that if the Government introduced a Job Guarantee and paid the workers the current national minimum wage (with holiday pay etc…) it could hire 557,000 full-time equivalent workers for around $8.3 billion per year.

In a major report *Creating effective local labour markets: a new framework for regional employment* that CofFEE released (in partnership with Jobs Australia) in November 2008 it was estimated that to achieve a full employment level (consistent with 2 per cent official unemployment, no hidden unemployment and no time-related underemployment), an extra 559.2 thousand jobs would have been required in May 2008. The figure will be higher now and increasing by the week.

In addition the research that underpinned the report conducted a national survey of local governments in Australia and identified hundreds of thousands of jobs that would be suitable for low-skill workers in areas such as community development and environmental care services. There is enormous unmet need for public works across regional Australia.

The report also proposes a role for the state in direct skill formation through a National Skills Development (NSD) framework which we consider will address the skills problem and support the global competitiveness of Australian industry. Several points need to be considered when developing a NSD framework:

- Maintaining a buffer stock of public sector jobs provides work for all irrespective of their skill levels and also allows paid-work opportunities to be structured into training and career development;
- The Federal and State Governments must renew their commitment to trade training and to adequately fund our public schools and universities. Public policy must also set in place safety-net structures to ensure that every person under 20 years of age is in education, training or a paid job;
- Occupational planning capacities must be reintroduced to ensure that the apprenticeship and training programmes are targeted in areas of regional and industrial need;
- By maintaining full employment private employers will be forced by competition to take a major responsibility for training and skill development of our workforce.

A Job Guarantee would restore the role of the public sector as a significant employer, and to do so in a way that also controls inflation.

A Job Guarantee provides a platform for developing the national skills base, by comparing the observed skills and competencies of the Job Guarantee workforce with the emerging skills requirements of each regional labour market. This would inform the provision of accredited training (both in-house and via external providers such as TAFE), the indenturing of apprentices, and the design of Job Guarantee activities so that they include experiential development of skills expected to be in local demand, thereby restoring the role of the public sector as a net trainer of skilled workers and minimising the likelihood of inflationary bottle-necks in labour supply.

The flexibility of the Job Guarantee would extend to designing jobs to accommodate individuals with special physical, intellectual and behavioural needs. It could also be adapted to address the needs of rural and remote communities, and to reflect cultural norms within indigenous and other non-Anglo Australian communities.

The Job Guarantee is intended as a platform to: provide economic security and social integration for those whose labour is currently being under-utilised; reduce social dislocation arising from unemployment and poverty; and contribute to the quality of life of all by its contributions to a better environment, public amenity and improved services.

As a minimum wage employer that accommodates the poaching of its skilled workers by other employers, and even facilitates this practice when extra workers are needed in the private sector, the Job Guarantee is a superior price stabiliser than the present method that entails keeping over a million people precariously unemployed and under-employed, and in a condition of skill-atrophying idleness, social exclusion and poverty.

1. Introduction

There can be little doubt that the current global economic crisis is going to lead to significant economic and social pain with the worst affected being the persons who lose their jobs. For example, consider these statements

- The International Labour Organisation (ILO) predicts that global unemployment may reach 30 million in 2009;
- The estimates for the United States project official unemployment to be around 8 per cent in 2010; during 2008 the unemployment rate increased by 2.7 percentage points, an increase of over 3.6 million people;
- For Australia, Treasury estimates that the unemployment rate will grow to 7 per cent by the middle of 2010, with others tipping a rate of 8 per cent or close to 1 million people.

If these and other predictions are correct (and they reflect the experience of previous major downturns) then the impact on the employment structure of our economy, our society and the places where we live and work is going to be stark. People in particular industry sectors, those with low skills and those employed in casual or part-time positions will likely see their employment opportunities diminish. A recent *IBIS World* report has identified that for Australia it is industry sectors including construction, manufacturing, mining, retail, accommodation, finance and real estate that will be most at risk of suffering significant job losses. At an aggregate level the loss of jobs will be significant despite the current government policy of developing stimulus packages of varying sizes and with various target populations. The recent and highly publicised loss of manufacturing jobs at Pacific Brands and in other manufacturing firms and the loss of mining jobs in Queensland represent a taste of potential losses. It is certain there will be more pain to come.

The problems associated with employment adequacy and attachment to paid work have always been considered central to understanding questions of disadvantage, poverty and social exclusion. Being actively and meaningfully engaged in the labour market is an integral part of many people's lives. Employment is an effective barrier against abject poverty, so being excluded from employment brings with it significant financial concerns for individuals and their families. In terms of the growth of poverty, welfare agencies are quick to point to the problems imposed by unemployment (Samaritans, 2003), with the wider implications also being discussed in the public policy arena. For example, the Senate Community Affairs Reference Committee (2004) considered that unemployment, and particularly long-term unemployment, is the key driver in understanding poverty and disadvantage in the Australian community. Moreover self-dignity and physical and social well-being are violated by high rates of labour underutilisation (Junankar and Kapuscinski, 1992, Mitchell and Muysken, 2008). For the nation having a large percentage of the workforce marginally attached represents a waste of resources and huge losses in national income. An increase in unemployment and other types of labour force disadvantage is only going to exacerbate these issues and spread the burden across more sectors of society.

There is an important spatial element that attaches itself to the spectre of job losses and raises a range other questions and challenges. Put simply job losses will be more concentrated in some areas than others. We know for example that some suburbs in our large metropolitan and non-metropolitan cities are already disadvantaged because

of the concentrations of residents unable to find work. Despite the long growth phase that the Australian economy has undergone since the last major recession in 1991, the benefits of the growth have been spatially disparate.

The impacts of this spatially concentrated disadvantage are well understood and have been commented on elsewhere. In several other published works we have pointed to the uneven nature of socio-economic conditions across various types of spatial disaggregation. In a recent analysis, Baum (2008a, 2008b) has shown the way that Australia's metropolitan regions are characterised by the scars of socio-economic disadvantage, with many suburbs falling further being the mainstream as multiple disadvantages act as barriers to full inclusion in society. In a number of publications Mitchell (Mitchell and Carlson, 2005; Mitchell and Bill, 2004; 2006; Mitchell *et al.*, 2008) points to the disparities that occur in the performance of local labour markets and the ways that these impact on the spatial economy. The overwhelming conclusion that our research has reached is that these disparities are intrinsically linked to the persistence of unemployment rate differentials across the same spatial units and accompanying social disadvantage. The evidence for these outcomes is a range of analyses that has consistently shown that some localities and regions are employment 'hot spots' and others are employment 'cold spots' calling into question the spatial equity of recent periods of employment growth.

Swan (2005) argues that a consequence of growing spatial inequality in Australian society is a greater separation of rich and poor. In particular he points out:

> As the wealthy take over real estate close to the good jobs, the best schools and hospitals they lift the cost of entry to those areas. On the other hand, as the splintering middle and poorer people move further away they are paying more to get to work, school and see the doctor. If they lose their job, distance compounds their disadvantage (Swan, 2005: 172).

Similarly, Gray and Lawrence (2001: 115) discussing regional communities argue that

> Alongside the promise of the generation of wealth comes a certainty that deprivation and poverty will accompany it. Along with the opportunity for global marketing comes vulnerability to forces of global investment…The inevitable result is a *deepening of the chasms between the people and communities which have inherent advantages and those which do not.* (emphasis in original)

Internationally, the OECD has argued in the past that

> …[d]eprived areas, which have grown in number in recent years, limit the opportunities and prospects of people who live in them. Without a vision of their potential, a nation [not] only bears the costs but fails to realise the possibilities inherent in these places and their populations (OECD 1998: 11).

We know that the current economic crisis in generating employment losses. However, from past experience we know that some places are more exposed to job loss than other areas given the characteristics of their employed population. So what we will see is that existing disadvantaged places will likely become more disadvantaged and a new breed of disadvantaged places will follow in their wake.

This Research Report outlines where we expected the job losses to fall. That is, we provide, based on extensive modelling, the expected spatial distribution of job losses resulting from the current economic crisis.

Using data on the employment characteristics of Australia's metropolitan suburbs we provide a national level ranking according to the risk of job losses based on a new labour market indicator which we call the *Employment Vulnerability Index* (EVI). We explain this index in more detail in Section 3 and the Appendix.

2. Job losses in context: where we have been and where we might be headed

Despite the long period of economic growth that has now ended, the Australian economy still could only produce a labour market where at best 8.8 per cent of the willing workforce was underutilised. At the top of the boom there were still around 530,000 workers officially unemployed and more than 680,000 classified by the ABS as being underemployed.

The lessons from past economic slowdowns tell us that the labour market deteriorates fairly quickly once things economic activity slows. We also know that employment growth is very low for several quarters after the trough in the cycle is reached as firms use hours adjustments to meet the growing demand. The unemployment rate, for example, reached its lowest value since the early 1970s of 5.5 per cent in 1981Q2 and then peaked 9 quarters later at 10.3 per cent in 1983Q3. By comparison, a broader measure of labour underutilisation (combining unemployment, underemployment and hidden unemployment) published by the Centre of Full Employment and Equity (CofFEE, 2008) went from 8.7 per cent to 16.5 per cent over the same 9 quarters. It took until 2004Q2 for the unemployment rate to get back below 5.5 per cent.

In the 1991 recession, which was much longer and deeper, the official unemployment rate went from 5.7 per cent to 10.8 per cent over 12 quarters, while the CofFEE broad indicator of labour market underutilisation went from 9.7 per cent to 19.3 per cent over the same period. So the labour market deteriorated over 3 full years during this downturn.

One of the significant differences between the 1982 and 1991 episodes was the role that underemployment played. In the 1982 downturn, underemployment went from 1.4 per cent to 2.3 per cent. So while it was an issue, the number of part-time workers who wanted to work more hours but couldn't find the extra hours was relatively modest. However, in the 1991 downturn, a fundamental shift occurred in the labour market as employers scrapped full-time jobs rapidly and so began the sharp jump in underemployment. Over the 12 quarters that the labour market deteriorated, underemployment jumped from 2.2 per cent to 4.3 per cent. Even in the recovery of the late 1990s, underemployment never really returned to its lower levels.

In the current period, with the labour market beginning to deteriorate, the official unemployment rate has gone from its lowest value 4 per cent (February 2008) to 4.3 per cent (November 2008) and the CofFEE broad indicator of labour market underutilisation has climbed from 8.8 per cent to 9.3 per cent.

So the stark differences between this downturn and the last are that we already have high rates of labour underutilisation overall and that underemployment has become an integral result of the shifts in the private sector job creation process.

3. Employment vulnerability in Australian urban regions

3.1 The CofFEE/URP Employment Vulnerability Index

The Appendix details how we constructed the *Employment Vulnerability Index* (EVI), which is an indicator that identifies those suburbs that have higher proportions of the types of jobs thought to be most at risk in the current economic climate. Appendix A presents a full description of how the EVI was computed. Table 1 describes the EVI classifications for the ranked suburbs according to their index outcome.

Table 1 EVI classification scheme

EVI classification	Map Colour Code
Red alert suburbs – those with high potential job loss;	
Amber alert suburbs— those with Medium-high potential job loss;	
Medium-low potential job loss suburbs; and	
Low potential job loss suburbs.	

It should be noted that the underlying modelling used to compute the EVI takes into account both suburb and individual characteristics. As a result, any one person in a Red alert suburb may have little risk of job loss while any one person in a Low risk suburb might, in fact, be very vulnerable to job loss. But in aggregate, we expect the job losses to fall predominantly in the Red and Amber alert suburbs.

To make the analysis tractable, we computed the EVI for Capital Cities (2593 metropolitan suburbs) and the suburbs located in the Australian Bureau of Statistics non-Metropolitan regional centres with more than 20,000 residents. In some cases this does not include suburbs in outer areas of regional cities as they are not included as part of the ABS's urban centre categorisation.

The resulting rankings cover over 75 per cent of the total Australian population which is not surprising given the high degree of urbanisation in Australia.

A complete list of the rankings and different perspectives is available from the EVI Home Page at http://e1.newcastle.edu.au/coffee/indicators/job_loss_index/. All the maps are also available from the EVI Home Page.

3.2 Job loss potential: an overview

Table 2 presents summary statistics of the underlying EVI database. Around 15 per cent of suburbs in the analysis were found to be Red Alert while 40 per cent of the suburbs were considered to be an Amber Alert, which means they have medium high risk of job loss. Around 27 per cent of suburbs were considered to have medium low risk and 18 per cent were considered to be low risk.

How sensitive is the overall distribution of suburbs in the four categories to the thresholds chosen? Table 2 shows that overall 8.4 per cent of the Amber Alert suburbs have EVI Index values that are within 10 per cent of the Red Alert threshold. The percentages are higher for the more populated states such as NSW, Victoria, and Queensland, the latter having 10.3 per cent of its Amber Alert suburbs within close proximity of the Red Alert threshold.

Table 2 Summary EVI statistics

Summary measure	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Australia
Number of Red Alert suburbs	124	100	151	71	63	17	2	2	530
Number of Amber alert suburbs	395	238	378	124	194	53	8	1	1391
Number of Medium risk	365	153	157	114	112	29	0	13	943
Number of Low risk	216	83	58	86	31	22	49	78	623
% of Red Alert suburbs	11.3%	17.4%	20.3%	18.0%	15.8%	14.0%	3.4%	2.1%	15.2%
% of Amber alert suburbs	35.9%	41.5%	50.8%	31.4%	48.5%	43.8%	13.6%	1.1%	39.9%
% of Medium risk	33.2%	26.7%	21.1%	28.9%	28.0%	24.0%	0.0%	13.8%	27.0%
% of Low risk	19.6%	14.5%	7.8%	21.8%	7.8%	18.2%	83.1%	83.0%	17.9%
Percentage of Red Alerts metro (%)	61.3	76.0	36.4	97.2	47.6	47.1	100.0	100.0	60.0
Number of Amber Alert within 10% of Red	32	20	39	9	14	3	0	0	117
% of Amber Alert within 10% of Red	8.1%	8.4%	10.3%	7.3%	7.2%	5.7%	0.0	0.0	8.4%
Total number of suburbs	1100	574	744	395	400	121	59	94	3487

The two broad types of Red Alert suburb

At a general level the *Red Alert* suburbs span two broad types:

- Suburbs that have for some time been among Australia's most disadvantaged places to live; and
- Suburbs which up until the recent economic slowdown have been relatively sheltered from the social and economic problems that joblessness brings.

We have classified these based on a disadvantage index derived from the 2006 Census of Population and Housing. At this stage the classification is incomplete and only covers the Capital Cities and then only partially. A full list is available in the Appendix B as well as being denoted in the Capital City Tables 3 to 10 in Section 4: [B] denotes a battler suburb; [ED] denotes a suburb with emerging disadvantage; and [NC] not classified as yet.

The traditional battler suburbs

The first type of suburb at high risk of job loss has in the past perhaps been considered to be the home to the real 'battlers' of the metropolitan areas and the regional centres. Some of these locales, mainly in the country's large cities, have achieved a high public profile as a result of media stereotyping the social problems that are considered to be concentrated there (for example, Macquarie Fields and Rosemeadow in NSW). Most of these problems reflect the high rates of long-term unemployment and the intergenerational disadvantage that accompanies it.

Many of the suburbs have concentrations of multiple disadvantages whereby the problems associated with unemployment are compounded by other problems and issues. Recent years may have seen some small improvements, but by and large, these battling suburbs remain amongst the countries most deprived.

These localities dramatically illustrate the changing nature of the suburban industrial communities that were established during the Post-World War II Fordist phase of expansion.

For these localities, the post-Fordist economy has caused the old established economic and social geography to become obsolete as they are faced with new forces of production (Searle 1993). This is well illustrated by Peel's (1995) case study of Elizabeth in Adelaide:

> The combination of economic growth and adventurous public planning that underpinned the workers' city did not last. Crisis first arrived in the form of economic downturn of the mid 1970s. That was followed by restructurings which severed subsequent recovery from job creation…In this new environment places like Elizabeth faced an uncertain future…Their role in a reorganised and restructured economy would depend upon their ability to adjust, to attract and hold on to new investment and new kinds of jobs (Peel, 1995: 156).

For these suburbs the spectre of further job losses can only increase the potential for despair and entrenched long-term disadvantage.

The new emerging arenas of disadvantage

Our research has identified that there is now a second broad class of suburb emerging as a new arena of disadvantage. Some of these new suburbs which face high job-loss

risk represent the new suburban disadvantaged that have been discussed by Randolph (2004) and earlier by Badcock (1997). Others have been described as aspirant working class battler suburbs (Gwyther 2002; Baum *et al.*, 2005; and Baum, 2008a and b) or, in the case of non-metropolitan regions have been among regional success stories associated with manufacturing, services or mining, but which have been identified as having concentrations of vulnerable occupations (Baum *et al.*, 2005).

Taken together they represent the new face of disadvantage in our suburbs. These are likely to be places that have tended to have an association with old-economy manufacturing-based employment, but are not quite as disadvantaged as the most disadvantaged places in our cities. For the capital cities some of these localities are the places where families have chosen to live in an attempt to get a foothold in the housing market given that the recent property booms have further segregated the housing market across Australian cities.

Record low interest rates have helped keep these suburbs out of the highest level of housing-related disadvantage (Briton, 2003) they may be the places that Wayne Swan (2005) referred to when he stated that many families are being left behind in the race for prosperity.

These are suburbs where households are typically carrying high levels of debt and depend on two incomes to meet their nominal repayments. One of the household income earners is likely to be working in a part-time (and increasingly underemployed) capacity and total family income is highly dependent on the casual hours being maintained. One of the first casualties in a recession is the volume of part-time working hours that are available. With small changes in hours of work on offer, households in these suburbs will quickly enter financial crisis and the latent disadvantage will then manifest.

Figure 1 and 2 shows the Regional Concentration Ratio (RCR) for the Capital Cities and non-metropolitan urban areas, respectively. The RCR was developed to illustrate the relative distribution of suburbs in the high job-loss group across each city. The regional concentration ratio is a version of a location quotient. It determines the extent to which any metropolitan region has an over concentration of suburbs in the high job-loss group. The RCR is calculated by considering the percentage distribution of a high job-loss suburbs in each metropolitan and non-metropolitan region divided by the percentage distribution of high job-loss suburbs across all regions. Like a location quotient, a RCR greater than 1 indicates that the number of high job-loss suburbs in a particular city is overrepresented. An RCR less than 1 indicates the opposite outcome.

In this regard, Melbourne, Brisbane, Adelaide and Hobart are relatively disadvantaged compared to the other capital cities (from Figure 1), while the regional centres of Albury, Bendigo, Bunbury, Devonport, Geelong, Gladstone, Gold Coast, Kalgoorlie, Launceston, Lismore, Mandurah, the Sunshine Coast, Maryborough, Orange, Tamworth, and Whyalla are relatively disadvantaged compared to other regional cities (from Figure 2).

Figure 1 Regional Concentration Ratio - high job loss potential suburbs by capital city

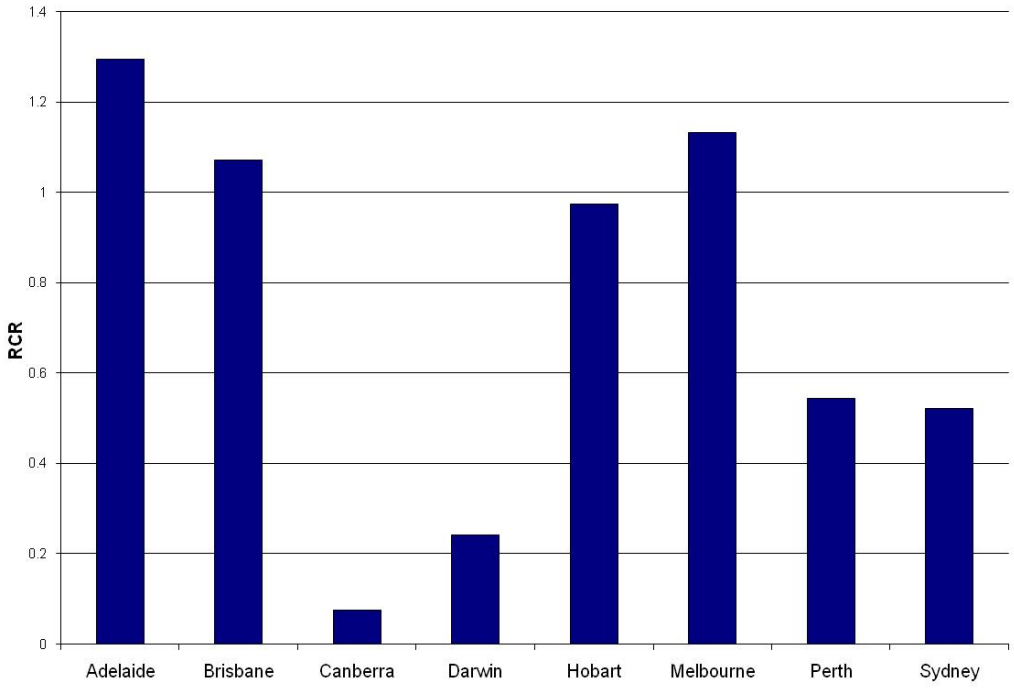
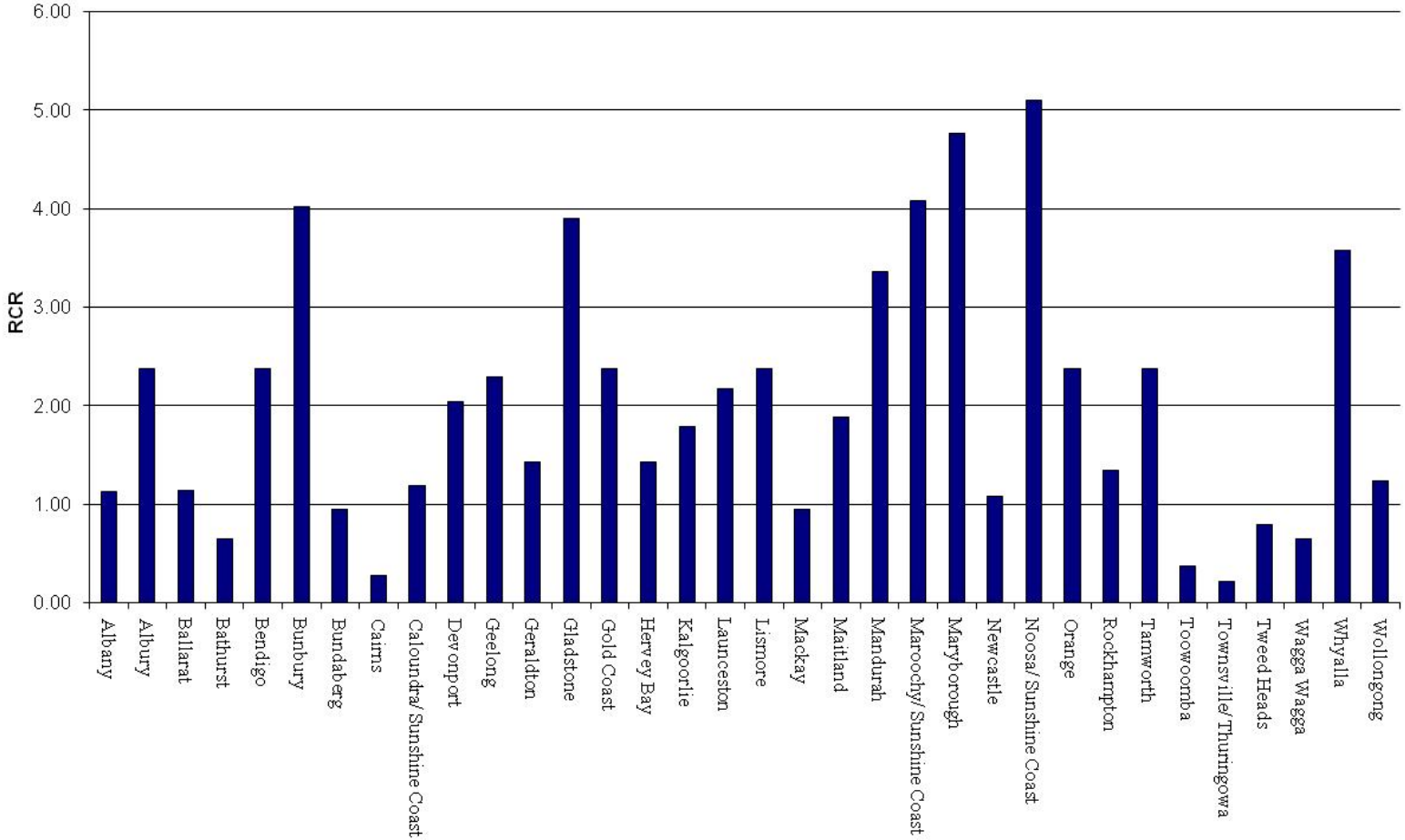


Figure 2 Regional Concentration Ratio - high job loss potential suburbs by non-metropolitan urban areas



4. Extreme job loss: the Capital Cities

4.1 Sydney

Table 3 lists all the Red Alert suburbs in Sydney ranked by EVI Index value (with the [B] and [ED] annotations where possible). At a relative level, Sydney has a slightly lower than average number of high job loss potential suburbs, scoring 0.52 on the regional concentration ratio (see Figure 1). Many of its suburbs are however not immune from the potential impact of job losses. The city has some of the highest scoring as well as the lowest scoring suburbs reflecting the general polarised nature of the city's residential structure. Like all of the cities, in many cases high potential job-loss suburbs sit in close proximity to those that will likely face much smaller impacts. Places such as Auburn to the South-West of the CBD sit only kilometres from suburbs such as Rhodes or Liberty Grove.

While Sydney also has a large number of Amber Alert suburbs (moderately high job-loss risk), many of these individual suburbs are very close to the borderline of being classified as Red Alert

Many of the high index suburbs in Sydney are among the city's most disadvantaged localities. Suburbs such as Claymore, Airds and Cabramatta have previously been found to suffer from high levels of often entrenched disadvantage (Baum 2008a & b). Other places such as Tacoma, Greenfield Park and Wakley have not seen significant disadvantage (Baum 2008a & b), but are likely to be among those places of Sydney's new, emerging disadvantage.

Spatially, the pattern of job loss potential in Sydney represents long standing patterns of disadvantage with significant concentrations in the Western suburbs and in the far northern beaches suburbs.

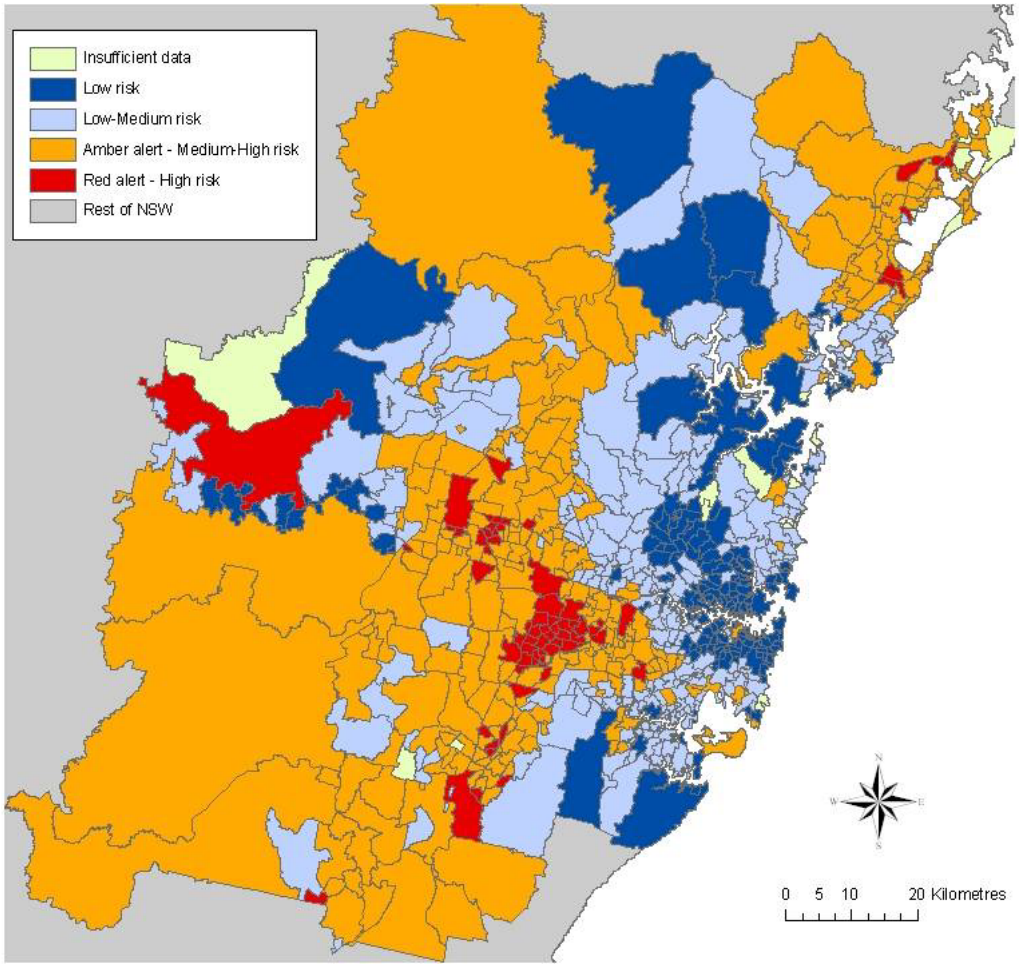
There are also significant medium-high concentrations in large parts of the outer metropolitan region (see Figure 3)

Table 3 High EVI or Red Alert suburbs in Greater Sydney, a higher Index value is worse

Suburb	Index	Suburb	Index	Suburb	Index	Suburb	Index
Arndell Park [ED]	0.937	Bidwill [B]	0.509	Hinchinbrook [ED]	0.438	Smithfield [B]	0.399
Cabramatta [B]	0.788	Green Valley [B]	0.505	Blue Mountains [NC]	0.435	Toowoon Bay [ED]	0.398
Canley Heights [B]	0.757	Edmondson Park [ED]	0.500	Tregear [B]	0.434	Eastern Creek [B]	0.392
Wallarah [NC]	0.732	Greenfield Park [B]	0.499	Punchbowl [B]	0.429	Werrington County [NC]	0.389
Cabramatta West [B]	0.727	North St Marys [B]	0.493	Busby [B]	0.427	Hoxton Park [NC]	0.382
Doyalson [B]	0.721	Heckenberg [B]	0.484	Rocky Point [ED]	0.424	Eagle Vale [NC]	0.381
Claymore [B]	0.701	Lethbridge Park [B]	0.484	Charmhaven [B]	0.422	Mount Pritchard [NC]	0.375
Canley Vale [B]	0.661	Wakeley [B]	0.475	St Clair [ED]	0.418	Buxton [NC]	0.373
Middleton Grange [B]	0.623	Haymarket [B]	0.469	Oxley Park [B]	0.418	Lurnea [NC]	0.371
St Johns Park [B]	0.613	Fairfield [B]	0.468	Fairfield Heights [B]	0.416	Abbotsbury [NC]	0.371
Regentville [ED]	0.586	Old Guildford [B]	0.465	Cecil Hills [NC]	0.415	Dean Park [NC]	0.370
Bonnyrigg Heights [B]	0.581	Blackett [B]	0.460	Mount Lewis [B]	0.413	St Andrews [NC]	0.369
San Remo [B]	0.577	Fairfield West [B]	0.459	Rosemeadow [ED]	0.413	Kearns [NC]	0.369
Bonnyrigg [B]	0.564	Bossley Park [B]	0.456	Emerton [B]	0.410		
Edensor Park [B]	0.554	Villawood [B]	0.456	Willmot [B]	0.409		
Windsor Downs [ED]	0.533	Tacoma [ED]	0.455	Blue Haven [B]	0.407		
Englorie Park [B]	0.530	Holroyd [NC]	0.448	Auburn [B]	0.406		
Shalvey [B]	0.522	Miller [B]	0.447	Tumbi Umbi [ED]	0.405		
Airds [B]	0.522	Werrington Downs [ED]	0.445	Whalan [B]	0.405		
Fairfield East [B]	0.518	Cartwright [B]	0.443	Wetherill Park [B]	0.403		
Sadleir [B]	0.517	Llandilo [ED]	0.443	Prairiewood [B]	0.402		

Note: [B] denotes battler suburb; [ED] denotes emerging disadvantage; and [NC] denotes not yet classified.

Figure 3 EVI assessments for job-loss across the suburbs of Greater Sydney



4.2 Melbourne

Unlike Sydney, Melbourne is faced with a relatively higher number of job loss suburbs than the average with a Regional Concentration ratio of 1.13. Table 4 lists all the Red Alert suburbs in Melbourne ranked by EVI Index value (with the [B] and [ED] annotations where possible).

Figure 4 displays the colour-coded map and reveals that, spatially, the potential job loss suburbs are located in the cities outer suburbs where significant concentrations can be seen.

As with Sydney, the potential job loss suburbs in Melbourne include those that have been at the sharp end of entrenched disadvantage for a considerable period. Here the suburbs of Broadmeadows, Dandenong and Sunshine in Melbourne's post-industrial growth heartlands come easily to mind.

These are the suburbs that many have discussed in terms of the negative impacts of economic restructuring (Peel, 2003; Baum *et al.*, 2005; and Baum, 2008a & b) and further job losses will compound the problems that these suburbs are already facing.

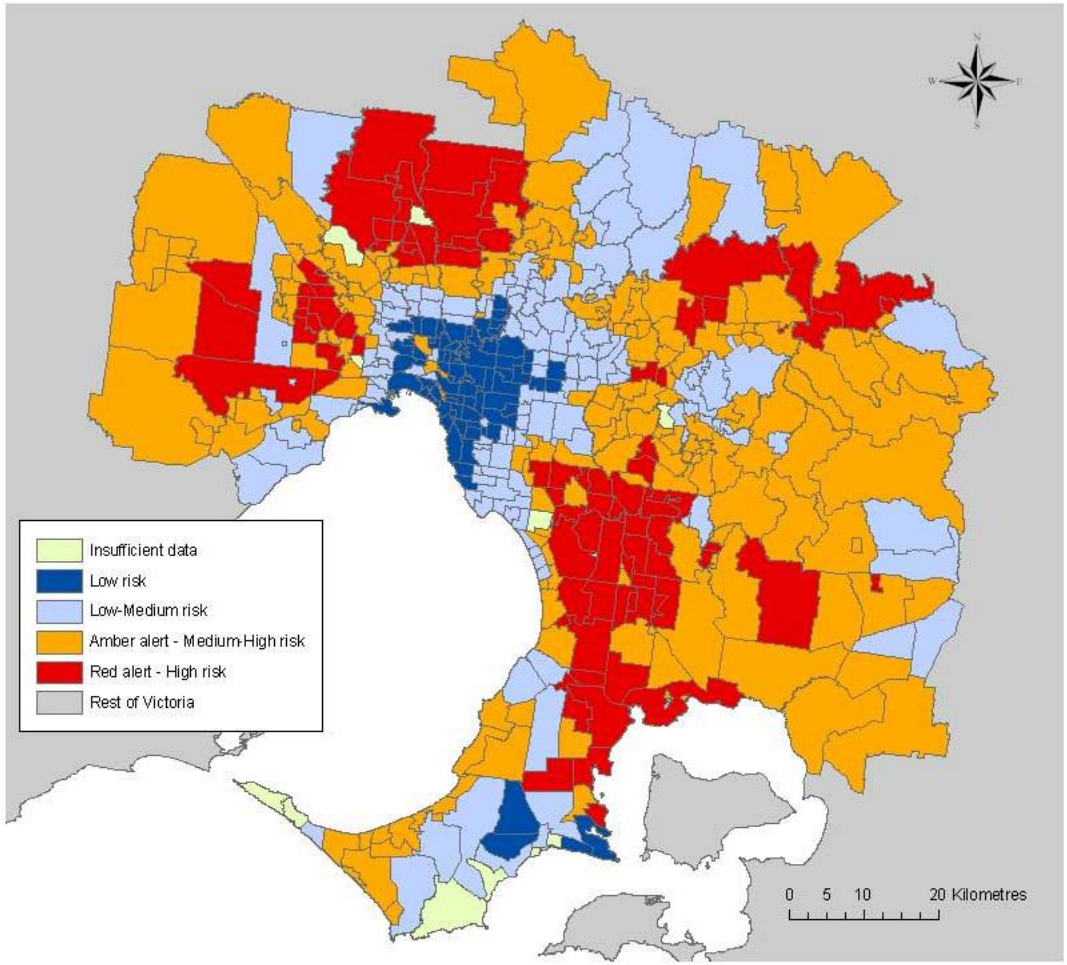
But Melbourne's potential job losses also spill out to places once considered to be doing well out of good economic times. Suburbs such as Cranbourne, Epping and Baxter have all previously been cited as suburbs in the middle of the distribution of disadvantage in the Melbourne metropolis (Baum 2008a & b). They are now among the places that may suffer from the negative impact that joblessness brings.

Table 4 High EVI or Red Alert suburbs in Greater Melbourne, a higher Index value is worse

Suburb	Index	Suburb	Index	Suburb	Index	Suburb	Index
Dandenong South [B]	0.835	Epping [ED]	0.526	Eumemmerring [B]	0.461	Tynong [ED]	0.404
Meadow Heights [B]	0.729	St Albans [B]	0.520	Woori Yallock [ED]	0.454	Lysterfield [ED]	0.404
Springvale South [B]	0.686	Baxter [ED]	0.519	Taylors Lakes [ED]	0.450	Laverton North [B]	0.400
Campbellfield [B]	0.675	Cairnlea [ED]	0.516	Roxburgh Park [B]	0.449	Dandenong North [B]	0.399
Keysborough [ED]	0.660	Mickleham [ED]	0.511	Crib Point [ED]	0.436	Mount Cottrell [B]	0.398
Thomastown [B]	0.622	Doveton [B]	0.511	Somerville [ED]	0.431	Langwarrin South [ED]	0.395
Springvale [B]	0.620	Cranbourne [ED]	0.497	Seville East [ED]	0.429	Langwarrin [NC]	0.384
Dallas [B]	0.618	Hallam [ED]	0.494	Beaconsfield [ED]	0.429	Mill Park [NC]	0.381
Lalor [B]	0.618	Narre Warren North [ED]	0.493	Coldstream [ED]	0.426	Tooradin [NC]	0.376
Delahey [B]	0.605	Frankston North [B]	0.492	Pearcedale [ED]	0.423	Badger Creek [NC]	0.373
Kings Park [B]	0.602	Skye [ED]	0.489	Dandenong [B]	0.420	Keilor Lodge [NC]	0.373
Coolaroo [B]	0.590	Carrum Downs [ED]	0.489	Narre Warren South [ED]	0.419	Millgrove [NC]	0.370
Greenvale [ED]	0.582	Cranbourne East [ED]	0.488	Wollert [ED]	0.418	Bayswater North [NC]	0.369
Cranbourne West [ED]	0.559	Broadmeadows [B]	0.484	Clayton South [B]	0.417		
Craigieburn [ED]	0.558	Keilor Downs [B]	0.478	Lynbrook [ED]	0.416		
Kilsyth South [ED]	0.548	Don Valley [ED]	0.475	Mernda [ED]	0.415		
Hampton Park [ED]	0.546	Braybrook [B]	0.474	Attwood [ED]	0.413		
Cranbourne North [ED]	0.535	Narre Warren [ED]	0.472	Noble Park North [B]	0.408		
Albanvale [B]	0.534	Sunshine West [B]	0.468	Pakenham [ED]	0.408		
Rockbank [ED]	0.531	Endeavour Hills [ED]	0.467	Lilydale [ED]	0.408		
Sunshine North [B]	0.527	Hastings [ED]	0.461	Deer Park [B]	0.406		

Note: [B] denotes battler suburb; [ED] denotes emerging disadvantage; and [NC] denotes not yet classified.

Figure 4 EVI assessments for job-loss across the suburbs of Greater Melbourne



4.3 Brisbane

Table 5 lists all the Red Alert suburbs in Brisbane ranked by EVI Index value (with the [B] and [ED] annotations where possible). Brisbane has for a significant period of time presided over a region and a state that has been on the up-side of the so-called two speed economy. This has to some extent insulated the city so that the negative impacts felt more recently elsewhere have not been seen to the same extent in Brisbane. With the declining economy this situation is set to change.

While there has been disadvantage, relative to other cities the recent past has recorded lower levels (Baum 2008a & b). The Regional Concentration ratio indicates that Brisbane has more than the average number of job loss suburbs with a ratio of 1.07. Brisbane's high potential job loss suburbs include those places often associated with disadvantage including those suburbs in Logan (for example, Logan Central, Loganlea) and Inala.

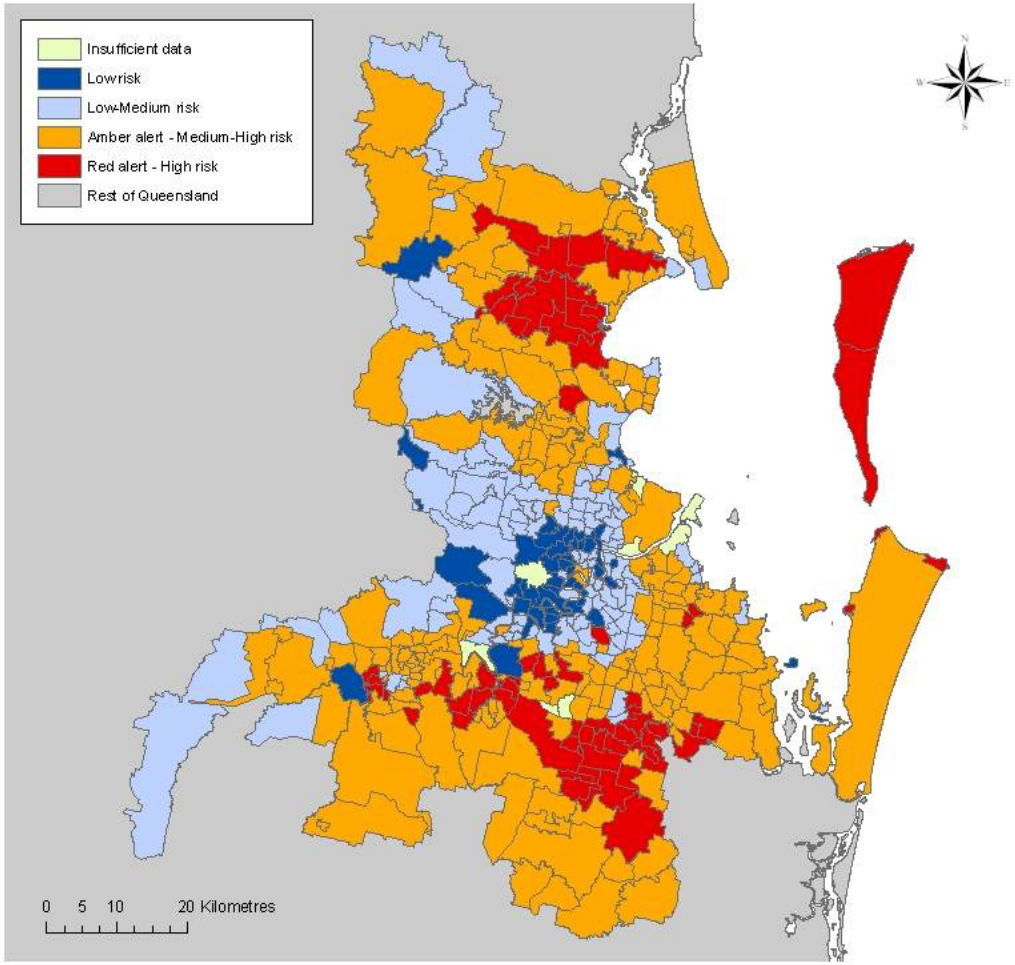
However, other places that have not been associated with extreme disadvantage such as Capalaba West and outer northern suburbs such as Morayfield and Bellmere will also be at risk of witnessing job losses.

Table 5 High EVI or Red Alert suburbs in Greater Brisbane, a higher Index value is worse

Suburb	Index	Suburb	Index	Suburb	Index	Suburb	Index
Kooringal [NC]	1.665	Browns Plains [ED]	0.550	Park Ridge South [ED]	0.473	Camira [ED]	0.416
Carole Park [B]	0.742	Regents Park [ED]	0.533	Deception Bay [ED]	0.469	Loganholme [ED]	0.410
Doolandella [ED]	0.677	Waterford West [ED]	0.520	Upper Caboolture [ED]	0.467	One Mile [ED]	0.406
Amity [NC]	0.671	Ripley [ED]	0.518	Logan Reserve [ED]	0.459	Boronia Heights [ED]	0.401
Willawong [ED]	0.650	Churchill [B]	0.510	Waterford [ED]	0.457	Ningi [ED]	0.398
Nathan [B]	0.644	Bulwer [NC]	0.506	Hillcrest [ED]	0.456	Kallangur [ED]	0.394
Point Lookout [ED]	0.626	Dunwich [NC]	0.499	Logan Central [B]	0.455	Cornubia [NC]	0.392
Crestmead [ED]	0.626	Heritage Park [ED]	0.498	Dinmore [B]	0.453	Munruben [NC]	0.383
Inala [B]	0.622	Capalaba West [ED]	0.497	Wulkuraka [ED]	0.436	Logan Village [NC]	0.378
Richlands [B]	0.609	Goodna [B]	0.495	Greenbank [ED]	0.432	Bellbird Park [NC]	0.375
Loganlea [B]	0.598	Morayfield [ED]	0.484	Blackstone [ED]	0.428	Leichhardt [NC]	0.375
Marsden [ED]	0.571	Meadowbrook [ED]	0.483	Moorina [ED]	0.426	Chambers Flat [NC]	0.372
Redbank Plains [ED]	0.566	Caboolture [ED]	0.480	Caboolture South [B]	0.420	Park Ridge [NC]	0.369
Kingston [B]	0.565	Burpengary [ED]	0.476	Woodridge [B]	0.417		

Note: [B] denotes battler suburb; [ED] denotes emerging disadvantage; and [NC] denotes not yet classified.

Figure 5 EVI assessments for job-loss across the suburbs of Greater Brisbane



4.4 Adelaide

Table 6 lists all the Red Alert suburbs in Adelaide ranked by EVI Index value (with the [B] and [ED] annotations where possible). Adelaide, along with Hobart have for some time been seen as being Australia's rust-belt capitals as declining populations and declining economic fortunes have taken their toll on the level of socio-economic opportunity (Baum *et al.*, 2005). For some time Adelaide in particular has been considered to be facing significant and entrenched economic disadvantage across several areas.

Perhaps unkindly, Carlyon (2003: 52) argues that 'South Australia has spent the past decade hurtling towards economic irrelevance' a fact that has been reflected in a range of negative socio-economic outcomes, while Peel (1995: 3) discussing the northern suburb of Elizabeth says that it 'is a shorthand for difference and despair, a symbol of what lurks in the darker spaces of a city's life'.

The picture as far as potential job losses are concerned is one of continued pressure. The Regional Concentration ratio (1.29) indicates that Adelaide has an above average number job loss suburbs. Several of the potential job loss suburbs have been among Adelaide's most disadvantaged localities. Suburbs including Elizabeth, Salisbury, Ottoway and Angle Park have been widely discussed in the literature dealing with the spatial concentration of disadvantage (Baum 2008a & b).

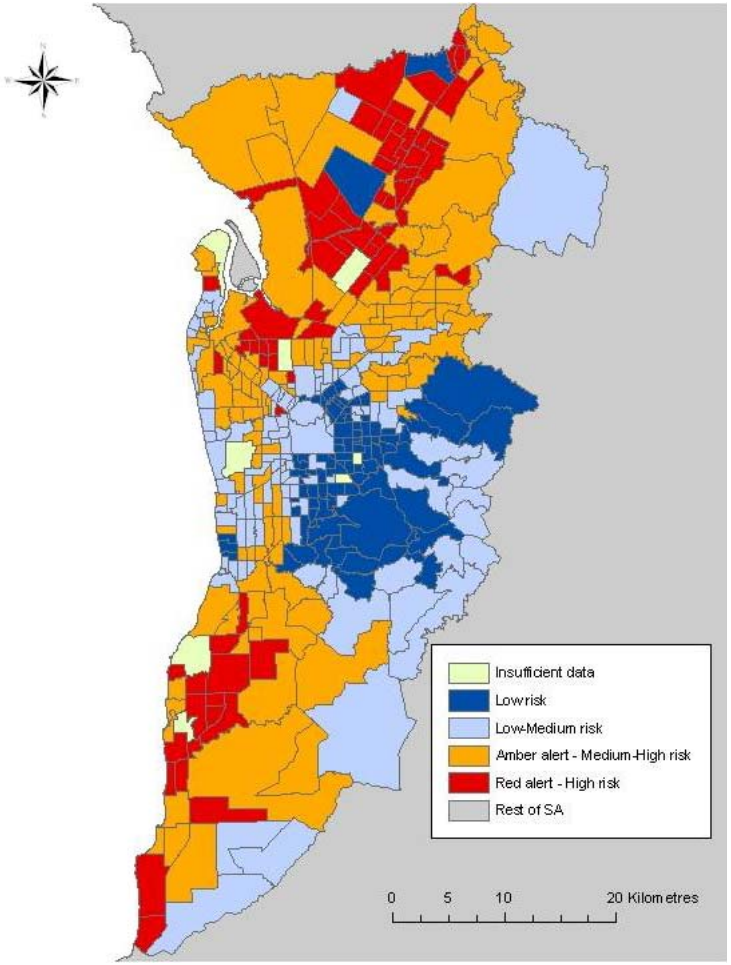
As with the other cities, these places of established disadvantage will see increasing problems. Other suburbs including Hindmarsh, Newton, Craigmore and Para Hills which have been surviving in the previous economic climate may now well witness changing fortunes. The distribution of high and medium-high job loss suburbs shows the scale of the potential impact across the Adelaide region.

Table 6 High EVI or Red Alert suburbs in Greater Adelaide, a higher Index value is worse

Suburb	Index	Suburb	Index	Suburb	Index	Suburb	Index
Cavan [B]	1.310	Blakeview [ED]	0.554	Evanston [B]	0.454	Evanston Gardens [NC]	0.380
Bolivar [B]	0.990	Elizabeth South [B]	0.548	Hindmarsh [ED]	0.448	Taperoo [NC]	0.380
Athol Park [B]	0.773	Huntfield Heights [B]	0.546	Reynella [ED]	0.448	Salisbury East [NC]	0.380
Andrews Farm [ED]	0.762	Dudley Park [B]	0.540	Salisbury Plain [B]	0.442	Macdonald Park [NC]	0.377
Munno Para [B]	0.733	Craigmore [ED]	0.540	Elizabeth Grove [B]	0.436	Trott Park [NC]	0.371
Munno Para West [ED]	0.716	Noarlunga Downs [B]	0.535	Morphett Vale [ED]	0.435	Gulfview Heights [NC]	0.370
Hackham West [B]	0.677	Elizabeth North [B]	0.528	Hillbank [ED]	0.433		
Smithfield [B]	0.647	Wingfield [B]	0.522	Globe Derby Park [B]	0.433		
Davoren Park [B]	0.638	St Kilda[B]	0.514	Angle Vale [ED]	0.428		
Salisbury North [B]	0.630	Salisbury Downs [B]	0.512	Salisbury [B]	0.414		
Hackham [ED]	0.630	Elizabeth East [B]	0.498	Angle Park [B]	0.412		
Parafield Gardens [B]	0.620	Pennington [B]	0.483	Seaford [ED]	0.403		
Ottoway [B]	0.602	Tatachilla [ED]	0.482	Para Hills West [ED]	0.401		
Paralowie [ED]	0.597	Elizabeth Park [B]	0.482	Aldinga Beach [B]	0.398		
Burton [ED]	0.597	Ferryden Park [B]	0.481	Salisbury Park [ED]	0.396		
Smithfield Plains [B]	0.596	O'Sullivan Beach [B]	0.477	Woodcroft [ED]	0.395		
Elizabeth Downs [B]	0.581	Gepps Cross [B]	0.470	Moana [NC]	0.391		
Mansfield Park [B]	0.578	Christie Downs [B]	0.469	Kudla [NC]	0.389		
Brahma Lodge [B]	0.576	Woodville Gardens [B]	0.460	Seaford Rise [NC]	0.388		
Sellicks Beach [ED]	0.561	Yatala Vale [ED]	0.459	Royal Park [NC]	0.385		
Old Noarlunga [ED]	0.557	Evanston South [ED]	0.456	Gawler West [NC]	0.384		

Note: [B] denotes battler suburb; [ED] denotes emerging disadvantage; and [NC] denotes not yet classified.

Figure 6 EVI assessments for job-loss across the suburbs of Greater Adelaide



4.5 Perth

Table 7 lists all the Red Alert suburbs in Perth ranked by EVI Index value (with the [B] and [ED] annotations where possible). The other capital city on the up-side of the two speed economy has been Perth. Like all of the capitals Perth records its fair share of job loss potential suburbs, although the regional concentration index (0.542) indicates that it has relatively less suburbs in the high range than the average.

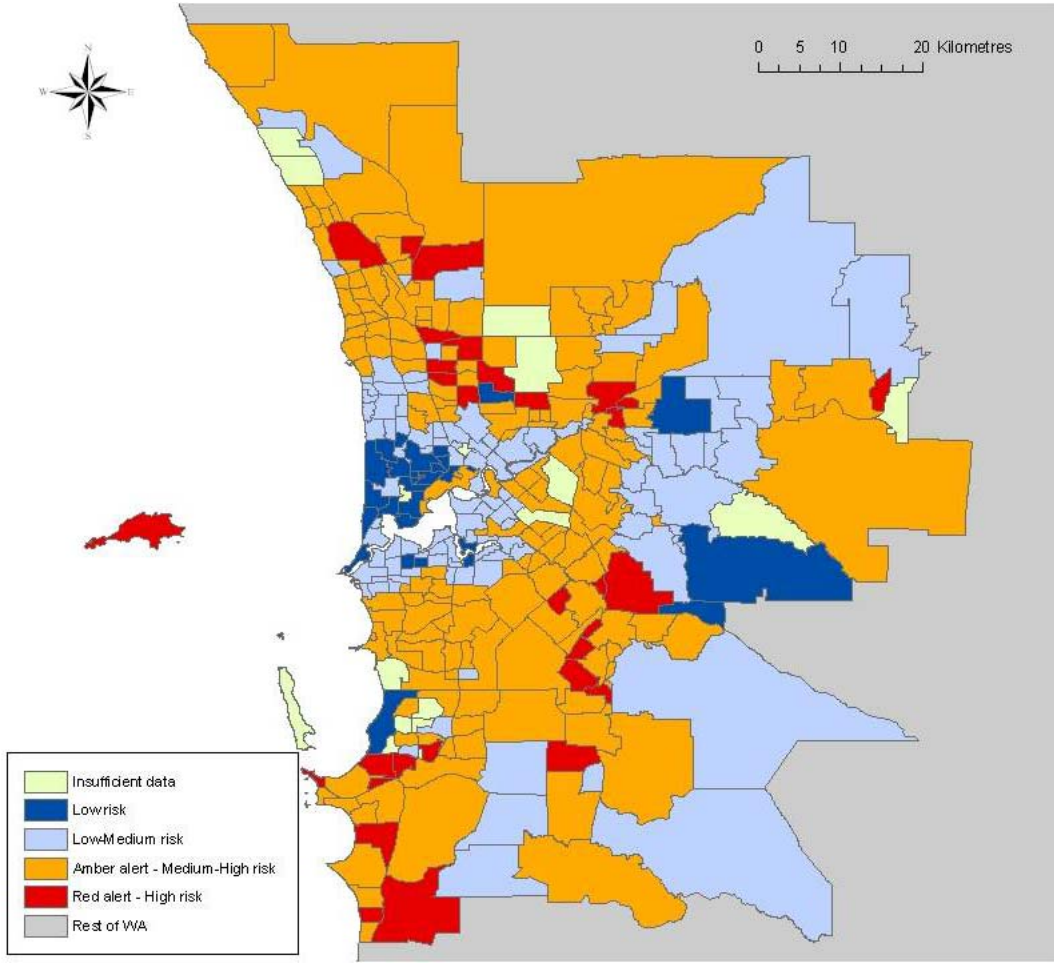
Among the high job loss suburbs are Karawara and Midvale those that earlier work has identified as being among Perth's disadvantaged places (Baum 2008a & b). But as with the other places, Perth's potential job loss suburbs include previously higher order suburbs including East Rockingham, Rockingham, and Seville Grove.

Table 7 High EVI or Red Alert suburbs in Greater Perth, a higher Index value is worse

Suburb	Index	Suburb	Index	Suburb	Index	Suburb	Index
Peron [ED]	1.548	Wungong [ED]	0.476	Mariginiup [ED]	0.399	Midvale [NC]	0.380
Rottnest Island [NC]	1.327	Stratton [ED]	0.448	Warnbro [NC]	0.392	Ballajura [NC]	0.378
Wangara [ED]	0.821	Clarkson [ED]	0.448	Brookdale [NC]	0.388	Beechboro [NC]	0.375
East Rockingham [ED]	0.586	Westfield [ED]	0.441	Cardup [NC]	0.387		
Banksia Grove [ED]	0.557	Golden Bay [ED]	0.440	Leda [NC]	0.385		
Seville Grove [ED]	0.511	Hillman [ED]	0.430	Landsdale [NC]	0.384		
Karnup [ED]	0.499	Huntingdale [ED]	0.412	Middle Swan [NC]	0.384		
Mirrabooka [B]	0.493	Martin [ED]	0.408	Girrawheen [NC]	0.381		
Beechina [ED]	0.492	Marangaroo [ED]	0.401	Parmelia [NC]	0.380		

Note: [B] denotes battler suburb; [ED] denotes emerging disadvantage; and [NC] denotes not yet classified.

Figure 7 EVI assessments for job-loss across the suburbs of Perth



4.6 Hobart

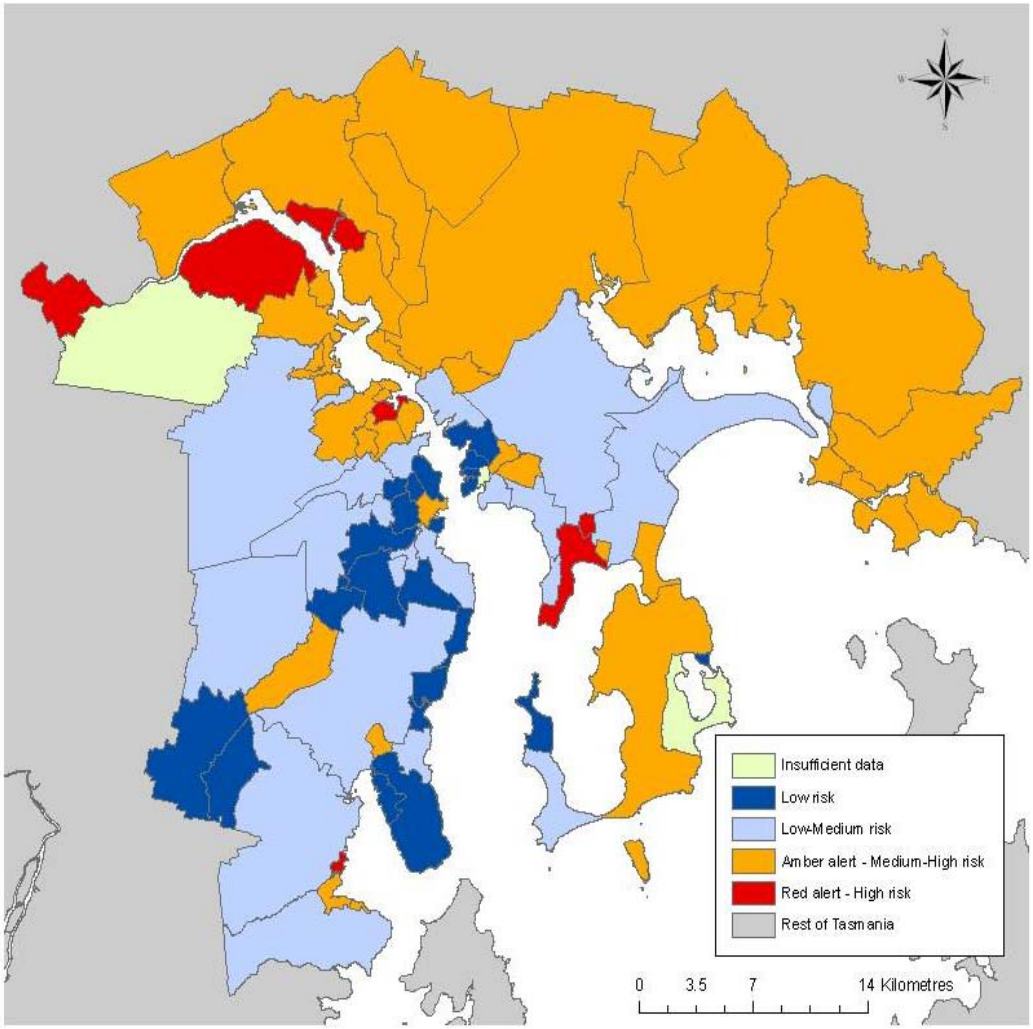
Table 8 lists all the Red Alert suburbs in Hobart ranked by EVI Index value (with the [B] and [ED] annotations where possible). Hobart, like Adelaide has for some time been home to a relatively large socio-economically disadvantaged community. The Regional Concentration Index (0.97) indicates that for Hobart the number of potential job loss suburbs is just below the average. Like all the other cities potential job loss are concentrated in existing disadvantaged suburbs (for example, Bridgewater, Clarendon Vale and Gagebrook) as well as those not necessarily associated with extreme disadvantage in previous work (Baum, 2008a & b). These potential new places of disadvantage include Granton, Tea Tree and Brighton. The outer northern suburbs will be among those most at risk (Figure 8).

Table 8 High EVI or Red Alert suburbs in Greater Hobart, a higher Index value is worse

Suburb	Index
Gagebrook [B]	0.775
Bridgewater [B]	0.680
Electrona [NC]	0.636
Derwent Park [B]	0.469
Rokeby [B]	0.423
Granton [ED]	0.421
Clarendon Vale [B]	0.403
New Norfolk [NC]	0.383
Brighton [NC]	0.361

Note: [B] denotes battler suburb; [ED] denotes emerging disadvantage; and [NC] denotes not yet classified.

Figure 8 EVI assessments for job-loss across the suburbs of Greater Hobart



4.7 Canberra and Darwin

Table 9 lists all the Red Alert suburbs in Canberra and Darwin ranked by EVI Index value (with the [B] and [ED] annotations where possible). The two public service based cities (Baum *et al*, 2005) of Canberra and Darwin show little sign of potential job loss suburbs. While these cities will certainly witness job losses - nowhere will be immune - relative to the other capital cities the impacts on anyone particular locality will be limited. In part this is due to the large public sector presence in these cities.

For Canberra, only one suburb, Acton, is identified as a potential high job loss suburb, while for Darwin the two high job loss potential suburbs are Lee Point and Winnellie.

Table 9 High EVI or Red Alert suburbs in Canberra and Darwin, a higher Index value is worse

Suburb	Index	Suburb	Index
Canberra		Darwin	
Acton [ED]	1.078	Lee Point [ED]	0.716
Fyshwick [NC]	0.561	Winnellie [ED]	0.587

Note: [B] denotes battler suburb; [ED] denotes emerging disadvantage; and [NC] denotes not yet classified.

Figure 9 EVI assessments for job-loss across the suburbs of Canberra

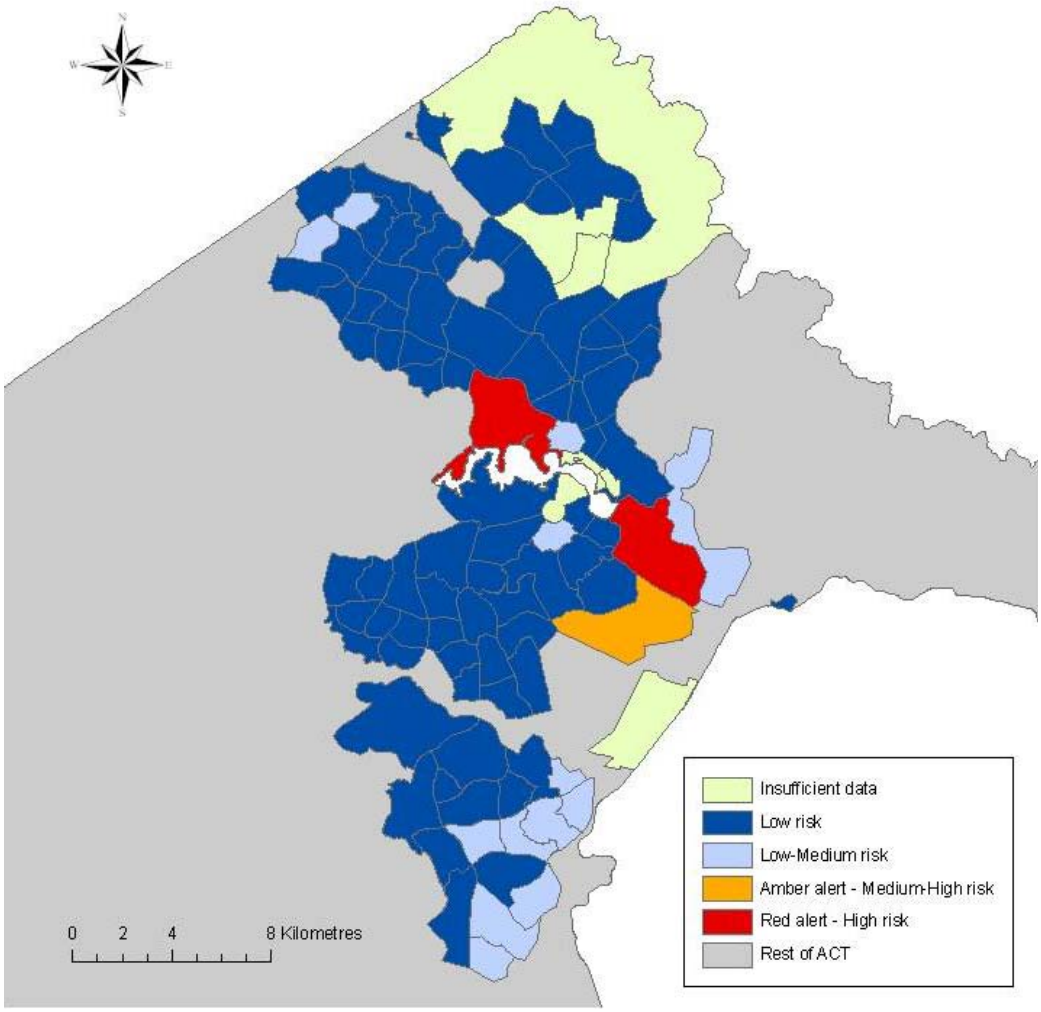
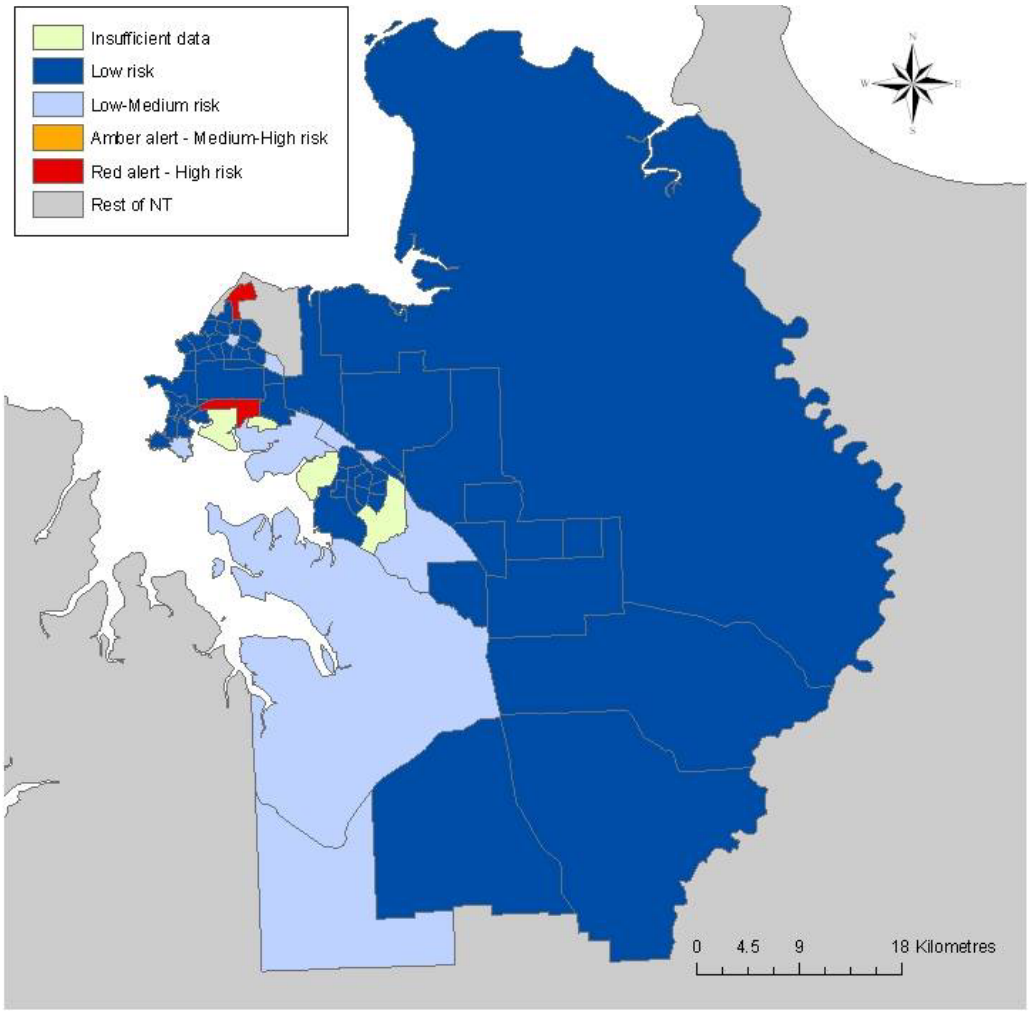


Figure 10 EVI assessments for job-loss across the suburbs of Darwin



5. Extreme job loss: regional Australia

In this section we summarise the Red Alert suburbs for the regional cities which have more than 20 thousand residents. The relevant tables are presented after the brief descriptive analysis.

Maps for the major regional centres of Newcastle and Wollongong (NSW), Geelong (Victoria); and Gold Coast, Sunshine Coast, Cairns and Townsville (Queensland) follow the Tables. All other maps are available from the EVI home page which is accessible via http://e1.newcastle.edu.au/coffee/indicators/job_loss_index/

5.1 Non-metropolitan New South Wales

Table 10 shows that of the 14 non-metropolitan urban regions included for New South Wales, 10 had suburbs included in the highest employment vulnerability group. Job loss potential is seen in urban centres that have had significant service functions and those that have been associated with varying economic functions and fortunes (Baum *et al.*, 2005). Above high numbers of job loss suburbs are located in cities including Albury, Newcastle and Wollongong. High job loss potential suburbs included Telarah and Tarro in Maitland, Argenton and Holmesville in Newcastle, North Wagga Wagga in Wagga Wagga and Warrawong and Cringila in Wollongong.

5.2 Non-metropolitan Victoria

There are 7 non metropolitan urban regions included in our analysis for Victoria. Table 11 shows that the job loss suburbs are concentrated in the cities of Geelong, Ballarat and Bendigo. Geelong in particular, with its manufacturing base is particularly vulnerable with a regional concentration ratio of 2.3 indicating that it has more suburbs in the high EVI group relative to the national average.

5.3 Non-metropolitan Queensland

The urban centres in non-metropolitan Queensland include those adjacent to Brisbane (Gold Coast and Sunshine Coast) together with other coastal settlements in the mid and far north of the state. Table 12 (which spans two pages) shows the regional Red Alert suburbs. The town of Gladstone with a regional concentration ratio of 3.32 has a significant number of its suburbs in the high EVI group as does Rockhampton (RCR=1.14). The Gold Coast also has a high number of suburbs included in the high EVI group. The suburbs included in Queensland are Barney Point and South Gladstone (both located near the harbour) in Gladstone, Coomera and Upper Coomera in the north Gold Coast, Mackay Harbour and Slade Point in Mackay, Mooloolaba and Noosa Heads on the Sunshine Coast, Rockhampton City (Rockhampton) and Cluden in Townsville.

5.4 Non-metropolitan South Australia

Table 13 shows that only 1 major urban centre is included for South Australia; the iron triangle town of Whyalla. The localities of Whyalla Norrie and Whyalla Stuart are included in the high EVI category.

5.5 Non-metropolitan Western Australia

A total of 5 non-metropolitan urban centres are included in Western Australia. Table 14 shows Red Alert suburbs for non-metropolitan Western Australia. Bunbury with a

regional concentration ratio of 4.01 and the mining city of Kalgoorlie with a regional concentration ratio of 1.78 have significant numbers of job loss suburbs. The suburbs of Glen Iris in the east of Bunbury and Usher an outer southern suburb of Bunbury are included in the high EVI group, while the suburbs of Somerville (located near west Kalgoorlie) and Victory Heights are included from Kalgoorlie. There is also a significant number of suburbs from the Mandurah region (just outside of Perth) including Coodanup and Halls Head.

5.6 Non-metropolitan Tasmania

Table 15 shows that two urban centres - Launceston and Davenport - are included in the analysis for Tasmania and both contain Red Alert suburbs. Devonport has 2 suburbs included (Quoib and East Devonporta) while Launceston has 7 including Mayfield to the north of the City centre and Waverley located in the east of Launceston.

Table 10 High EVI or Red Alert suburbs in non-metropolitan New South Wales, high index values are worse

Suburb	Index	Suburb	Index	Suburb	Index
Mitchell (Bathurst)	1.462	Barrack Heights (Wollongong)	0.499	Woodrising (Newcastle)	0.399
Tamworth (Tamworth)	1.281	Boolaroo (Newcastle)	0.496	Lavington (Albury)	0.396
North Wagga Wagga (Wagga Wagga)	0.697	Gosforth (Maitland)	0.491	Mount Warrigal (Wollongong)	0.396
Cringila (Wollongong)	0.686	Holmesville (Newcastle)	0.491	West Tamworth (Tamworth)	0.394
Fernbank Creek (Port Macquarie)	0.651	Greta (Maitland)	0.488	Moorong (Wagga Wagga)	0.394
Woodberry (Maitland)	0.598	Flinders (Wollongong)	0.486	Edgeworth (Newcastle)	0.391
Windale (Newcastle)	0.597	Shortland (Newcastle)	0.454	South Albury (Albury)	0.382
Chinderah (Tweed Heads)	0.595	Berkeley (Wollongong)	0.451	South Maitland (Maitland)	0.380
Barnsley (Newcastle)	0.594	Blackbutt (Wollongong)	0.441	Toormina (Coffs Harbour)	0.375
Lucknow (Orange)	0.584	Hillsborough (Newcastle)	0.435	Metford (Maitland)	0.370
Lochinvar (Maitland)	0.579	Belmont South (Newcastle)	0.432		
Warrawong (Wollongong)	0.573	Springdale Heights (Albury)	0.425		
Glenroi (Orange)	0.550	Argenton (Newcastle)	0.417		
Koonawarra (Wollongong)	0.540	Warilla (Wollongong)	0.416		
Tarro (Maitland)	0.517	West Wallsend (Newcastle)	0.415		
Gillieston Heights (Maitland)	0.513	Minmi (Newcastle)	0.408		
Rutherford (Maitland)	0.501	Albion Park - Bal (Wollongong)	0.407		
South Lismore (Lismore)	0.500	Gateshead (Newcastle)	0.407		
Telarah (Maitland)	0.499	Port Kembla (Wollongong)	0.400		

Table 11 High EVI or Red Alert suburbs in non-metropolitan Victoria, high index values are worse

Suburb	Index	Suburb	Index	Suburb	Index
Big Hill (Bendigo)	0.896	Bakery Hill (Ballarat)	0.588	Delacombe (Ballarat)	0.486
Lovely Banks (Geelong)	0.831	Burrumbeet (Ballarat)	0.568	Flora Hill (Bendigo)	0.466
North Shore (Geelong)	0.806	Bell Post Hill (Geelong)	0.532	Cardigan (Ballarat)	0.459
West Bendigo (Bendigo)	0.701	Cardigan Village (Ballarat)	0.531	Sailors Gully (Bendigo)	0.446
Whittington (Geelong)	0.667	Norlane (Geelong)	0.526	Delacombe - Bal (Ballarat)	0.445
Jackass Flat (Bendigo)	0.662	Bell Park (Geelong)	0.518	Long Gully (Bendigo)	0.407
Corio (Geelong)	0.610	Bagshot (Bendigo)	0.503	Epsom (Bendigo)	0.381
Mitchell Park (Ballarat)	0.601	St Albans Park (Geelong)	0.490	Ascot (Bendigo)	0.379

Table 12 High EVI or Red Alert suburbs in non-metropolitan Queensland, high index values are worse

Suburb	Index	Suburb	Index	Suburb	Index
Kunda Park (Maroochydore)	1.214	Gladstone City (Gladstone)	0.562	Coomera (Gold Coast)	0.483
Bohle (Townsville)	1.011	Bunya Creek (Hervey Bay)	0.557	South Gladstone (Gladstone)	0.480
Palm Cove(Cairns)	0.903	Iveragh (Gladstone)	0.552	Upper Coomera (Gold Coast)	0.478
Toolooa (Gladstone)	0.806	Mooloolaba (Maroochydore)	0.548	Coolangatta (Gold Coast)	0.475
Cairns City(Cairns)	0.765	Noosaville (Noosa Heads)	0.542	Burrum Town (Hervey Bay)	0.468
Benaraby (Gladstone)	0.712	Forest Glen (Maroochydore)	0.542	Slade Point (Mackay)	0.467
Noosa Heads (Noosa Heads)	0.694	Rockhampton City (Rockhampton)	0.542	Booral (Hervey Bay)	0.457
Tannum Sands (Gladstone)	0.674	Bundaberg Central (Bundaberg)	0.538	Parkwood (Gold Coast)	0.454
Sun Valley (Gladstone)	0.667	O'Connell (Gladstone)	0.532	Gaven (Gold Coast)	0.451
Bakers Creek (Mackay)	0.650	Walligan (Hervey Bay)	0.527	Pacific Pines (Gold Coast)	0.445
Arcadia (Townsville)	0.634	Surfers Paradise (Gold Coast)	0.523	Barney Point (Gladstone)	0.444
Mackay Harbour (Mackay)	0.629	New Auckland (Gladstone)	0.517	Oxenford (Gold Coast)	0.441
Horseshoe Bay (Townsville)	0.620	Cluden (Townsville)	0.506	Torquay (Hervey Bay)	0.439
Boyne Island (Gladstone)	0.617	Mountain Creek (Maroochydore)	0.506	Meridan Plains (Caloundra)	0.438
Paget (Mackay)	0.610	Pacific Paradise (Maroochydore)	0.504	Glen Eden (Gladstone)	0.437
Broadbeach (Gold Coast)	0.596	River Ranch (Gladstone)	0.503	Bonogin (Gold Coast)	0.434
Kuluin (Maroochydore)	0.588	Alexandra Headland (Maroochydore)	0.489	Gowrie Junction (Toowoomba)	0.427
Calliope (Gladstone)	0.586	Worongary (Gold Coast)	0.488	Bilinga (Gold Coast)	0.425
Burrum Heads (Hervey Bay)	0.573	Mount Kynoch (Toowoomba)	0.487	Pacific Pines (Gold Coast)	0.425

Table 12 (continued) High EVI or Red Alert suburbs in non-metropolitan Queensland, high index values are worse

Suburb	Index	Suburb	Index	Suburb	Index
Burdell (Townsville)	0.422	Maryborough West (Maryborough)	0.403	Wyreema (Toowoomba)	0.381
Aroona (Caloundra)	0.419	Deeragun (Townsville)	0.401	Varsity Lakes (Gold Coast)	0.380
Depot Hill (Rockhampton)	0.418	Palmview (Caloundra)	0.395	Cambooya (Toowoomba)	0.380
Clinton (Gladstone)	0.416	Mount Low (Townsville)	0.394	Nerang (Gold Coast)	0.379
Wyreema (Toowoomba)	0.416	Oxenford (Gold Coast)	0.390	Takura (Hervey Bay)	0.377
Wurtulla (Caloundra)	0.416	Burua (Gladstone)	0.389	Dundowran (Hervey Bay)	0.376
Thabeban (Bundaberg)	0.414	Coomera (Gold Coast)	0.389	Maroochydore (Maroochydore)	0.375
West Gladstone (Gladstone)	0.411	Kin Kora (Gladstone)	0.388	Wilsonton (Toowoomba)	0.373
Mackay (Mackay)	0.409	Andergrove (Mackay)	0.383	Helensvale (Gold Coast)	0.372
Mount Louisa (Townsville)	0.405	Jensen (Townsville)	0.383	Marcus Beach (Noosa Heads)	0.371
Coolum Beach (Maroochydore)	0.404	Hope Island (Gold Coast)	0.382	Wurdong Heights (Gladstone)	0.370

Table 13 High EVI or Red Alert suburbs in non-metropolitan South Australia, high index values are worse

Suburb	Index
Whyalla Stuart	0.681
Whyalla Norrie	0.649

Table 14 High EVI or Red Alert suburbs in non-metropolitan Western Australia, high index values are worse

Suburb	Index	Suburb	Index	Suburb	Index
Boulder (Kalgoorlie)	0.624	Greenfields (Mandurah)	0.516	Halls Head (Mandurah)	0.439
Coodanup (Mandurah)	0.612	Madora Bay (Mandurah)	0.510	Lakelands (Mandurah)	0.434
Usher (Bunbury)	0.591	Pelican Point (Bunbury)	0.498	Broadwood (Kalgoorlie)	0.424
Victory Heights (Kalgoorlie)	0.590	Karloo (Geraldton)	0.495	Dawesville (Mandurah)	0.424
Glen Iris (Bunbury)	0.588	San Remo (Mandurah)	0.492	Silver Sands (Mandurah)	0.420
South Boulder (Kalgoorlie)	0.555	Orana (Albany)	0.492	Withers (Bunbury)	0.420
North Yunderup (Mandurah)	0.544	Kalgoorlie (Kalgoorlie)	0.481	Herron (Mandurah)	0.380
Millbridge (Bunbury)	0.543	South Kalgoorlie (Kalgoorlie)	0.474	Milpara (Albany)	0.378
Somerville (Kalgoorlie)	0.541	Carey Park (Bunbury)	0.465	Piccadilly (Kalgoorlie)	0.375
Williamstown (Kalgoorlie)	0.535	Leschenault (Bunbury)	0.452	Wannanup (Mandurah)	0.373
Eaton (Bunbury)	0.523	Australind (Bunbury)	0.443	Meadow Springs (Mandurah)	0.372

Table 15 High EVI or Red Alert suburbs in non-metropolitan Tasmania, high index values are worse

Suburb	Index
Mayfield (Launceston)	0.680
Waverley (Launceston)	0.663
Ravenswood (Launceston)	0.626
Quoiba (Devonport)	0.505
Rocherlea (Launceston)	0.499
Mowbray (Launceston)	0.497
East Devonport (Devonport)	0.415
Newnham (Launceston)	0.408
Invermay (Launceston)	0.369

Figure 11 EVI suburbs for Newcastle, NSW

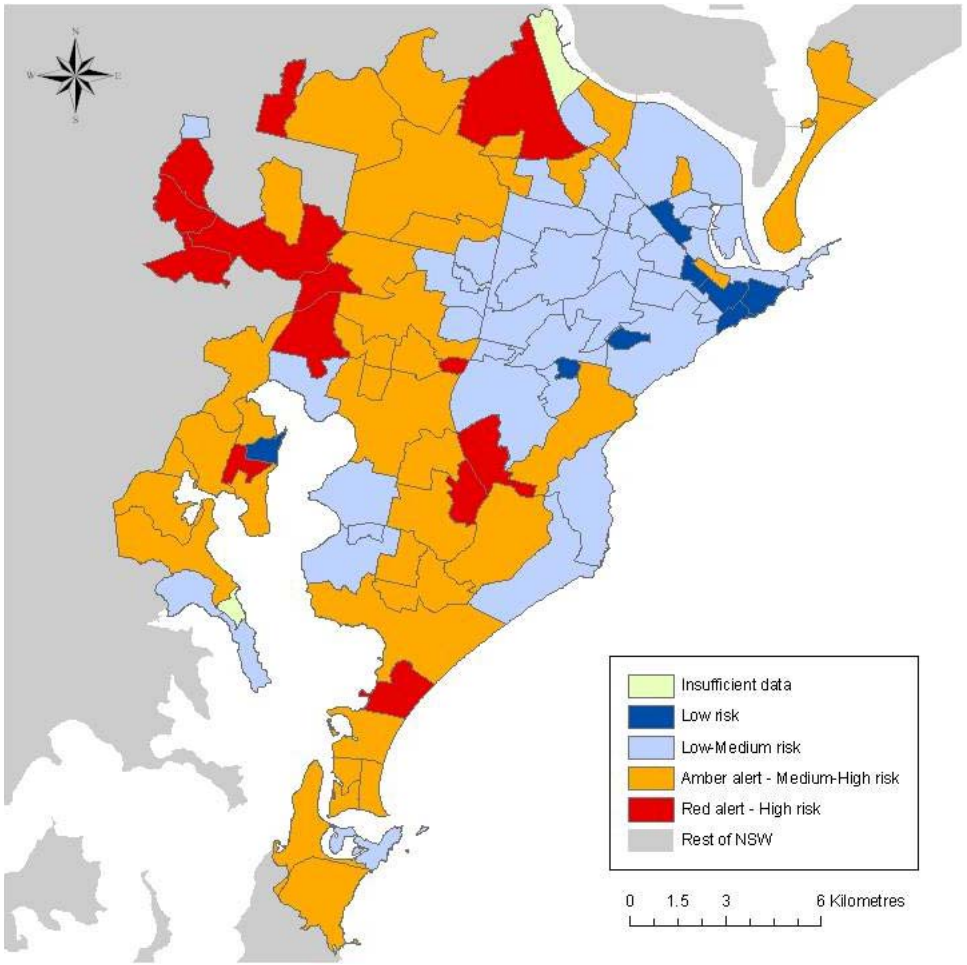


Figure 12 EVI suburbs for Wollongong, NSW

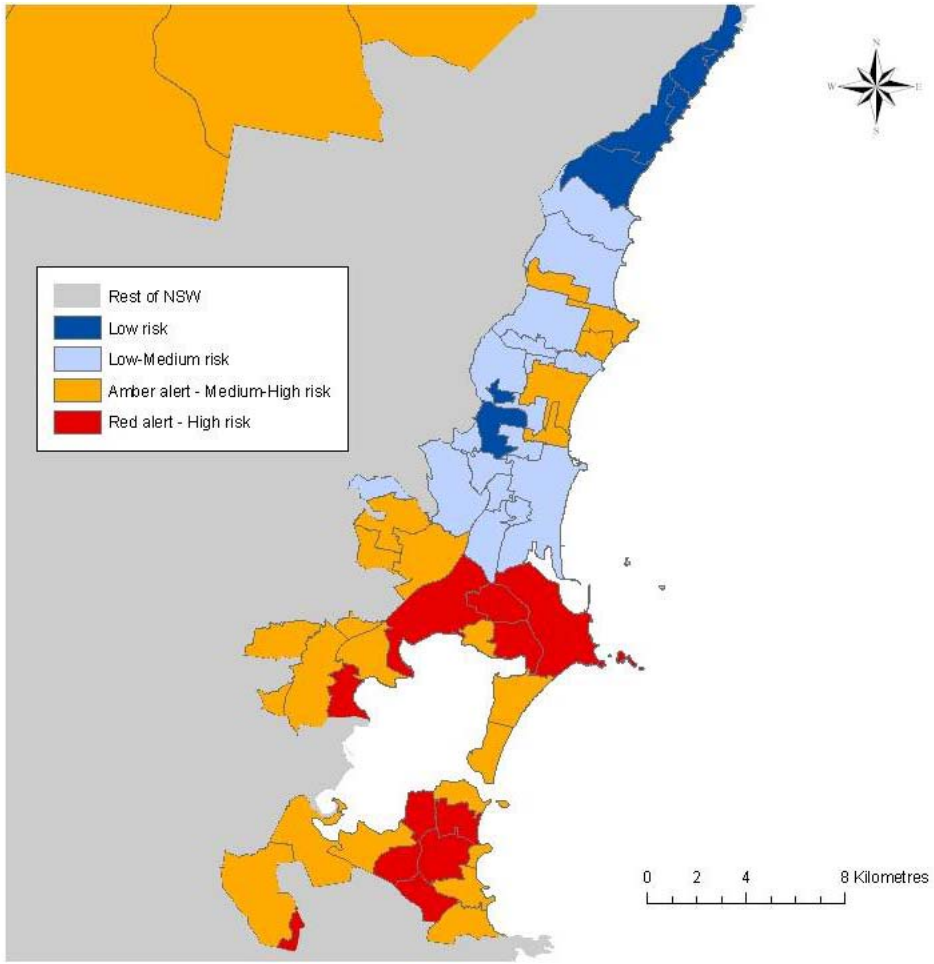


Figure 13 EVI suburbs for Geelong (Victoria)

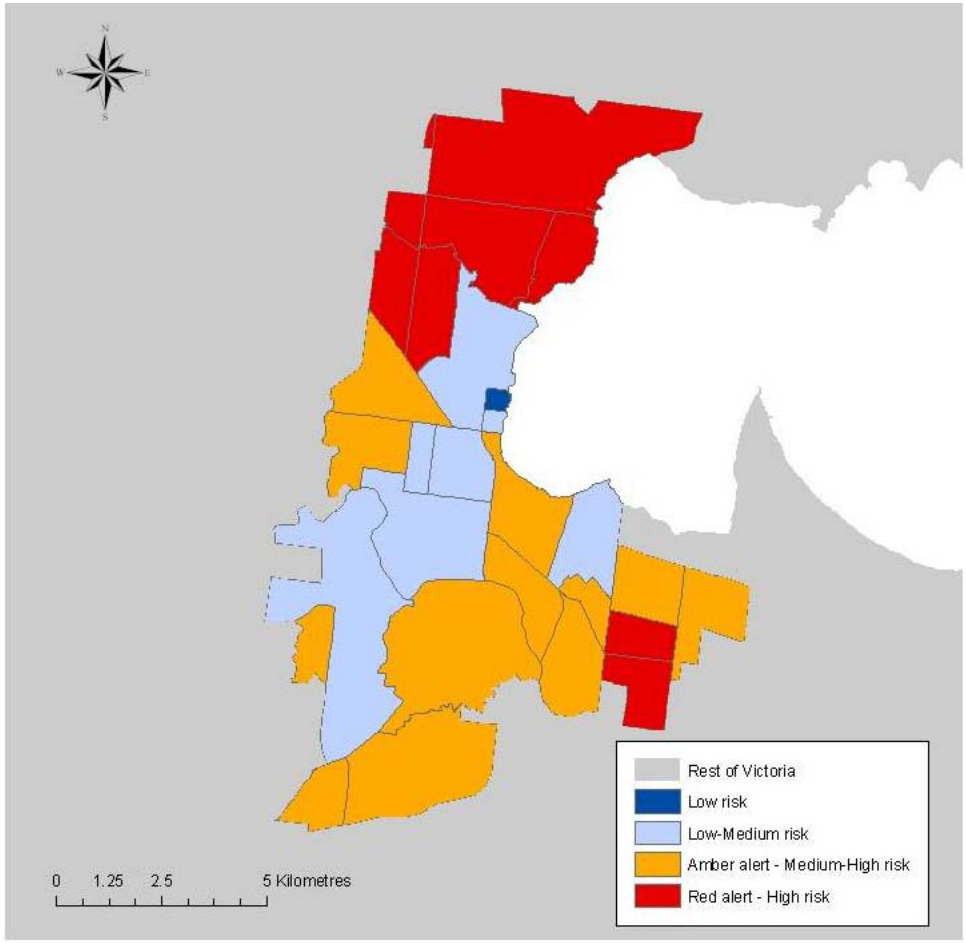


Figure 14 EVI suburbs for and Gold Coast (Queensland)

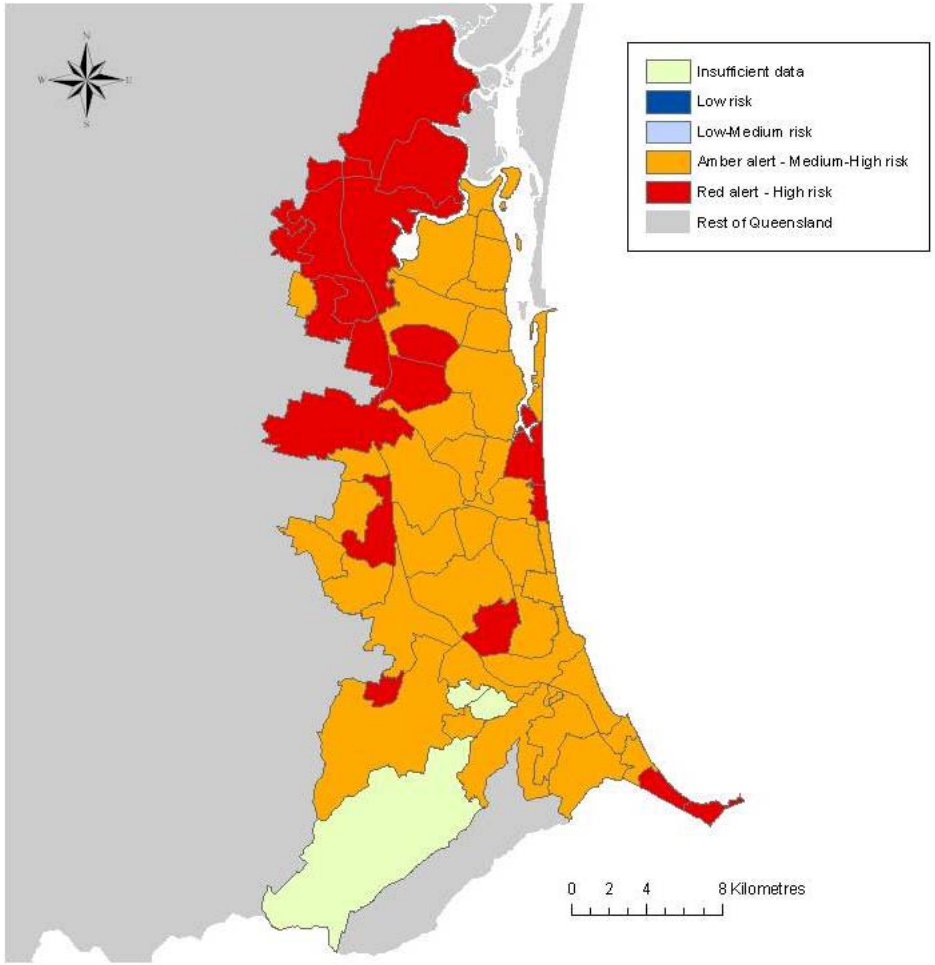


Figure 15 EVI suburbs for Sunshine Coast (Queensland)

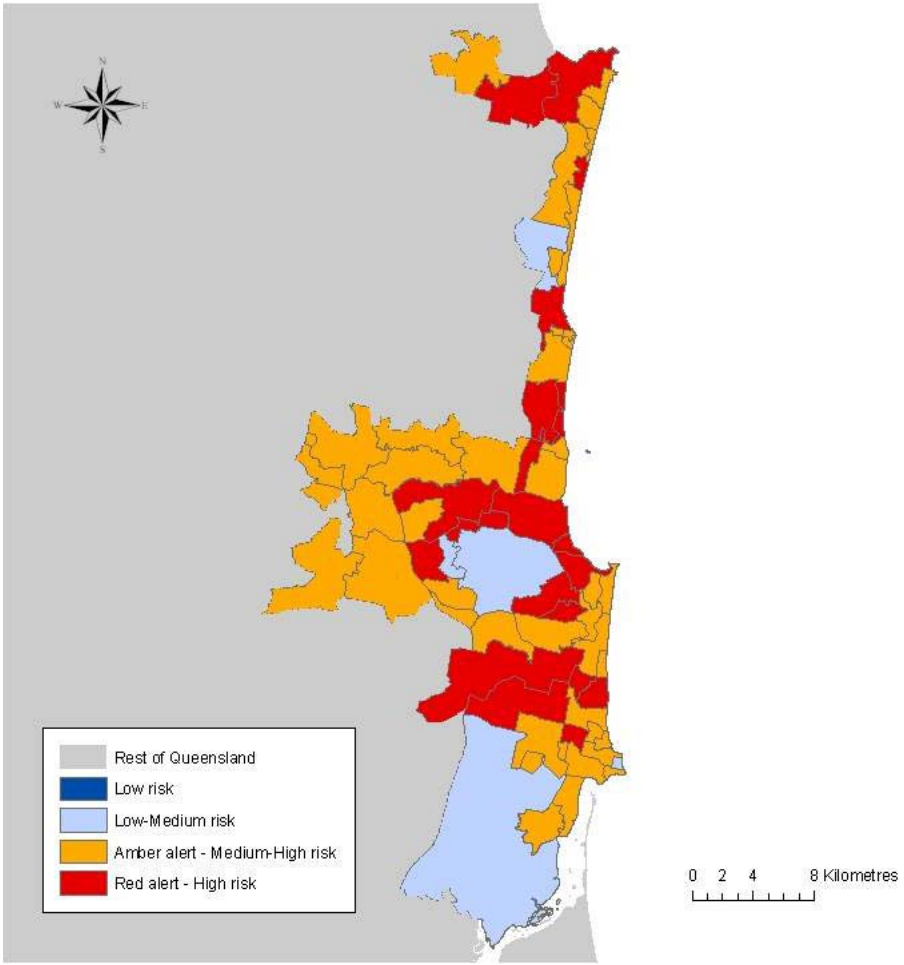


Figure 16 EVI suburbs for Cairns (Queensland)

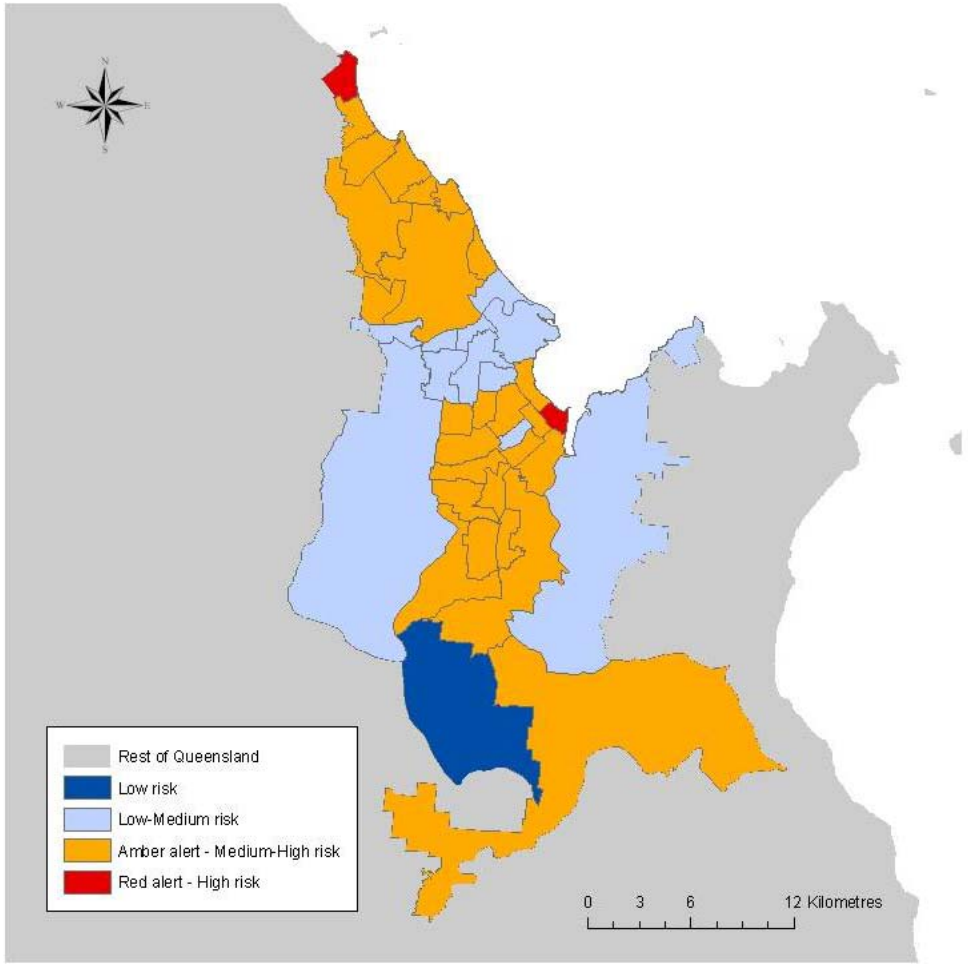
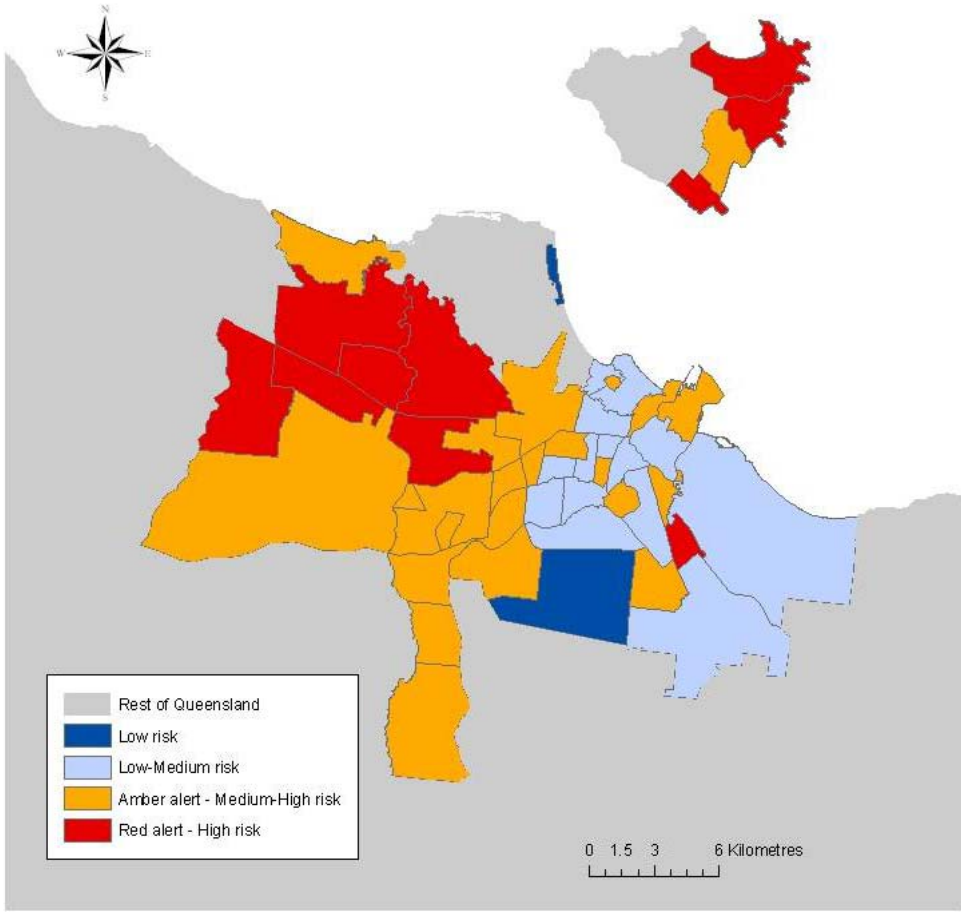


Figure 17 EVI suburbs for Townsville (Queensland)



6. Discussion and analysis

6.1 The problem

This paper has already discussed the reasons why we need to be concerned about the uneven spatial outcomes that have been identified in terms of potential job losses across our capital cities and non-metropolitan urban regions. It is now appropriate to consider something about policy outcomes. How should we begin to think about the outcomes we have identified and what input can we make in terms of policy questions and approaches?

Broadly we have seen that the potential patterns of job losses will cut a broad path across our large capital cities and also impact significantly across many of our non-metropolitan urban regions. This potential new pattern of spatially concentrated disadvantage will likely redefine our understanding of suburban disadvantage. Randolph (2004) has discussed the way previous demographic and social transitions have impacted to reshape the social landscape of our cities and earlier Baum *et al.* (2002) argued that the post-industrial city structure had shifted from a simple structure dominated by working class communities to a much more complex structure where the community of the working class had become less dominant.

Whether the outcome of the current economic crisis will result in a ***substantial shift*** again in the social structure of our cities will remain to be seen. Change is often slow and ultimately influenced by a range of factors. However, even if change is only temporary the impacts are likely to be hard felt.

Regardless of the eventual long term changes in the social structure of our cities and urban areas, more immediate concerns require consideration. To this end there are two main issues arising from the analysis presented here are:

1. the continued exclusion of existing localities of disadvantage through increasing job losses; and
2. the emergence of new localities of potential job loss and disadvantage.

The continued exclusion of some suburbs through increasing job losses will be of significant concern. Places in our capital cities such as Claymore and Cabramatta in Sydney, Broadmeadows and Sunshine in Melbourne and Elizabeth in Adelaide will, if confronted by increasing job losses as a result of the current economic crisis, be further pushed from the mainstream as disadvantage becomes more difficult to escape. For unemployed people living in these suburbs economic recovery at the national level may mean little. An early discussion of disadvantage in US cities points to some of the problems that potentially face our most deprived suburbs:

> …the residents of the abandoned city, particularly in the new ghetto of the excluded, play a different role from those of the old ghetto in many respects….Older forms of the ghetto…remained an integral part of the mainstream economy, with residents of different classes and with a variety of prospects on the labour market. Their residents, when unemployed, were part of a reserve army of the unemployed, who had expectations of re-entering the mainstream labour force when conditions changed. That holds less and less in the new ghettos (Marcuse and Van Kempan, 2000: 19).

While clearly the Australian situation is far removed from the problems of the worst ghettos in the US, the important point is that like the US, Australia's most deprived

suburbs and the people that live in them may well continue to fall further behind in the wash-up of the current situation.

While the continued exclusion of our most disadvantage suburbs is of concern, another important issue relates to the potential of the current economic crisis to deliver a range of new disadvantaged suburbs and families to our metropolitan and non-metropolitan regions. As presented here there are a number of suburbs that score highly on the employment vulnerability index and in the past have been characterised not by extreme disadvantage but by moderate success.

For the individuals and families in these potentially new suburbs of disadvantage the long term outcomes will depend on the extent to which joblessness becomes a long term issue and results in ongoing disadvantage. Some individuals and the families and communities will come out the other side of the current crisis only mildly scarred, others may not be so lucky.

5.2 Moving ahead

If the predictions of economists around the globe are even partially correct we are going to need a new suite of policy tools with which to tackle the increasing tide of unemployment (not to mention the increasing tide of other forms of labour market disadvantage). The spatial patterns of potential job losses outlined in this research paper raise a couple of points which need to drive policy:

There is clearly not going to be enough jobs for everyone who wants to work.

When jobs do become available, the spatial patterns of labour markets and the concentration of joblessness in certain areas will act to ration possibilities.

Labour markets in their current form do not adequately supply enough jobs. This has been the case for a significant period. Even during the so-called boom-times of the past decade or so the demand for labour has fallen far short of what is being supplied.

Despite the long period of economic growth that has now ended, the Australian economy still could only produce a labour market where at best 8.8 per cent of the willing workforce was underutilised. At the top of the boom there were still around 530,000 workers officially unemployed and more than 680,000 classified by the ABS as being underemployed.

The current economic situation will see these numbers deteriorate swiftly.

The appropriate policy response must focus on preventing unemployment from rising. Maintaining people in paid employment must be the policy priority of the Federal government.

A reliance on the recessed private market to create enough jobs is a flawed approach. Stimulus handouts to Australians will allow them to increase their saving and pay off debt. The flow into job creating spending is likely to be too small to make a significant dent in the rate of job loss. The Federal government has to take a leadership role via direct job creation if the job losses are to be contained.

The second guiding point refers to understanding the drivers of joblessness and other forms of labour market underutilisation. Eventually the economy will experience a resumption in jobs growth. However, once employment growth returns the operation of spatial labour markets and the concentration of joblessness in certain localities will mean that some of the patterns we have noted in this Report will continue to exist.

The very fact that there have existed distinct spatial patterns of unemployment across our cities for a significant period of time, even before the current situation, means that the operation of the spatially defined local labour market that one lives in is important in determining employment outcomes.

Taking this further, the problems for those living in high unemployment suburbs or labour markets are likely to be further exacerbated because of what sociologists and others refer to as concentration effects. For the unemployed, concentration effects are likely to occur in terms of a lack of employed role models or a lack of information about jobs through social networks.

So there is a double whammy; people in poorly performing spatially-based labour markets are likely to be disadvantaged because of inefficiencies in the operation of the market, but are also disadvantaged because they may lack information about job possibilities.

The impact of increasing job losses thus requires decisive policy action.

To remedy the negative job impacts of the current economic crisis we advocate the introduction of a **Job Guarantee**, where the Federal government offers unconditionally a job at the minimum wage to anyone who is without work.

Modelling at the Centre of Full Employment and Equity (CofFEE) shows that if the Government introduced a Job Guarantee and paid the workers the current national minimum wage (with holiday pay etc…) it could hire 557,000 full-time equivalent workers for around $8.3 billion per year.

In a major report *Creating effective local labour markets: a new framework for regional employment* (CofFEE, 2008) that CofFEE released (in partnership with Jobs Australia) in November 2008 it was estimated that to achieve a full employment level (consistent with 2 per cent official unemployment, no hidden unemployment and no time-related underemployment), an extra 559.2 thousand jobs would have been required in May 2008. The figure will be higher now and increasing by the week.

In addition, the research that underpinned the report conducted a national survey of local governments in Australia and identified hundreds of thousands of jobs that would be suitable for low-skill workers in areas such as community development and environmental care services. There is enormous unmet need for public works across regional Australia.

The report also proposes a role for the state in direct skill formation through a National Skills Development (NSD) framework which we consider will address the skills problem and support the global competitiveness of Australian industry. Several points need to be considered when developing a NSD framework:

- Maintaining a buffer stock of public sector jobs provides work for all irrespective of their skill levels and also allows paid-work opportunities to be structured into training and career development;
- The Federal and State Governments must renew their commitment to trade training and to adequately fund our public schools and universities. Public policy must also set in place safety-net structures to ensure that every person under 20 years of age is in education, training or a paid job;

- Occupational planning capacities must be reintroduced to ensure that the apprenticeship and training programmes are targeted in areas of regional and industrial need;
- By maintaining full employment private employers will be forced by competition to take a major responsibility for training and skill development of our workforce.

A Job Guarantee would restore the role of the public sector as a significant employer, and to do so in a way that also controls inflation.

A Job Guarantee provides a platform for developing the national skills base, by comparing the observed skills and competencies of the Job Guarantee workforce with the emerging skills requirements of each regional labour market. This would inform the provision of accredited training (both in-house and via external providers such as TAFE), the indenturing of apprentices, and the design of Job Guarantee activities so that they include experiential development of skills expected to be in local demand, thereby restoring the role of the public sector as a net trainer of skilled workers and minimising the likelihood of inflationary bottle-necks in labour supply.

The flexibility of the Job Guarantee would extend to designing jobs to accommodate individuals with special physical, intellectual and behavioural needs. It could also be adapted to address the needs of rural and remote communities, and to reflect cultural norms within indigenous and other non-Anglo Australian communities.

The Job Guarantee is intended as a platform to: provide economic security and social integration for those whose labour is currently being under-utilised; reduce social dislocation arising from unemployment and poverty; and contribute to the quality of life of all by its contributions to a better environment, public amenity and improved services.

As a minimum wage employer that accommodates the poaching of its skilled workers by other employers, and even facilitates this practice when extra workers are needed in the private sector, the Job Guarantee is a superior price stabiliser than the present method that entails keeping over a million people precariously unemployed and under-employed, and in a condition of skill-atrophying idleness, social exclusion and poverty.

References

Badcock, B. (1997) 'Recently observed polarising tendencies and Australian cities', *Australian Geographical Studies*, 35(3), 243-59.

Baum, S. (2008a) *Suburban Scars: Australian Cities and Socio-economic Deprivation*, Urban Research Program, Research Paper, Griffith University, Brisbane.

Baum, S. (2008b) Making Space for Social Inclusion, *People and Place*, 6(4), 9-18

Baum, S. O'Connor, K. and Stimson, R. (2005) *Fault Lines Exposed: Advantage and Disadvantage across Australia's Settlement System*, Monash University ePress, Clayton.

Baum, S. Mullins, P. Stimson, R. and O'Connor, K. (2002) 'Communities of the post-industrial city', *Urban Affairs Review*, January, 302-322

Baum, S., Bill, A. and Mitchell W.F. (2008a) 'Labour Underutilisation in Metropolitan Labour Markets: Individual characteristics, personal circumstances and local labour markets', *Urban Studies*, 45 (5 & 6), 1193-1216

Baum, S., Bill, A. and Mitchell, W.F. (2008b) 'Unemployment in non-metropolitan Australia: Integrating geography, social and individual contexts', *Australian Geographer*, June, 39, 2, 193-210

Briton, B. (2003) 'Tightening of the mortgage belt: the Australian dream of home ownership'. *The Guardian*, December 10 [cited 2005 July 10] Available from: http://www.cpa.org.au /garchve03/1167housing.html.

Carlyon, P. (2003) 'Vanishing state', *The Bulletin*, Sydney; December 2, 52–54.

Centre for Cities (2009) *Cities Outlook 2009*, Centre for Cities, London [cited 2009 February 9] Available from: http://www.centreforcities.org /garchve03/1167housing.html.

Centre of Full Employment and Equity (2008) *Creating effective local labour markets: a new framework for regional employment*, CofFEE Policy Report, November, available at http://e1.newcastle.edu.au/coffee/pubs/reports/2008/CofFEE_JA/CofFEE_JA_final_report_November_2008.pdf

Gray, I. and Lawrence G. (2001) *A Future for Regional Australia: Escaping Global Misfortune*, Cambridge University Press, Cambridge.

Gwyther, G. (2002) 'Socio–spatial Differentiation and the Master Planned Community in a Global City', *Research paper No. 8,* Urban Frontiers Program. Sydney: University of Western Sydney

Hill, E. Brennan, J. and Wolman, H. (1998) 'What is a central city in the United States? Applying a statistical technique for developing taxonomies', *Urban Studies*, 35, 11, 1935-1969

Junankar, P. and Kapuscinski, C. (1992) 'The Costs of unemployment in Australia', *Economic Planning Advisory Council Background Paper No. 24*. Canberra: AGPS.

Marcuse, P. and Van Kempen, R. (2000) 'Introduction', in: Marcuse, P. and Van Kempen, R. (eds.) *Globalizing Cities: A New Spatial Order*, Blackwell, Oxford, 1-21.

Mitchell W.F. and Bill A. (2004) 'Spatial dependence in regional unemployment in Australia', in Carlson E. (ed) A Future that works: economics, employment and the environment, *Proceedings of the 6th Path to Full Employment Conference and the 11th National Conference on Unemployment*, 312-326.

Mitchell, W.F. and Bill, A. (2005) 'A spatial econometric analysis of the irreversibility of long term unemployment in Australia', ARCRNSISS Methods, Tools and Techniques Workshop, Newcastle, June.

Mitchell, W.F. and Bill, A. ((2006) 'Who benefits from Growth? Disadvantaged workers in growing regions', *Australian Journal of Labour Economics*, 9(2), June, 239-255.

W.F. Mitchell, A. Bill and M.J. Watts (2008) 'The Occupational Dimensions of Local Labour Markets in Australian Cities', *Built Environment*, 34(3).

Mitchell, W.F. and Carlson, E. (2005) 'Exploring employment growth disparities across metropolitan and regional Australia', *Australasian Journal of Regional Studies*, 11(1), 25-40

Mitchell, W. and Muysken, J. (2008) *Full Employment Abandoned: Shifting Sands and Policy Failures*, Edward Elgar, Cheltenham, UK.

OECD (1998) *Integrating Distressed Urban Areas*, OECD, Paris.

Peel, M. (1995) *Good Times, Hard Times: The Past and the Future in Elizabeth*, Melbourne: Melbourne University Press.

Peel, M. (2003) *The Lowest Rung: Voices of Australian Poverty*, Cambridge University Press, Cambridge.

Randolph, W. (2004) "The changing Australian city: new patterns, new policies and new research needs'. *Urban Policy and Research*; 22, 481-493.

Samaritans (2003). 'Inquiry into Poverty in Australia'. A Submission to the Senate Community Affairs Reference Committee: March.

Searle, G. (1993) The Spatial Restructuring of Sydney's Economy, 1981-1991: Case Studies of 12 Industries/Activities. Paper presented at Regional Science Association Conference (ANZ Section).

Senate Community Affairs Reference Committee, (2004) 'A Hand Up Not a Hand Out: Renewing the Fight Against Poverty'. Report on Poverty and Financial Hardship. Canberra: Senate Community Affairs Reference Committee.

Swan, W. (2005) *Postcode: the Splintering of a Nation.* North Melbourne: Pluto Press Australia.

Appendix A Methodology

Computing the Employment Vulnerability index

The simple methodological approach used to build the job loss potential index follows a similar approach used by the Centre for Cities in the UK in developing their index of economic development (Centre for Cities, 2009).

We have taken three key indicators of the types of jobs at most risk:

1. The proportion of people employed in construction, mining, manufacturing, retail, accommodation and tourism, financial services and real estate;
2. The proportion of employed people without post school qualifications; and
3. The proportion of people working part-time.

An aggregation technique was used to create an index which reflects the relative weightings of these vulnerability factors. Using a principle components analysis we obtain factor loadings for these indicators and use these to develop a simple weighted index.

Each of the 2500 suburbs across the Australian capital cities were analysed together and divided into 4 groups depending on their score relative to the mean.

Table A1 Assessment criteria

Job loss potential category	Relation to the mean
High job loss potential	> than 1 standard deviation above the mean
Medium-High job loss potential	< than 1 standard deviation above the mean
Medium-Low job loss potential	< than 1 standard deviation below the mean
Low job loss potential	> than 1 standard deviation below the mean

The regional concentration ratio

The regional concentration ratio is developed to illustrate the relative distribution of suburbs in the high job loss group across each city. The regional concentration ratio is a version of a location quotient (Hill *et al.*, 1980). It determines the extent to which any metropolitan region has an over concentration of suburbs in the high job loss group. The RCR is calculated by considering the percentage distribution of a high job loss suburbs in each metropolitan region divided by the percentage distribution of high job loss suburbs across all metropolitan regions. Like a location quotient, a RCR greater than 1 indicates that the number of high job loss suburbs in a particular city is overrepresented. An RCR less than 1 indicates the opposite outcome.

Appendix B The battler and emerging disadvantage suburbs

This list is incomplete and is based on a disadvantage index computed using the 2006 Census of Housing and Population data. The array of suburbs is incomplete at this stage. First, it only covers the Capital Cities. Second, there are some Capital City suburbs that are not yet classified.

The following tables list Red Alert suburbs by Capital City where a classification is currently available.

- [B] denotes a battler suburb;
- [ED] denotes an emerging disadvantage suburb.

Table A2 Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Sydney, a higher Index value is worse

Suburb	Index		Suburb	Index		Suburb	Index	
Airds	0.522	[B]	Fairfield West	0.459	[B]	Whalan	0.405	[B]
Auburn	0.406	[B]	Green Valley	0.505	[B]	Willmot	0.409	[B]
Bidwill	0.509	[B]	Greenfield Park	0.499	[B]	Blue Haven	0.407	[B]
Blackett	0.460	[B]	Haymarket	0.469	[B]	Charmhaven	0.422	[B]
Bonnyrigg	0.564	[B]	Heckenberg	0.484	[B]	Doyalson	0.721	[B]
Bonnyrigg Heights	0.581	[B]	Lethbridge Park	0.484	[B]	San Remo	0.577	[B]
Bossley Park	0.456	[B]	Miller	0.447	[B]	Middleton Grange	0.623	[B]
Busby	0.427	[B]	Mount Lewis	0.413	[B]			
Cabramatta	0.788	[B]	North St Marys	0.493	[B]	Arndell Park	0.937	[ED]
Cabramatta West	0.727	[B]	Old Guildford	0.465	[B]	Windsor Downs	0.533	[ED]
Canley Heights	0.757	[B]	Oxley Park	0.418	[B]	Hinchinbrook	0.438	[ED]
Canley Vale	0.661	[B]	Prairiewood	0.402	[B]	Rosemeadow	0.413	[ED]
Cartwright	0.443	[B]	Punchbowl	0.429	[B]	Regentville	0.586	[ED]
Claymore	0.701	[B]	Sadleir	0.517	[B]	Toowoon Bay	0.398	[ED]
Eastern Creek	0.392	[B]	Shalvey	0.522	[B]	Edmondson Park	0.500	[ED]
Edensor Park	0.554	[B]	Smithfield	0.399	[B]	Rocky Point	0.424	[ED]
Emerton	0.410	[B]	St Johns Park	0.613	[B]	Tumbi Umbi	0.405	[ED]
Englorie Park	0.530	[B]	Tregear	0.434	[B]	Werrington Downs	0.445	[ED]
Fairfield	0.468	[B]	Villawood	0.456	[B]	St Clair	0.418	[ED]
Fairfield East	0.518	[B]	Wakeley	0.475	[B]	Tacoma	0.455	[ED]
Fairfield Heights	0.416	[B]	Wetherill Park	0.403	[B]	Llandilo	0.443	[ED]

Table A3 Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Victoria, a higher Index value is worse

Suburb	Index		Suburb	Index		Suburb	Index	
Albanvale	0.534	[B]	Deer Park	0.406	[B]	Noble Park North	0.408	[B]
Braybrook	0.474	[B]	Delahey	0.605	[B]	Roxburgh Park	0.449	[B]
Broadmeadows	0.484	[B]	Doveton	0.511	[B]	Springvale	0.620	[B]
Campbellfield	0.675	[B]	Eumemmerring	0.461	[B]	Springvale South	0.686	[B]
Clayton South	0.417	[B]	Frankston North	0.492	[B]	St Albans	0.520	[B]
Coolaroo	0.590	[B]	Keilor Downs	0.478	[B]	Sunshine North	0.527	[B]
Dallas	0.618	[B]	Kings Park	0.602	[B]	Sunshine West	0.468	[B]
Dandenong	0.420	[B]	Lalor	0.618	[B]	Thomastown	0.622	[B]
Dandenong North	0.399	[B]	Laverton North	0.400	[B]	Mount Cottrell	0.398	[B]
Dandenong South	0.835	[B]	Meadow Heights	0.729	[B]			

Table A3 (continued) Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Victoria, a higher Index value is worse

Suburb	Index		Suburb	Index		Suburb	Index	
Attwood	0.413	[ED]	Hallam	0.494	[ED]	Taylors Lakes	0.450	[ED]
Baxter	0.519	[ED]	Hampton Park	0.546	[ED]	Coldstream	0.426	[ED]
Beaconsfield	0.429	[ED]	Hastings	0.461	[ED]	Don Valley	0.475	[ED]
Cairnlea	0.516	[ED]	Keysborough	0.660	[ED]	Mernda	0.415	[ED]
Carrum Downs	0.489	[ED]	Kilsyth South	0.548	[ED]	Mickleham	0.511	[ED]
Craigieburn	0.558	[ED]	Langwarrin South	0.395	[ED]	Pakenham	0.408	[ED]
Cranbourne	0.497	[ED]	Lilydale	0.408	[ED]	Pearcedale	0.423	[ED]
Cranbourne East	0.488	[ED]	Lynbrook	0.416	[ED]	Rockbank	0.531	[ED]
Cranbourne North	0.535	[ED]	Lysterfield	0.404	[ED]	Seville East	0.429	[ED]
Cranbourne West	0.559	[ED]	Narre Warren	0.472	[ED]	Tynong	0.404	[ED]
Crib Point	0.436	[ED]	Narre Warren North	0.493	[ED]	Wollert	0.418	[ED]
Endeavour Hills	0.467	[ED]	Narre Warren South	0.419	[ED]	Woori Yallock	0.454	[ED]
Epping	0.526	[ED]	Skye	0.489	[ED]			
Greenvale	0.582	[ED]	Somerville	0.431	[ED]			

Table A4 Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Brisbane, a higher Index value is worse

Suburb	Index		Suburb	Index		Suburb	Index	
Caboolture South	0.420	[B]	Browns Plains	0.550	[ED]	Morayfield	0.484	[ED]
Carole Park	0.742	[B]	Burpengary	0.476	[ED]	One Mile	0.406	[ED]
Churchill	0.510	[B]	Caboolture	0.480	[ED]	Park Ridge South	0.473	[ED]
Dinmore	0.453	[B]	Camira	0.416	[ED]	Redbank Plains	0.566	[ED]
Goodna	0.495	[B]	Capalaba West	0.497	[ED]	Regents Park	0.533	[ED]
Inala	0.622	[B]	Crestmead	0.626	[ED]	Ripley	0.518	[ED]
Kingston	0.565	[B]	Deception Bay	0.469	[ED]	Upper Caboolture	0.467	[ED]
Logan Central	0.455	[B]	Doolandella	0.677	[ED]	Waterford West	0.520	[ED]
Loganlea	0.598	[B]	Greenbank	0.432	[ED]	Waterford	0.457	[ED]
Nathan	0.644	[B]	Heritage Park	0.498	[ED]	Willawong	0.650	[ED]
Richlands	0.609	[B]	Hillcrest	0.456	[ED]	Logan Reserve	0.459	[ED]
Woodridge	0.417	[B]	Kallangur	0.394	[ED]	Moorina	0.426	[ED]
			Loganholme	0.410	[ED]	Ningi	0.398	[ED]
Blackstone	0.428	[ED]	Marsden	0.571	[ED]	Point Lookout	0.626	[ED]
Boronia Heights	0.401	[ED]	Meadowbrook	0.483	[ED]	Wulkuraka	0.436	[ED]

Table A5 Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Adelaide, a higher Index value is worse

Suburb	Index		Suburb	Index		Suburb	Index	
Aldinga Beach	0.398	[B]	Huntfield Heights	0.546	[B]	Burton	0.597	[ED]
Angle Park	0.412	[B]	Mansfield Park	0.578	[B]	Craigmore	0.540	[ED]
Athol Park	0.773	[B]	Munno Para	0.733	[B]	Evanston South	0.456	[ED]
Bolivar	0.990	[B]	Noarlunga Downs	0.535	[B]	Hackham	0.630	[ED]
Brahma Lodge	0.576	[B]	O'Sullivan Beach	0.477	[B]	Hillbank	0.433	[ED]
Cavan	1.310	[B]	Ottoway	0.602	[B]	Hindmarsh	0.448	[ED]
Christie Downs	0.469	[B]	Parafield Gardens	0.620	[B]	Morphett Vale	0.435	[ED]
Davoren Park	0.638	[B]	Pennington	0.483	[B]	Munno Para West	0.716	[ED]
Dudley Park	0.540	[B]	Salisbury	0.414	[B]	Old Noarlunga	0.557	[ED]
Elizabeth Downs	0.581	[B]	Salisbury Downs	0.512	[B]	Para Hills West	0.401	[ED]
Elizabeth East	0.498	[B]	Salisbury North	0.630	[B]	Paralowie	0.597	[ED]
Elizabeth Grove	0.436	[B]	Smithfield	0.647	[B]	Reynella	0.448	[ED]
Elizabeth North	0.528	[B]	Smithfield Plains	0.596	[B]	Salisbury Park	0.396	[ED]
Elizabeth Park	0.482	[B]	St Kilda	0.514	[B]	Salisbury Plain	0.442	[ED]
Elizabeth South	0.548	[B]	Wingfield	0.522	[B]	Seaford	0.403	[ED]
Evanston	0.454	[B]	Woodville Gardens	0.460	[B]	Sellicks Beach	0.388	[ED]
Ferryden Park	0.481	[B]				Woodcroft	0.561	[ED]
Gepps Cross	0.470	[B]	Andrews Farm	0.762	[ED]	Yatala Vale	0.395	[ED]
Globe Derby Park	0.433	[B]	Angle Vale	0.428	[ED]	Tatachilla	0.459	[ED]
Hackham West	0.677	[B]	Blakeview	0.554	[ED]			

Table A6 Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Perth, a higher Index value is worse

Suburb	Index		Suburb	Index		Suburb	Index	
Mirrabooka	0.493	[B]	Huntingdale	0.412	[ED]	Westfield	0.441	[ED]
			Marangaroo	0.401	[ED]	Beechina	0.492	[ED]
Banksia Grove	0.557	[ED]	Martin	0.408	[ED]	Karnup	0.499	[ED]
Clarkson	0.448	[ED]	Peron	1.548	[ED]	Mariginiup	0.399	[ED]
East Rockingham	0.586	[ED]	Seville Grove	0.511	[ED]	Wungong	0.476	[ED]
Golden Bay	0.440	[ED]	Stratton	0.448	[ED]			

Table A7 Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Hobart, a higher Index value is worse

Suburb	Index		Suburb	Index		Suburb	Index	
Bridgewater	0.680	[B]	Gagebrook	0.775	[B]	Granton	0.421	[ED]
Clarendon Vale	0.403	[B]	Rokeby	0.423	[B]			
Derwent Park	0.469	[B]						

Table A8 Battler [B] and emerging disadvantage [ED] Red Alert suburbs in Canberra and Darwin, a higher Index value is worse

Suburb	Index		Suburb	Index	
Canberra			Darwin		
Acton	1.078	[ED]	Winnellie	0.587	[ED]
			Lee Point	0.716	[ED]

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