Growing Melbourne's West:

Challenges and Opportunities

An Economic and Social Analysis of Melbourne's Western Region

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A report for
Melbourne's West Area Consultative Committee (MWACC)

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Contents

List of tables

Executive summary

By 2003 there were 595,742 persons living in the western economy, an economy that has grown at the strong rate of 2.03 per cent per annum since 1998. The main beneficiaries of this growth are the outer regions of Melton and Wyndham although significant growth has also occurred in Hobson's Bay and Brimbank. Associated with the increase in population is the increase in the number of households from 185,033 in 1998 to 216,810 in 2003. There is an overall drop in household size in the western economy from 2.91 to 2.74 persons.

Because of the rapid growth of our cities, both in population and geography, growth issues were often solved by moving further out when new industries or housing was required. The built form and first use of land has significantly shaped the outcomes for the sub-regions of our cities and when Melbourne extended its residential reach in the land booms of the 1890's the eastern suburbs cemented their role as dormitory suburbs for city focussed work. The northern and western suburbs received the bulk of later migrants and industrial work. When quarter acre blocks for new homes were required in the seventies, eighties and nineties; Casey, Melton, Hume, Whittlesea and Wyndham provided the opportunity for this fashionable lifestyle.

A positive sign for the western economy is that the places with the highest population growth are also the places with the highest employment growth and hence the biggest employment and population growth potential. In Melton and Wyndham this is particularly important as significant segments of these areas are in the early stages of development.

The medium to long-term risk in new suburbs can surface after these suburbs have been established because the necessary infrastructure and investment has not been adequate or timely. In such circumstances a situation may develop that will eventually lead to a negative employment to population differential resulting in increases in unemployment and/or a high proportion of local residents working elsewhere. A higher share of residents working outside the region will create an adverse impact on retail outlets and services locally.

Key issues facing the western economy, unlike many other areas which have seen re-gentrification of suburbs, include the levels of social exclusion which are higher than areas which have been transformed. There is a danger that social exclusion, because of the downward social and economic pressure this creates, will slow the pace of change in the Inner West.

This said, between 1998 and 2003 unemployment in the western economy has dropped from 32,095 persons to 29,645 persons. These figures correspond to a drop in the unemployment rate of 12.0 per cent to 10.8 per cent. This compares to a national drop of 10.1 per cent to 9.8 per cent and for the Melbourne metropolitan region a fall from 9.3 per cent to 7.9 per cent. The improvement in unemployment rates has encouraged higher participation rates.

There is high degree of casualisation in the retail sector within the region with 9.06 per cent, out of a total of 18.76 per cent of the workforce, employed in the sector part time. The implication of a high degree of casualisation and exposure to retail employment is a poor outlook for employment in the sector.

In the western region large businesses play the very important role of employer, exporter and training provider. Of the 6,187 Victorian businesses employing more than 50 employees, 565 or 9.13 per cent are located in the western region. The transport and storage sector has a large role in the western economy with approximately 13.7 per cent of all firms and 18.8 per cent of large firms operating in the west. This trend can be expected to strengthen in the medium term, because of the advantages of access, cost of land and strength of port related trade.

Manufacturing employs a high proportion of residents and accounts for an even proportion of full time workers in the western region. The value of output in the western region represents 17.7 per cent of all manufacturing in Melbourne, 13.6 per cent of manufacturing in Victoria and a significant 5.5 per cent of Australia’s manufacturing.

The strength of skills of the local resident population is often poor although there are some sub regions including Moonee Valley, Essendon, Williamstown and Wyndham South that perform far better. The low skill levels of local residents represent a significant disadvantage to the region, particularly since competition to attract higher skilled businesses is high. In other words without the appropriate capacity of local human capital the potential to attract highly skilled business to the region is severely diminished.

The range of average incomes in the western economy can be characterised as very eclectic. The suburban mix in the inner core has pockets of affluence and high skilled workers as well as neighbouring regions with poor incomes and social outcomes.

The immigrant profile of the western economy is another feature with 38.8 per cent of the population foreign-born. This is approximately four percentage points higher than the Melbourne average of 34.8 per cent.

Infrastructure development in education will create considerable opportunities for the future of the western economy and play an important role at the community level. There remains enormous potential for new school developments in the region’s growth areas, designed with a broader vision of the role of schools in the development of communities and social capital. The airport and universities are major assets. Other transport upgrades on the Geelong Rd and the Calder Highway provide further transport opportunities. The resurgence of rail, if successful, will provide opportunities in the west that other regions will find much harder to capitalize on.

When the western economy is compared to others regions in Melbourne the trends identified in the single indicators in this report show that the western economy is performing the worst out of all the regions analysed and is comparable only to south east Melbourne. The emerging eastern axis has built a considerable advantage across a range of indicators. At the sub regional level the best performance can be found in Maribyrnong and Hobson's Bay – Williamstown, which are ranked 20 and 25 respectively out of the 75 SLA's within the Melbourne metropolitan region.

The performance of the western economy to date highlights the major issues of development and management of the strategies for growth and the need to target existing resources and momentum to enhance future prospects. Many regions in the western economy also have significant shortcomings across key social measures and these will be improved by raising economic performance.

Table E.1 Combined local strength by region

	Score
Western region	1,684
Northern region	1,917
Eastern Axis	2,568
South East	1,735
Geelong	1,980
Inner Core	3,469
Inner East	2,385
Inner South	2,192

Source: YourPlace database

The following key recommendations are based on the analysis done in the report and are made with the goal of maximising the social and economic outcomes of the western region. The western economy should aim to:

- improve the level of innovation in the west by lobbying the government to improve the provision of tertiary opportunities available and encourage these institutions to focus on areas consistent with the economic development aspirations and employment-based objectives of the west;

- approach the issue of change management in the Western region by using policies that target specific pathways that cater for the different population cohorts of the resident population. Such cohorts may include inter-generational unemployed, the current small business community and generational out-migrants seeking new housing outcomes.

- maximise the use of future land available for industrial purposes by making it a requirement that decisions regarding the allocation of land give equal regard to achieving investment, employment generation and economic development targets;

- to continually measure in an honest fashion the actual levels of unemployment, and employment growth by using the method outlined by NIEIR in the report;

- to assist the non-job ready by providing targeted and integrated solutions that will enable their transition back to the workforce;

- improve the local employment in the western region by seeking over the next 20 years to increase the rate of local job creation to 40 local jobs per 100 residents; and

- to lobby the state and federal governments where appropriate to continue to increase the road transport infrastructure in line with current rates of traffic growth. This would necessarily include the widening of the Western Ring Rd and a capacity solution for the Westgate Bridge.

1. Introduction

To help develop a comprehensive understanding of the region the MWACC commissioned NIEIR to provide a detailed and comprehensive analysis of the western economy. The objective is to provide a catalyst for discussion and strategic thinking for formal planning and policy processes.

National Economics has for a long time provided socio economic data for each of the Local Government Areas (LGA) within Australia. Using a number of different sources of information during this time a unique framework of indicators has been developed to help assess the household, industrial and local foundations of the region. In this report this information will be used to analyse the relative health and prosperity of the western metropolitan region.

"National Economics has for a long time provided social economic data for each of the LGAs within Australia."

The western metropolitan region has been defined for this report as the area covering the six Local Government Areas of Brimbank, Hobson's Bay, Maribyrnong, Melton, Moonee Valley and Wyndham. The region covers 12 Statistical Local Areas as shown in Chart. The region includes areas of socio-economic contrast from moderately high income, well qualified residents in secure and full-time employment to regions whose residents have high susceptibility to change and economic stress as a result of higher unemployment, lower incomes and lower skill levels.

2. Developing the western economy

In Australia we will often think of regions as simply those areas outside our major cities. 'Regional Australia' is the country and bush, places which we know will face a broad range of issues which are different from those faced in the cities. This notion belies the enormous differences that exist within our very large cities. In Melbourne and to a lesser degree Sydney, we have a very large population that is spread across a significant distance, and this forms one city. There is only one central business district, surrounding it is a vast expanse of suburban housing which, unlike European cities, is very low in population density.

In this vast expanse are large populations of people operating economies which, whilst not autonomous by any degree, have clearly identifiable structures similar to cities in their own right. The size of the Western Melbourne region can be seen within the context of the following European cities, each of which is noted for economic development.

City / region	Population
Western Melbourne	595,742
Liverpool	481,000
Dublin	1,027,000
Marseille	797,000
Turin	857,000
Leeds	424,000

Due to young age and rapid growth of our cities both in population and geography we have tended to simply move further out when new industries or housing were required. Therefore depending on the nature of the population growth in any particular period or the industrial/business fashion of the day, this defined the land use patterns for the newly emerging areas. The fashion of the built form and first use of land has therefore shaped significantly the outcomes for the sub-regions of our cities. So when Melbourne extended its residential reach in the land booms of the 1890's the eastern suburbs cemented their role as dormitory suburbs for city focussed work. The northern and western suburbs received the bulk of later migrants and industrial work. When ¼ acre blocks for new homes were required through the 70s to 90s, Casey, Melton, Hume, Whittlesea and Wyndham provided them.

"When ¼ acre blocks for new homes were required through the 1970s to 1990s, Casey, Melton, Hume, Whittlesea and Wyndham provided them."

But the timing and focus of development impacted significantly on the evolution of each region of the city. The eastern suburbs remained the home of city-focussed workers who received the largest income growth and consolidated the wealth of the emerging middle classes. Those areas that received migrants developed strong local economies which have faced significant pressure from change ever since, whilst the growth suburbs formed after the need for local connections between workers and jobs found they live in regions deficient of employment. The regional differences in outcomes are becoming even more pronounced in Australia in the early 21st century, and highlight the requirement to shift the focus to a strong regional platform that includes all regions of Australia including those in the city regions, such as Western Melbourne.

NIEIR has completed many reports in the past twenty years that have analysed the future of various sectors and regions within our national economy. Through our work in constructing the past five "State of the Regions" reports for the Australian Local Government Association we have clarified our general perception that regional development in Australia should be a critical focus. Regional differentiation is increasing. By identifying the imbalances between regions we have noted that the linkages between innovation, skills, strong local employment and export related manufacturing are emerging issues.

The strength of a region's economy is often measured by the level of economic growth, or by the increase in its level of production and is often compared with the performance of other regions. A region that is growing faster than others is said to be out-performing the trend or excelling. This is a classically narrow view of the world where the impact of differing starting points is dismissed. Without an effective analysis of the economic and social base at the point of time from which growth is measured, it is unclear whether the outcomes are comparably favourable.

Adoption of a growth-based paradigm of measurement restricts the application of genuine vision for a community's future. If only growth is considered, especially short-term growth, it is exceptionally difficult to argue for long-term structural changes in the economy. It is difficult to promote education & training, infrastructure, regionally focused investment strategies or industry targeted assistance. In fact if growth is the only objective of policy makers then other objectives such as regionally equitable outcomes and equality of opportunity and access can be dismissed, with negative results as a necessary flow-on effect of the growth short-term policies. NIEIR research shows that a short-term focus does not build regional success, strong and sustainable outcomes are built on the direct participation of a region in local wealth creation with support from appropriate policy and planning.

This report provides a detailed analysis of the western region economy and includes:

- the role industry has played in the past;
- an evaluation of recent changes in industry structure;
- an outline of a number of national and state issues that impact on the region;
- an evaluation of the region's success as a provider of the highest quality income and employment opportunities for its residents;
- the strength of the region and sub-regions in comparison to the rest of Melbourne; and
- recommendations to assist planning for the future success of the region.

3. Regional policy issues

In this study the framework of regional evaluation will be presented within the context of tackling a range of important issues faced by the Western Melbourne region. It is important to couch the results of the regional analysis within an issue based context as the forces of inertia and momentum in regional economic outcomes should not be understated. There is tremendous inertia created within an economic system with respect to the geographic distribution of ownership, capital and skills. At the same time, however, a great deal of momentum is created within an economy as it hurtles forward, creating new wealth and opportunities which are largely distributed according to the same inertia dominated patterns of the present.

Using a rodeo-riding metaphor, the goal of regional economic development in the Western economy should be to strangle the inertia with one hand, hold on tight to the momentum with the other, whilst at the same time steering the distribution towards a higher share of ownership, capital and skills in the West.

The forces of inertia and momentum are most clearly seen at the personal level within a regional economy. For instance, take the case of unemployment. Inertia is created by being out of the workforce, skills are depleted, workforce disciplines dissipate and the community in which unemployment is high produces people who are more likely to be unemployed. Momentum for change however still exists in the economy, however the momentum is likely to create less low-skilled opportunities, likely to create a higher pool of structurally unemployed people living in the area. At the same time, new positions created at a faster rate will require more education, more workforce discipline and education, and be more likely to be taken by those living in regions already well employed.

Genuine regional opportunities are created when either the inertia is removed or when there is an internal (endogenous) or external (exogenous) shock to the forces underlying the momentum that shift the balances of competitive or comparative advantage to a region.

"Regional opportunities are created when inertia is removed."

Examples of the types of changes are noted below.

(i) Inertia removed

- a. Infrastructure bottlenecks removed, including those for business and workers
- b. Locally derived policy initiatives targeting disadvantage
- c. Workforce training

(ii) Endogenous shocks or critical points

- a. Locally derived policy
- b. Critical mass in size of population
- c. Scale of production achieved
- d. Trends, a region becomes fashionable through market forces (low relative prices), changes of tastes, or provision of necessary public / private goods.
- e. Strong population growth

(iii) Exogenous shocks

- a. National or state policy, including planning, taxation and subsidy
- b. Macro-economic change

The types of regional opportunities which are created may not be enough to close the gaps in regional inequality; in fact it is likely that many opportunities created by these sorts of changes will be required to simply stand still in terms of regional competitiveness.

Many regions however face limited opportunities created by either inertia removal, or endogenous / exogenous shocks. The Western Melbourne region isn't one of them. In fact it is likely that the west faces an enormous range of opportunities in each of these areas, the challenge is trying to define exactly what type of outcomes can be achieved given these opportunities.

- Emerging industries.
    - Restructuring.
- Growing population.
- Evolving demographics.

A number of such issues are presented below and elaborated on in the following sections of this chapter:

- Population growth and how it may provide opportunities for a more prosperous region.
- Future population growth and the urban growth boundary.
- Displacement and inequality within the region.
- Developing sources of mass employment at a regional level including high grade manufacturing as a political imperative
- Personal services growth and export growth.
- Infrastructure created opportunities.
- Sustainable levels of unemployment.

3.1 Population growth and what it delivers

Population growth is a key determinant in growing a successful region. However population growth in itself will not necessarily guarantee economic growth and better outcomes. The following is a table of the employment – population differential for selected LGA's, including those that make up the western economy.

"Population growth in itself will not necessarily guarantee economic growth and better outcomes."

Table 3.1 The employment-population growth differential: Western economy

Selected lower performing regions	Percentage change over 5 years, 1996 to 2001 Population growth	Employment growth, positions in region	Outcome = Increases in employment minus population growth, OR net employment creation
Wyndham (C)	2.94	6.31	3.37
Hobson's Bay (C)	1.64	1.72	0.08
Brimbank (C)	1.40	4.01	2.61
Moonee Valley (C)	0.53	1.82	1.29
Maribyrnong (C)	0.00	0.01	0.01
Melton (C)	6.23	8.20	1.97
Stonnington (C)	1.13	1.68	0.55
Monash (C)	0.49	1.62	1.14
Knox (C)	1.56	1.70	0.15
Casey (C)	4.19	6.50	2.31

Source: ABS Estimated Resident Population and Journey to Work data

The pleasing sign for the western economy is that the places with the highest population growth are also the places with the highest employment growth and hence the biggest employment – population growth potential. For places like Melton and Wyndham this is particularly important as huge parts of these regions are in their infancy. The risk is that new suburbs can surface in the medium to long term when the region has well been established. Without the necessary infrastructure and investment into a region, a situation may develop that will eventually lead to negative employment – population differential. In this instance this will either lead to increases in unemployment, a high proportion of residents working elsewhere or both. With a higher share of residents working outside the region local retail and services will suffer. The challenge for Melton and Wyndham is to ensure that policies are put in the place to allow them to maintain the current differentials displayed above.

The table below looks at the population-employment differential from the perspective of the resident workforce rather than employment positions in the region. A negative differential indicates a region now has fewer workers relative to their population. This is a problem because it means the remaining employed residents are in some ways supporting the rest of local society and therefore reflect a drop in per capita incomes[1]. For the entire western region the differentials are positive. In Maribyrnong in particular the differential is highly positive, although it comes from a very low base, and supports the notion that this region is becoming more prosperous as more professionals move into the area.

[1] Income support is not directly sourced from local people but rather the capacity of the economy is supported by fewer people which reduce future opportunities.

Table 3.2 Resident workforce-population growth differential: Western economy

Selected lower performing regions	Percentage change over 5 years, 1996 to 2001		
	Population growth	Employment growth, resident workforce	Outcome = Increases in employment minus population growth, OR net employment creation
Wyndham (C)	2.94	3.14	0.20
Hobson's Bay (C)	1.64	1.73	0.09
Brimbank (C)	1.40	1.95	0.55
Moonee Valley (C)	0.53	0.56	0.03
Maribyrnong (C)	0.00	2.46	2.46
Melton (C)	6.23	6.88	0.65
Stonnington (C)	1.13	0.74	-0.39
Monash (C)	0.49	0.10	-0.39
Knox (C)	1.56	2.14	0.58
Casey (C)	4.19	4.03	-0.16

Source: ABS Estimated Resident Population and Journey to Work data

Even in the outer regions of Wyndham and Melton residents are still finding jobs. This compares favourably with Casey in the far south east which is struggling to provide the adequate infrastructure that allow residents to find jobs to support their booming population growth. While places like Stonnington experience a negative differential the large average incomes of the workforce and wealth of the residents are easily capable of sustaining the welfare of the region.

Table 3.3 Employed density 1996-2001: Western economy (per cent)

Selected lower performing regions	Percentage change over 5 years, 1996 to 2001		
	Employed density, 1996	Employed density, 2001	Change in employed density
Wyndham (C)	0.43	0.44	0.004
Hobson's Bay (C)	0.40	0.41	0.002
Brimbank (C)	0.37	0.38	0.010
Moonee Valley (C)	0.43	0.43	0.001
Maribyrnong (C)	0.33	0.37	0.043
Melton (C)	0.42	0.43	0.013
Stonnington (C)	0.49	0.48	-0.010
Monash (C)	0.45	0.44	-0.009
Knox (C)	0.46	0.48	0.014
Casey (C)	0.44	0.44	-0.003

Source: ABS Estimated Resident Population and Journey to Work data

One final means of measuring a region's ability to turn population growth into employment is by looking at the trend in employed densities. The employed density is simply the number of resident workers over the total population. As seen in the table above over the past five years employed densities have increased in all the western municipalities. Again the biggest mover has occurred in Maribyrnong where the process of gentrification has seen employed densities rise from 0.33 in 1996 to 0.37 in 2001. However it must be said that of all the regions presented it has come off the smallest base. It is also encouraging to see that the younger regions of Wyndham and Melton have experienced increases in this measure. The challenge for these regions will be for them to at the very least maintain these levels as the population continues to rise. While most of the other regions presented have experienced falls in employed densities it is interesting to note that each of these regions are still higher than their western economy counterparts.

3.1.1 Future population growth and the urban growth boundary

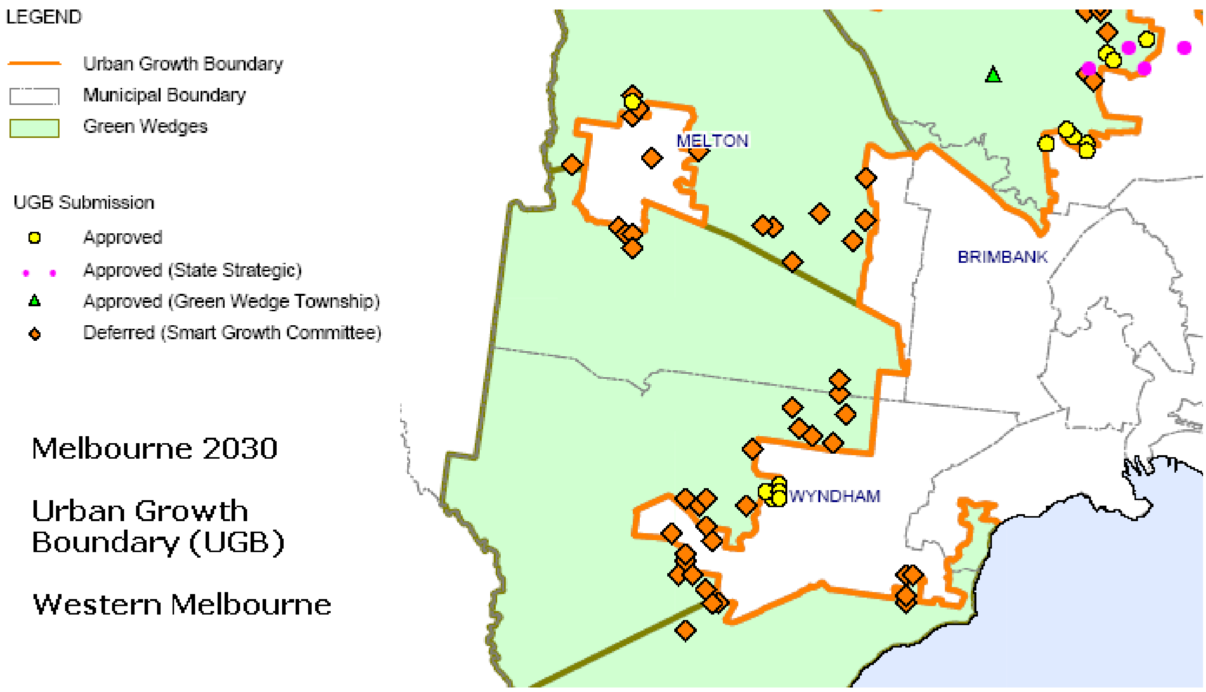
The Melbourne 2030 document estimates that Melbourne's population will increase by 925,000 people and 620,000 households by the year 2030 (DOI, 2002a:14). As such, the Urban Growth Boundary (UGB) is given considerable attention in Melbourne 2030. At its most basic, the UGB is designed to contain growth and prevent urban sprawl into rural areas. The UGB, as outlined in Melbourne 2030, came into effect at the same time as the release of Melbourne 2030. It follows the existing boundary defined by urban zones and growth strategies for the majority of the urban areas in metropolitan Melbourne. The UGB "indicates the long-term limits of urban development and where non-urban values and land uses should prevail in metropolitan Melbourne, including the Mornington Peninsula" (DOI, 2002b:2). The intention of the UGB is to contain urban sprawl, protect valued non-urban areas and ensure access to transport infrastructure in the growth areas.

NIEIR believes that the major concerns that the UGB presents to the Western region is an increase in the cost of new housing as concerns over supply of high quality residential land raises prices. The second concern is that implicit in the definition of the UGB is a concentration of growth opportunities in areas in the West, which in the absence of the UGB may have had less urban development pressure.

The overarching concern however with the UGB is the implied interaction between the application of the UGB and other Melbourne 2030 principles and their impacts on the supply of new infrastructure. The logic is as follows:

- 2030 envisages a decrease in the reliance on motor vehicles;
- outcomes are led by an increasing concentration of activity in key centres which are expected to be linked better;
- outwards movements are designed to be constrained within the UGB; and
- infrastructure planning will reflect these desired outcomes, and have reduced emphasis in natural growth corridors.

If instead current trends continue and the rate of trip generation by household's increase and the importance of private transport is even more paramount, then the West will suffer from underdevelopment of infrastructure which it may have otherwise expected to receive.



3.2 Change management issues

Most inner areas in Melbourne face challenging issues related to the "hollowing out" of employment, developing an environment for new employment options to flourish and managing future residential densities in line with the planning strategy Melbourne 2030. The outer growth areas have major issues related to new home development, growing population and employment, transport infrastructure and managing the rural interface with metropolitan Melbourne.

"Most inner areas in Melbourne face challenging issues related to the "hollowing out" of employment."

The future of the Western economy is change, as the saying goes the only constant is change. The issues facing the West unlike many other areas which have seen re-gentrification of suburbs is that the levels of social exclusion in the West are higher than areas that have transformed before them. This fact will actually slow the pace of change in the Inner West with developments such as those planned in Maribyrnong likely to evolve quite slowly over the next 7 to 10 years. The reason for slow evolution relates to the significant blockages to rapid change that social problems and the appreciation of social problems by the wider Melbourne community will have.

Should development in the West simply replicate the pattern of the rest of Melbourne it is likely that very little trickle down benefits will be spread to the regions of Brimbank where endemic issues of poverty and low employment manifest themselves. It is likely that Maribyrnong could transform into a part of the city which increasingly orients itself towards trends that have emerged in the East, with ever increasing levels of skills, incomes and job creation.

Recommendation: Approach the issue of change management in the Western region through the use of population cohort specific pathway policies. Rather than only concentrating on geographic areas and their outcomes, the policies need to be directed to people living in each area now. This cohort approach is preferable to encouraging local areas to define land use and development pathways for a resident population, which could be changing quite rapidly.

Cohorts for such analysis could include:

- inter-generational unemployed;
- current small business community; and
- generational out-migrants seeking new housing outcomes.

The simple concept with the pathways policy as an economic development principle addresses the fact that the ability of high skilled people living in high amenity areas to create wealth for the entire community is tremendously important. Maribyrnong and Hobson's Bay have great capacity to continue to deliver high levels of employment that benefits the entire region. The more that this employment reflects a higher level of skilled input, the more it complements the current manufacturing base, the greater the levels of exporters the better will be the outcome for regional incomes in general. But in so doing we need to address the fact that those displaced by the process or those who currently face the highest levels of inequity in the community should be provided with at least as strong a level of service provision, public infrastructure and transport connectivity as they currently do within their communities.

With a strong state and local planning policy in Melbourne 2030 getting bedded down, the opportunity for the community to address the core issues of capacity building under-employment and skills development which this report raises has never been stronger. 2004 is an opportunity to use the momentum of urban renewal to break the inertia in structural unemployment in the West. If however the benefits of urban renewal are maintained or diverted into silos of local government or developers, there are possibilities of significant wealth transfers to once again short change the Western economy.

3.2.1 Displacement and inequality

The structural underpinnings of the displacement of poorer less employed residents into other regions of the west lies at the core of a number of outcomes of this report’s analysis. In general, and in direct contradiction to many other analyses[2] of economic strength, this report highlights the strength and economic advantages of communities such as Maribyrnong.

In a static sense there are communities that appear to deliver worrying values for economic indicators such as poverty and unemployment. At the same time they may have strong local employment, have a number of high skilled residents and capacity in a broad range of economic spheres.

The apparent disparity that can be seen in a range of statistics actually relates to the underlying forces for transformational change that is emerging in such communities. To illustrate these forces in a range of economic outcomes and development forces the following 4 way table or quadrant of household classification is presented.

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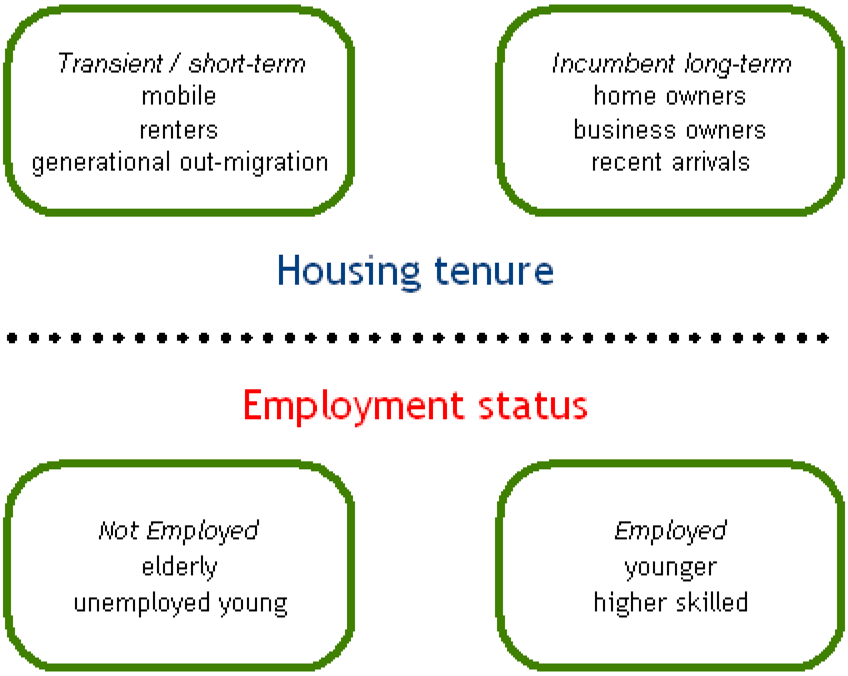
[2] For instance a comparison of the ABS SEIFA disadvantage measure as presented in Chapter 9



Above the dotted line are two states that relate to the type of housing tenure the household faces in its broadest terms, short-term or long-term. Below the line are the two states of employment faced by the households, employed or not-employed.

A number of different movements or stylised positions can be held by households within this framework. These positions can relate specifically to the household or can describe the type of outcomes that a household in one position is likely to produce for children from such a household.

For instance, an employed incumbent household may produce children / youth / young adults who are either:

- not employed and remaining with the incumbents housing;
- employed high skilled and purchasing with the intent to be incumbent; and
- employed but likely to move out to other areas, generational out-migrant.

Similarly through time the incumbent long-term resident may move into retirement and hence in the not employed state.

New residents may be employed new home-owners, and their demands may increase rents. This could force unemployed transient people out due to price increases creating asset liquidation incentives for the non-employed incumbent homeowners. Alternatively, their offspring may be forced to leave. They will therefore become generational out-migrants, according to the quadrants above.

In a static community, under equilibrium settings, the flows between and products of the quadrants would balance to broader social trends in the economy. However in a sub-region of the Melbourne metro system different elements of the quadrant analysis can be stronger than others. In an area which is facing rapid change it is likely that social measurement of outcomes for that community will find vastly different results depending on the focus a particular measure has with respect to the four quadrants.

In the Inner West we can see quite a high skilled workforce, as those who are employed are more likely to represent the recent arrivals to the area, who are setting themselves to be employed incumbent home-owners. But at the same time there can remain high levels of unemployed transient or incumbent population, reflecting the outcomes of the previous incumbent families.

3.2.2 Sustainable levels of unemployment

For a region that has experienced high unemployment for extended periods, there may not be a clear understanding of a reasonable target for unemployment. With increasing benefit reassignment and a clouding of the notion of unemployment it can be difficult for real targeting of unemployment levels. Regardless of this, the levels of unemployment in the West are too high. It is a false economy to create a situation where employers face labour shortages, because the unemployed faced marginal taxation rates of higher than 60 per cent[3], and to then claim full employment. Unemployment remains a core contributor to social exclusion, creates inter generational inequality and wastes resources.

When a region is being assessed for sustainability of growth opportunities, the level of effective or structural unemployment is crucial for that determination. When regions face a high level of short-term unemployment coupled with a high degree of non-job ready, the households face a high level of employment stress. For instance suppose an area has 11 per cent of its population aged 18-65 being non-job ready[4]. Suppose the region also has reported a short-term unemployment rate of 7 per cent, the level of dependency of the region to government supported income is suddenly moderately high. In addition with such a large group of people looking for work or unable to move into work, the community suffers from an inability to support non-employment alternatives such as education, training and child care for its inhabitants. The increased pressure on locally provided support services is also heightened.

On the other hand, a local government area such as Nillumbik has a non-job ready rate of only 3.3 per cent. When combined with a small rate of short-term unemployment and solid incomes, the result is a large proportion of the population can be supported in activities such as education. The key for economic development is that the freedom of the population to undertake activities other than employment often guarantees future prosperity.

Targeting a sustainable level of unemployment at around 7 to 9 per cent of the population using the NIEIR measures outlined in Section 4.9 would create genuine opportunities for the region to manufacture endogenous growth in the future. This is a recommendation of this report to once again seek to continually measure progress in this area in an honest fashion.

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[3] In terms of total social benefits received.

[4] An NIEIR measure of structural unemployment which does not include short-term unemployed.

3.2.3 Transference of social wealth

One of the understated aspects of the displacement which occur in a city which is gentrifying is the large effective wealth transfer in the form of public goods and infrastructure between those who leave and those who replace them.

Quality infrastructure, especially in medical and social services, vibrant main streets, eclectic development, and public transport are all features of the inner west. As the region develops further, those moving in will access the advantages of such infrastructure which has been developed in response to the social issues of the time, or as part of the success of the previous generation. The Western economy risks continually reproducing this pattern of growing opportunities for others, as the market delivers opportunities for those new entrants on higher incomes. In some way this a fact of life, however recognising this transfer allows us to build programs that seek to redistribute some of this benefit.

Returning to the four spheres diagram, to aid analysis we can picture the movements of the generational out-migrants (those whose parents have grown up in the area) and the outcomes of the unemployed young in sharp contrast. As the incumbent long term residents move on, they are replaced by the younger employed higher skilled entrants; the previous resident's children are either moving to areas which are now more affordable (have less service and poorer employment connections) or remain in transient accommodation without employment. Hence the cycles of intergenerational unemployment and lack of opportunities continue. In 25 years time when the value of the infrastructure and the proximity of the city increases the value of the Brimbank region, are the second and third generation of unemployed from the area going to benefit or are these opportunities going to be taken by others?

The best way to counter such flows is to allow the development of social infrastructure to lead the market outcomes. That is providing the quality of services to the places where the market is not likely to move, yet.

The wealth transfer is that the value created by the previous residents is now transferred to others. The challenge for the Western region is to ensure new opportunities created can provide current residents and their children with higher incomes, increased amenity, better connections to employment and stronger innovative capacity.

3.3 Returning high grade manufacturing as a political imperative: Developing sources of mass employment at a regional level

Michael Porter, Bishop William Lawrence University Professor, based at Harvard Business School, and world renowned business and economic thinker recently offered the observation that many nations have a misconception that "high-tech manufacturing" means only electronics, information technology and such.

But in fact "high tech" is not so restricted in meaning: "Every industry today is high technology!" Porter's favourite example is Holland, which despite having an unfavourable climate and scarce land, has used computerization and complex marketing technology to remain one of the world's largest suppliers of fresh flowers.

In raising competitiveness, it "doesn't matter what particular products you produce. That's not so important. What's important is how the nation produces those products."

His famous example is the Italian shoe industry. With their top-quality shoes marketed around the world, workers in the Italian shoe industry can enjoy wages as high as AUS$28 an hour, and yet Bangladeshi workers are paid almost nothing to do the same job.

His observation rings true in Australia, where economic growth sometimes appears to be solely the responsibility of retail and finance. With retail generating high levels of low paid part-time employment and the retail oriented finance sector providing significant job insecurity, it is not surprising that quality employment with training, a career structure and full-time work is so hard to generate.

Manufacturing or technology rich driven production if you prefer does not appear to be a high priority in Australia, yet at the same time we have amazing firms doing amazing things in this sphere. The pre-occupation with retail and finance leads regions such as the West with lower incomes and employment in the long run. This is because if a given region imports both retail services and finance then income spent does not maximise local wealth creation.

Historically the manufacturing sector has provided significant employment for the western region. Manufacturing continues to be important and has an additional crucial component, export capability. Since the early 1990's a strong level of domestic demand has driven growth. NIEIR believes that much of this growth was debt-financed and unsustainable, and therefore we are likely to witness considerable contraction in the growth driven by domestic demand in the future. Regardless of the accuracy of our forecasts in this respect two issues are clear, construction and retail are unlikely to grow at the same rate as the period 1991 to 2001, and secondly, a focus on international export markets mitigates exposure to domestic demand.

The strength of manufacturing in Australia is that it is genuinely export-oriented. The degree to which the western region economy does not focus on developing export capability is the degree to which it will fail to thrive as a regional economy. Exports should never be under-estimated in importance; they represent almost free income to the region. Building an economy that is export-driven makes sense to regions with lower than average socio-demographic fundamentals because it removes future income from the domain of local incomes.

"The strength of manufacturing in Australia is that it is genuinely export oriented."

Export income has a number of clear advantages over other activity:

- it is intensively competitive, either the exports are both the cheapest and best or they will be sourced elsewhere. This drives innovation as the regions businesses strive to stay in front;
- exports are likely to be driven by factors outside of domestic demand. This allows exports income to continue to grow when domestic factors are not favourable;
- in general the market of the rest of the world is enormous compared to the domestic market, therefore an increase in the share of the world market can provide growth that the domestic market could never provide; and
- the market for export goods can be completely different to the local market, for instance, goods which are too expensive for the local market can be produced at a significant margin. This increases local income without any negative impacts on the local area.

The analysis clearly demonstrates that the future of the Western economy is linked to our export potential as a nation. Whilst the region doesn't mine the resources or grow the wool, the manufactured goods component of exports is crucial to the success of the region. Policy development and planning must support the export of manufactured or value-added goods. With this focus, if Australia thrives in the world economy so should the western economy of Melbourne.

The growth of quality production must however be built on strong supply chains and consistent innovation, as Porter says it is not what you make but how you make it. A number of the reasons why Australia has turned away from this sphere of economic endeavour could be suggested:

- we do not have a large industrial military space complex to drive demand;
- we do not have strong innovative output; and
- the performance of our major companies is poor[5].

For each criticism it is very easy to admit defeat and pity the plight of manufacturing once more. Accepting defeat will erode the already low levels of employment in the Western region and continue to erode real incomes in Australia as a whole.

A more positive outlook would suggest that leadership needs to be provided to establish within the minds of business and government that working towards a nation that can produce goods that others demand, and in turn creating wealth and opportunities for its citizens, is the path we wish to take.

As production increase and exports are strengthened the supply chains which produce such goods and services begin to develop further strength to the point in which goods currently imported are replaced with local goods.

What scope is there for import replacement in the region?

The scope for import replacement in the West is strongest in the provision of technical and business services to the industry in the area, and delivering a larger scale and variety of retail, recreational and social services to its households.

The traditional view of import replacement is seen from the perspective of the national economy and replacement of goods imported from overseas with those produced domestically. It would be great to say that in the future there would be the type of high-grade production facilities in Melbourne which could replace the following; however this will require significant changes in policy and a lot of luck:

- micro-electronics; and
- technology hardware.

At the regional level, with a strong emphasis on education and the knowledge economy we could further accelerate the output of business and technical services. This could help develop true learning communities within our growth regions instead of seeing them as the place in which our population grows.

3.4 Infrastructure created opportunities

Infrastructure is the context in which development occurs; it can further development, it can impede it, and it can be either a necessary or sufficient condition for development. The nature of our modern economy, with the dominance of footloose capital and very high hurdle

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[5] Each of these criticisms is highlighted as an issue by Porter in his analysis of the Australian competitive position in 2001, Sydney, Australia IIR Leading Minds Conference, 1 August, 2002.

rates[6] required to attract investment has made infrastructure of all forms increasingly important.

Infrastructure can impact on a local economy in the following ways:

- reduce the cost of operating in a domestic market;
- unlock new markets;
- catalyse innovation;
- expand the effective labour market;
- expand opportunities for individuals;
- enhance broad social outcomes; and
- increase the attractiveness of a region through amenity and lifestyle characteristics.

Infrastructure can have multiple impacts and at times one impact may be positive at the expense of another outcome.

In Chapter 4 "Introducing the Western Economy" a number of important infrastructure projects, blockages and opportunities are discussed.

[6] The level of return of investment that is the minimum level required for attracting funds. Usually associated with new companies or expansions of existing operations.

4. Introduction to the western region economy

4.1 Demographics

Of all of the sectors of the western economy the most important is its residents. The following subsections provide a snapshot and in some cases a trend analysis of the western economy.

4.1.1 Population and labour force

In Table 4.1 it is estimated that in 2003 there were 595,742 persons living in the western economy, which since 1998 has grown at a strong rate of 2.03 per cent per annum. The main beneficiaries of this increase are the outer regions of Melton and Wyndham although significant growth has also occurred in Hobson's Bay and Brimbank. Associated with this increase in the population is an increase in households from 185,033 in 1998 to 216,810 in 2003. This corresponds to an overall drop in household size from 2.91 to 2.74 persons.

"The western economy has grown at a strong rate of 2.03 per cent per annum."

Table 4.1 Western economy population and labor force

	1998 Level	Percent	2003 Level	Percent	Growth p.a. %
Population	538,892		595,742		
Households	185,033		216,810		
Workforce	266,748	49.4	303,514	50.9	2.6
Employment	234,653		273,869		3.1
Unemployment NIEIR	32,095	12.0	29,645	10.8	-1.6
DEET U/E	25,260	9.6	22,077	7.4	-2.7
Structural U/E % population[1]	42,565	12.3	45,059	11.9	1.3

Note: 1. Population aged 18-65 years.

2. See Glossary below for data source

Glossary of terms and sources

Population ABS Estimated resident population (ERP)

Households NIEIR estimate based on Census information

Workforce Department of Employment, Education and Training (DEET) average labour force estimate adjusted for excess growth in Disability Support Pension recipients, generally higher than DEET estimate.

Per cent is share of population.

Employment Defined by the difference between workforce and NIEIR unemployment estimate

Unemployment NIEIR	Estimated using Centrelink recipient data, percent is defined as the share of the workforce unemployed
DEET U/E	Official estimate of unemployment, percent is as provided by DEET
Structural U/E	Alternative NIEIR measure of unemployment which includes the long term unemployed, a proportion of single parents, migrant unemployment, and all disability support pension recipients. It does not include the short term unemployed, any unemployed people who are not benefit recipients and is measured as percentage of population aged 18 to 65 years old.

To estimate unemployment National Economics uses its extensive database of social security payments at the small area level, maintained in a time series since 1991. This is achieved by measuring the effective number of individuals on unemployment benefits.

Between 1998 and 2003 unemployment levels in the western economy have dropped from 32,095 persons to 29,645 persons. These figures correspond to a drop in the unemployment rate of 12.0 per cent to 10.8 per cent. This compares to a national drop of 10.1 per cent to 9.8 per cent although closer to home the Melbourne metropolitan region has fallen from 9.3 per cent to 7.9 per cent. The improvement in the unemployment statistics has been associated with considerable improvements in the levels of those employed, resulting in higher participation rates.

In addition to the effective unemployment level it is also important to consider the number of individuals who can be classified as being structurally unemployed. Structural unemployment is a measure of long-term unemployment. National Economics defines this as including everyone on disability support pensions, 50 per cent of people from a non-English background on Newstart allowance, 20 per cent of people on single parents benefits and all people on the mature age allowance. This measure excludes everyone else on Newstart allowance and anyone receiving youth allowance. It therefore assumes that none of the youth are structurally unemployed. This figure measures those individuals who find it the hardest to find employment and therefore the ones that require the greatest assistance and retraining. The difficulty with a region that is high in structural unemployment is that funds that could otherwise be spent on infrastructure, improved amenities or innovation will need to spent on services that will allow these individuals to regain employment.

In the previous table, the number of structurally unemployed was 45,509 in 2003, which is an increase on the 1998 figure of 42,565. The structural unemployment rate is defined as the number of structurally unemployed divided by the 18-65 year old population. Despite the increase in the level of those structurally unemployed the structural unemployment rate dropped marginally from 12.3 to 11.9. This is an improvement compared to the national trend which during the same time increased from 10.4 to 10.8. The Western region's drop in the structural unemployment rate is similar to metropolitan Melbourne, which has seen a drop of 9.7 to 9.4.

4.1.2 Flow of funds

The flow of funds analysis undertaken by NIEIR is a detailed attempt to capture the wealth building forces at work in the regional economy. The measures concentrate on the ways in which money is sourced and applied by the households in a region. In general, a region will benefit from a number of flows into the household from wages and salaries, net farm and business income, social security benefits, interest and dividends and from property income. Balancing this inflow will be the income tax, Medicare and levies paid to the Federal government, GST paid on consumption and interest paid on monies owed by the household sector. The amount that remains is available for consumption by the household sector. It is therefore changes in this figure that are most important in regard to the spending capacity of the western economy.

Table 4.2 Western economy flow of funds

	1999 Level	1999 PC	2003 Level	2003 PC	Growth p.a. %
Wages and salaries	8,405	15,451	10,618	17,823	3.6
Income tax	1,939	3,565	2,347	3,939	2.5
GST (WST)	443	814	839	1,409	
Benefits	1,213	2,229	1,416	2,377	1.6
Business income	1,045	1,922	1,359	2,282	4.4
Interest/dividends	161	295	189	318	1.9
Interest paid	663	1,218	747	1,255	0.7
Property income	97	178	110	185	1.0
Net flows	7,875	14,478	9,759	16,382	3.1

Source: See Appendix 10.1 for a description of each of the above figures and data source

Using the net flows position as a guide, the effective income earning capacity of the western economy has improved moderately in the last two years rising in per capita terms from a Net Flows position of 14,478 in 1999 to 16,382 in 2003 but is falling behind a national average increase of 14,375 to 17,342 in 2003.

During this period wages grew moderately from 15,451 to 17,823 at a rate of 3.6 per cent. The improvement in the net flows was also demonstrated in the regions ability to use this income for wealth building purposes. This is demonstrated via a 1.7 per cent increase in the interest and dividends received, a 0.7 per cent increase in property income and a 4.4 per cent increase in business income. Although in each of these categories average national growth is approximately double these figures. Of course, these wealth gains are nearly eliminated by increased tax receipts and interest paid.

Determining the regional balance of income sources, 2003

Using the regional flow of finds analysis and journey to work data, we can estimate the net flows in the Western economy by source.

Approximately 45 per cent of income in the area is sourced locally.

Table 4.3 Regional flow of funds

	Total	Source from within	Sourced outside	Paid out to external
Wages and Salaries	10,618	5,100	5,518	
Income Tax				-2,347
GST				-839
Benefits	1,416		1,416	
Business Income	1,359	1,008	351	
Interest / Dividends	189	14	175	
Interest Paid				-747
Property Income	110	35	65	
Net Flows	**9,759**			**-3,933**
Total by source		**6,157**	**7,525**	

Source: See Appendix 10.1 for a description of each of the above figures and data source

4.1.3 Residents (average incomes)

The western economy covers a broad geographical area which is characterised by some of the oldest suburbs in Melbourne along with the newest. The process by which different regions evolve indeed has a bearing on its comparative success. One of the clearest ways of measuring this difference is by looking at the average personal incomes of the residents from each region.

There are clear differences in the region between income which can be seen in the following table. The highest income area is the statistical local area of Wyndham – South, which is predominantly characterised by residents with high skills and full time jobs, which has an average adult personal income of $31,536. Its average income per adult resident is nearly more than 50 per cent greater than the lowest income area of Brimbank – Sunshine which is characterised by residents who have low skills, are structurally unemployed and therefore have less access or opportunity to full time work. The diversity of these regions is further highlighted by the Victorian average which is split evenly by these figures.

Table 4.4 Average personal income, Census 2001

SLA	Average Income ($)
Brimbank (C) - Sunshine	19,235
Maribyrnong (C)	23,119
Brimbank (C) - Keilor	23,308
Hobsons Bay (C) - Altona	23,352
Melton (S) - Bal	23,745
Moonee Valley (C) - West	24,339
Wyndham (C) - North	25,634
Wyndham (C) - West	26,754
Melton (S) - East	28,435
Moonee Valley (C) - Essendon	29,967
Hobsons Bay (C) - Williamstown	31,214
Wyndham (C) - South	31,536
Victorian average	26,161

Source: ABS 2001 Census

The table above is designed to illustrate that some of the differences in average incomes that may exist between regions may be intergenerational in nature. This can be more easily explained if one considers the quadrant of household classifications in section 3.2.1. If one takes Maribyrnong for example it has nearly the lowest average incomes for those over 55, but at the same time moderate average incomes for those under 55 leading to some of the highest differentials in incomes between the two age groups in the western region.

This can be explained by a predominantly high number of poor and elderly incumbent long-term homeowners. This is because the vast majority are either in poor paying are/or underemployed jobs or simply unemployed altogether due to structural barriers to employment. Of course, a high number will have retired but the rate at which this occurs should not differ substantially from any other region.

In contrast the recent and growing trend of gentrification taking place in the region has produced an influx of young and well educated professionals taking advantage of Maribyrnong's proximity to the CBD and recent improvements in social infrastructure. These individuals are typically transient/short term in nature that rent for a time and then move elsewhere as other opportunities present themselves. This force alone has caused average incomes for those under 55 around the fridge of the city to rise. What prevents these figures from being even higher is the significant population of students who also migrate from vast areas to live closer to the cluster of education institutions in and around the CBD. The region also has a high number of overseas migrants who will take time to establish themselves and improve their incomes. The other negative force is the high number of structurally unemployed youth or underemployed young people who have lived in the region all their lives due to historically low house prices and rents. At the same time the proximity to services and retail and the wealth of public transport does not provide a large enough deterrent for these people to displace themselves. Particularly, since places with cheaper rents are not likely to be as well equipped in these areas and are likely to be out in the urban fringe. Nevertheless, as the place has become relatively more expensive to live in there has been some generational out-migration taking place allowing for a greater proportion of people who are considered to be amongst the working class.

If we compare the above analysis with a place such as Brimbank (C) – Sunshine it becomes apparent that in this area both the young and old are poor. The only intergenerational changes that may be taking place here are that the old people and perhaps some of the young people that displaced themselves from Maribyrnong are now moving to Brimbank (C) – Sunshine because it is the only place they can afford to live.

Table 4.5 Average personal annual income, under 55 and over 55 years of age

SLA	Under 55	Over 55
Brimbank (C) – Sunshine	21,059	14,137
Maribyrnong (C)	26,258	14,262
Brimbank (C) – Keilor	24,845	16,762
Hobson's Bay (C) – Altona	26,131	15,963
Melton (S) – Bal	24,927	18,213
Moonee Valley (C) – West	27,981	17,188
Wyndham (C) – North	27,349	17,915
Wyndham (C) – West	28,089	19,294
Melton (S) – East	29,475	18,374
Moonee Valley (C) – Essendon	33,753	19,015
Hobson's Bay (C) – Williamstown	35,379	19,525
Wyndham (C) – South	33,348	22,565

Source: ABS 2001 Census

Table 4.6 Average personal annual income, Census 2001

SLA	Average Income	10 km radius		20 km radius	
		Min	Max	Min	Max
Brimbank (C) – Sunshine	19,235	19,235	23,119	19,235	44,520
Maribyrnong (C)	23,119	19,235	44,520	19,235	44,520
Brimbank (C) – Keilor	23,308	23,308	29,967	19,235	44,520
Hobson's Bay (C) – Altona	23,352	23,352	31,214	19,235	44,520
Melton (S) – Bal	23,745	23,745	23,745	23,745	28,435
Moonee Valley (C) - West	24,339	23,119	29,967	19,235	44,520
Wyndham (C) – North	25,634	25,634	25,634	23,352	31,536
Wyndham (C) – West	26,754	26,754	26,754	25,634	26,754
Melton (S) – East	28,435	27,361	28,435	23,308	28,435
Moonee Valley (C) - Essendon	29,967	20,915	44,520	19,235	44,520
Hobson's Bay (C) - Williamstown	31,214	23,119	44,520	19,235	44,520
Wyndham (C) – South	31,536	31,536	31,536	25,634	31,536
Stonnington (C) - Prahan	39,404	27,742	44,520	19,235	44,520
Stonnington (C) - Malvern	37,323	23,566	41,848	19,649	44,520
Monash (C) – South-West	23,566	19,649	37,323	19,649	44,520
Monash (C) – Waverly East	28,480	19,649	30,588	19,649	39,404
Monash (C) – Waverly West	27,952	19,649	28,480	19,649	37,323
Knox (C) – North	25,860	25,860	30,588	19,649	37,323
Knox (C) – South	30,588	20,163	30,588	19,649	30,588
Casey (C) – Berwick	28,051	23,140	28,051	20,163	30,588
Casey (C) - Cranbourne	23,561	23,561	23,561	20,163	28,051
Casey (C) – Hallam	23,140	20,163	28,051	19,649	30,588
Casey (C) – South	25,339	25,339	25,339	22,329	25,339
Metropolitan average*	**27,309**	**23,566**	**30,588**	**19,649**	**38,254**

Source: ABS 2001 Census *Note: * Median used.*

The range of average incomes in the western economy can be characterised as very eclectic. The suburban mix in the inner core has pockets of affluence and high skilled workers, and neighbouring regions with poor incomes and social outcomes. To capture this effect the above table illustrates what the minimum and maximum average incomes are for neighbouring regions within a 10km and 20km radius with respect to each SLA.

For example the City of Maribyrnong which has an average income of $23,119 is less than 10km from a region with an average income of $19,235 which incidentally is Brimbank (C) – Sunshine and is the lowest in metropolitan Melbourne. Likewise it is less than 10km away from Melbourne (C) – Southbank-Docklands which has an average personal income of $44,520 and is the highest in the state. The significance of this outcome for a place such as Maribyrnong is that provided the appropriate infrastructure, amenity, public transport and overall access and attractiveness of the region is improved they are in a good position to capture some of the incomes of their more wealthier neighbours. Certainly, the less wealthy regions of Hobson's Bay and Moonee Valley would also fit into this category. However, the opportunities discussed above are not as readily available for all other areas. For instance, the range of incomes in Brimbank (C) – Sunshine and Brimbank (C) – Keilor don't lend themselves to huge improvements in their own incomes via this mechanism, particularly in the short term. Even in large parts of the fairly successful Monash region average incomes range are not high. The key to prosperity for the other areas in the western economy will depend on different sets of factors.

"Maribyrnong experiences the greatest variation of average income around its border."

The immigrant background is another feature of the west in general. As shown in the following table the western region has 38.8 per cent of the population foreign-born. This is approximately four percentage points higher than the Melbourne average of 34.8 per cent. However, there is a high degree of variation in the sub regions of the western economy. For instance, in Sunshine 53.7 per cent of residents are foreign born but in Wyndham – South this figure is a much lower 21.0 per cent.

Table 4.7 Foreign born, % of population

SLA	
Brimbank (C) - Sunshine	53.7
Maribyrnong (C)	48.8
Brimbank (C) - Keilor	45.4
Hobsons Bay (C) - Altona	40.3
Western Region	**38.8**
Moonee Valley (C) - West	37.4
Melbourne Average	**34.8**
Melton (S) - East	33.8
Moonee Valley (C) - Essendon	32.5
Wyndham (C) - North	29.8
Wyndham (C) - South	28.6
Hobsons Bay (C) - Williamstown	28.1
Australian Average	**28.1**
Melton (S) - Bal	23.2
Wyndham (C) - West	21.0

Source: ABS 2001 Census

Investigating the qualification levels of residents is another way of demonstrating the diversity of the region. With a similar pattern to income difference the statistical local areas in

Essendon have almost three times the levels of university qualifications than those in Melton – Bal.

The fast growing areas of Melton and parts of Wyndham have a clear focus on vocational training qualifications.

Table 4.8 Qualifications (per cent of population aged 15 and over)

	Uni Degree	Diploma	Vocational	No quals stated
Melton (S) – Bal	14.1	10.8	46.9	28.3
Wyndham (C) – West	18.2	12.8	45.0	24.0
Brimbank (C) - Sunshine	18.4	10.1	34.0	37.6
Wyndham (C) – North	19.4	12.3	39.7	28.5
Hobsons Bay (C) - Altona	20.5	11.0	38.1	30.4
Brimbank (C) – Keilor	22.4	12.4	36.6	28.5
Melton (S) – East	24.6	13.2	39.6	22.7
Moonee Valley (C) - West	26.5	12.7	36.2	24.6
Wyndham (C) – South	29.9	13.9	35.2	20.9
Maribyrnong (C)	31.8	11.4	23.5	33.2
Hobsons Bay (C) - Williamstown	37.9	12.7	27.2	22.2
Moonee Valley (C) - Essendon	41.3	12.9	22.0	23.8
Victorian Average	**30.6**	**13.2**	**31.4**	**24.8**

Source: ABS 2001 Census

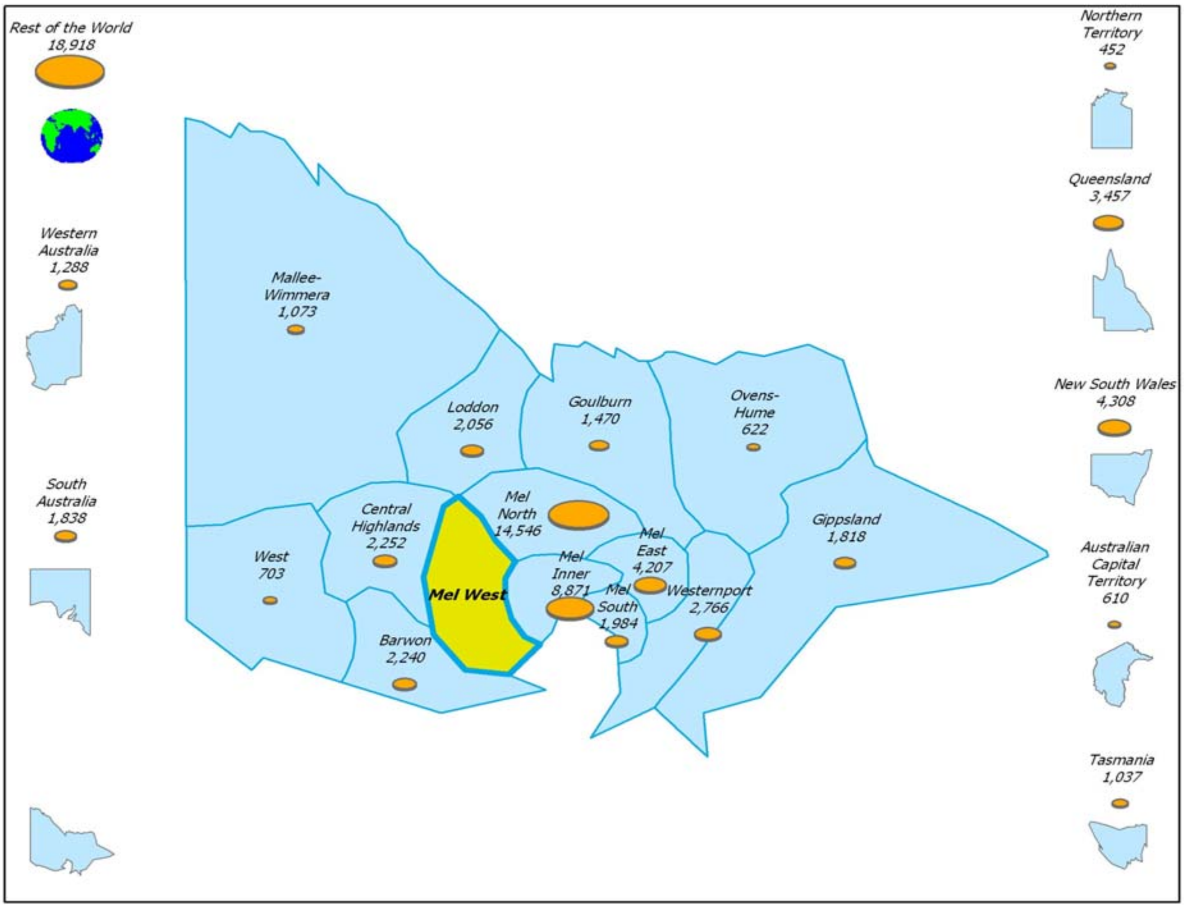
4.2 Migration

One of the key concerns in Australia and around the world is that of our ageing population. Related to this source of demographic change are interregional and international migration patterns. In this section these concepts are discussed in relation to their implications on the western economy and in what sense they may become a source of comparative advantage.

4.2.1 Interregional migration

The figure below illustrates where the current resident population came from since 1996. In the map below the dark highlighted region is Melbourne's West. All the other remaining segments are the other State of the Regions (SOR) regions in the state. The number in each region represents the number of people who since 1996 have left that region to live in Melbourne West. On each side of the map the other states that make up Australia are presented as well as the number that migrated from there since 1996. The symbol on the left hand corner represents the rest of the world or the number of people that have immigrated to Melbourne West from an overseas origin.

The figure illustrates that the current population have come from a wide spread of locations. Not surprising most new residents have migrated from the neighbouring locations of Melbourne North (14,546 people) and Melbourne Inner (8,871). There has been moderate migration from interstate such as New South Wales (4,308) and Queensland (3,457) although as a percentage of their 1996 population a higher proportion have moved from Northern Territory, Tasmania, ACT and then South Australia in that order. Already adding to a very multicultural society is the 18, 918 persons who have immigrated from overseas.



Where the current population were in 1996

With reference to the region as the current place of residence, the table below illustrates where the current population was located in 1996 as a proportion of the current resident population. The data is obtained from 2001 Census by usual residence.

The table is disaggregated into three different age cohorts. The categories include those less than 25 years, 25 to 54 years and those 55 and older. The total category refers to all age groups.

The 'location in 1996' has been split into six groups. The following is a brief description of each.

- **Not yet born –** includes the proportion of the population who are less than 5 years of age.

- **Same address** – the proportion of the population who lived in the same address in 1996.

- **Same LGA or 'local move'** – the proportion of the population that have either not moved outside of the municipality or have moved locally. For the metropolitan region a local move is considered to be 10km or less.

- **Other Australia** – the proportion of the population who in 1996 either did not live in the same address, did not move within the same LGA nor moved locally but is known to have come from another Australian address.

- **Overseas** – the proportion of the population who were living overseas in 1996.

- **Not stated** – includes those people who did not write down where they lived in 1996.

All proportions are calculated as the total number of persons in the age group/location divided by the total number of persons in the age group and then multiplied by 100.

In 2001, 76 per cent of the 55+ group lived at the same address in the western economy as they did in 1996. The most mobile group and the group most likely to have been overseas were the 25-54 years age group. In total, 53.8 per cent of all residents remained at the same address.

Table 4.9	Location in 1996, of 2001 Census usual residence, proportion (per cent)					
Age in 2001	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
Western Region						
0 to 24 years	19.6	44.6	15.0	13.2	3.6	4.0
25 to 54 years		51.7	18.9	20.1	4.3	5.0
55 + years		76.0	8.6	7.7	1.2	6.4
Total	**6.9**	**53.8**	**15.6**	**15.4**	**3.4**	**4.9**
Metro Average						
0 to 24 years	18.9	42.6	14.9	14.8	5.0	3.8
25 to 54 years	0	48.6	20.1	21.2	5.4	4.7
55 + years	0	74.3	9.7	8.9	1.3	5.8
Total	6.4	52.1	16.1	16.4	4.4	4.6

Source: ABS 2001 Census

Individual local government area versions of the table above are provided in Chapter 10.

Sources of net population change since 1996

With reference to the western region as the current place of residence, the table illustrates the sources of net population change since 1996. Migration data is obtained from 2001 Census by usual residence and is expressed as a proportion of 2001 estimated resident population (ERP) data. The table utilises the same age cohorts as the previous table.

The source of net population change is split into four groups which when summed equals an overall growth rate. All four groups are expressed as an annualised percentage of 2001 ERP population and include:

- **New population under 5 years** – This includes all those persons in the population under the age of 5.
- **Net change from internal migration** – This includes the net change in persons moving into the region from another Australian address against those leaving the regions to another Australian address. This does not include those in the population under 5 years.
- **Net change from death and overseas migration** – This is derived by taking the total net change in each age group (growth) and subtracting the net change from the population under 5, the net change from internal migration and net change from age progression. What remains is the net change resulting from overseas migration and death or from changes in levels of address not stated.
- **Age progression** – This includes the net change in persons within an age bracket resulting from persons moving from one age bracket to the next. For example, in the 0 to 24 years age bracket there will be a net loss in the population as a result of people who were age between 20 and 24 in 1996 moving to the 25 to 54 year bracket by 2001.

The overall growth rate takes the net change in the population in each age group and expresses it a percentage of the 2001 ERP population for that age group.

Table 4.10	Percentage of 2001, estimated resident population (ERP)				
Age in 2001	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth
0 to 24 years	3.98	0.23	0.65	-4.35	0.51
25 to 54 years		0.28	0.50	1.27	2.05
55 + years		-0.25	-2.14	4.97	2.59
Total	**1.39**	**0.16**	**0.06**		**1.61**
Number per year	7,886	919	341		9,146
Net Fertility Rate		**-0.37**	**Rank (out of 64)**		**50**
Net Ageing Rate		**0.95**	**Rank (out of 64)**		**24**

Source: ABS 2001 Census and Estimated Resident Population

The growth in ageing in a relative sense is quite low which can be seen in the net aging rate of 0.95. This rate is equal to the 55+ cohort less the growth in the other two age groups. This means that comparatively the region is getting older in terms of the age cohort represented. This ranks the region in the better half of the regions in terms of ageing, ranked 24 out of 64 for this measure. Only Inner Melbourne and South Melbourne rank more highly in Victoria.

4.3 Business

For a modern economy to deliver strong employment there needs to be a mix of small and large business. At its best the small business sector can deliver a highly adaptable range of services with flexible types of employment for employees and operators alike. The medium size business sector can be the innovators with a fast growing strong employment base, capable of providing secure employment and moderate levels of training. The large business sector is crucial for the employment of large numbers of people, important in providing training and career development and has the capacity to underpin a strong export oriented economy.

Table 4.11 Number of businesses by size

	Small business, less than 10 persons	Medium business, between 10 and 50 persons	Large businesses, more than 50 persons	Total businesses
Wyndham (C)	2,398	441	79	2,918
Hobsons Bay (C) - Altona	1,457	265	77	1,799
Hobsons Bay (C) - Williamstown	1,102	199	29	1,330
Brimbank (C) - Keilor	2,015	255	31	2,301
Brimbank (C) - Sunshine	2,063	356	76	2,495
Moonee Valley (C) - Essendon	3,198	581	90	3,869
Moonee Valley (C) - West	1,653	262	27	1,942
Maribyrnong (C)	2,477	548	140	3,165
Melton (S) - East	256	21	0	277
Melton (S) - Bal	1,086	144	16	1,246
Western region	17,705	3,072	565	21,342
Victorian	**217,386**	**42,654**	**6,187**	**266,227**

Source: *YourPlace* database.

In the western region large businesses play the very important role of employer, exporter and training provider. Of the 6,187 Victorian businesses employing more than 50 employees, 565 or 9.13% are located in the western region. Of these businesses the numbers are heavily skewed in the regions of Maribyrnong and Essendon.

"In the western region large businesses play the very important role of employer, exporter and training provider."

In some regions such as Melton the business landscape is dominated by small businesses, the vast majority of which would employ less than 5 employees. The region of Melton - East has no large business as compared to 256 small businesses.

The table below is based on the previous table but has been converted into shares of Victoria for firms of that particular size in each of the statistical local areas. These amounts can then be compared to the share of population in the region to provide a context for the levels detailed previously

As can be seen in the table below Maribyrnong has a high level of large business as compared to its population and share of other size businesses.

Table 4.12 Concentration of industry by location (per cent)

	Small business, less than 10 persons	Medium business, between 10 and 50 persons	Large businesses, more than 50 persons	Total Business	Population Share
Wyndham (C)	1.10	1.03	1.28	1.10	1.81
Hobson's Bay (C) - Altona	0.67	0.62	1.24	0.68	1.13
Hobson's Bay (C) - Williamstown	0.51	0.47	0.47	0.50	0.60
Brimbank (C) - Keilor	0.93	0.60	0.50	0.86	1.86
Brimbank (C) - Sunshine	0.95	0.83	1.23	0.94	1.64
Moonee Valley (C) - Essendon	1.47	1.36	1.45	1.45	1.41
Moonee Valley (C) - West	0.76	0.61	0.44	0.73	0.89
Maribyrnong (C)	1.14	1.28	2.26	1.19	1.27
Melton (S) - East	0.12	0.05	0.00	0.10	0.33
Melton (S) - Bal	0.50	0.34	0.26	0.47	1.81
Western region	8.14	7.20	9.13	8.02	12.77

Source: *YourPlace* database.

Table 4.13 Concentration of business by industry sector – western region

	Small business, less than 10 persons	Medium business, between 10 and 50 persons	Large businesses, more than 50 persons	Total businesses
Accommodation, cafes and restaurants	372	177	21	570
Agriculture, forestry and fishing	283	111	18	412
Communication services	174	22	2	198
Construction	2,558	429	10	2,997
Cultural and recreational services	493	110	13	616
Education	289	180	46	515
Electricity, gas and water supply	6	2	1	9
Finance and insurance	197	50	3	250
Government administration and defence	24	6	13	43
Health and community services	1,182	162	30	1,374
Manufacturing	1,232	415	171	1,818
Mining	8	-	-	8
Personal and other services	982	100	10	1,092
Property and business services	3,682	459	45	4,186
Food retailing	751	172	81	1,004
Personal and household good retailing	1,233	171	23	1,427
Motor vehicle retailing and services	824	133	12	969
Transport and storage	2,226	166	32	2,424
Wholesale trade	1,189	207	34	1,430
Western region	17,705	3,072	565	21,342

Source: *YourPlace* database.

The break down of business by industry type is detailed in the table above. There is 171 large scale manufacturing firms and a further 415 medium size businesses in that sector.

Table 4.14 Concentration of business by industry sector – Victoria

	Small business, less than 10 persons	Medium business, between 10 and 50 persons	Large businesses, more than 50 persons	Total businesses
Accommodation, cafes and restaurants	6,311	2,967	294	9,572
Agriculture, forestry and fishing	19,377	7,681	722	27,780
Communication services	1,530	258	73	1,861
Construction	25,803	4,398	135	30,336
Cultural and recreational services	6,184	1,385	150	7,719
Education	3,697	1,783	342	5,822
Electricity, gas and water supply	115	35	14	164
Finance and insurance	3,351	614	127	4,092
Government administration and defence	537	246	176	959
Health and community services	15,779	2,012	422	18,213
Manufacturing	11,510	4,586	1,272	17,368
Mining	203	17	2	222
Personal and other services	12,337	1,300	112	13,749
Property and business services	49,590	7,144	744	57,478
Food retailing	7,604	1,696	818	10,118
Personal and household good retailing	14,719	2,060	202	16,981
Motor vehicle retailing and services	7,795	1,362	121	9,278
Transport and storage	16,417	1,076	170	17,663
Wholesale trade	14,527	2,034	291	16,852
Victorian total	**217,386**	**42,654**	**6,187**	**266,227**

Source: *YourPlace* database.

The table below highlights the trends in employment and economic structure that are described within this report. The western economy has a high number of manufacturing firms including a range of small, medium and large business, which accounts for approximately 11 per cent of Victorian manufacturing firms. This compares to the western region contributing less than 8 per cent of all firms across all industries.

"The transport sector only caters for 6.3 per cent of the total workforce of the region."

Transport and storage is clearly shown to have a large role in the western economy with approximately 13.7 per cent of all firms and 18.8 per cent of large firms operating in the west. This would be expected to strengthen in the medium term, because of relative access advantages, cost of land and strength of port related trade.

Table 4.15 Concentration of business by industry sector – Western region expressed as a percentage of Victoria

	Small business, less than 10 persons	Medium business, between 10 and 50 persons	Large businesses, more than 50 persons	Total businesses
Accommodation, cafes and restaurants	5.9	6.0	7.1	6.0
Agriculture, forestry and fishing	1.5	1.4	2.5	1.5
Communication services	11.4	8.5	2.7	10.6
Construction	9.9	9.8	7.4	9.9
Cultural and recreational services	8.0	7.9	8.7	8.0
Education	7.8	10.1	13.5	8.8
Electricity, gas and water supply	5.2	5.7	7.1	5.5
Finance and insurance	5.9	8.1	2.4	6.1
Government administration and defence	4.5	2.4	7.4	4.5
Health and community services	7.5	8.1	7.1	7.5
Manufacturing	10.7	9.0	13.4	10.5
Mining	3.9	0.0	0.0	3.6
Personal and other services	8.0	7.7	8.9	7.9
Property and business services	7.4	6.4	6.0	7.3
Food retailing	9.9	10.1	9.9	9.9
Personal and household good retailing	8.4	8.3	11.4	8.4
Motor vehicle retailing and services	10.6	9.8	9.9	10.4
Transport and storage	13.6	15.4	18.8	13.7
Wholesale trade	8.2	10.2	11.7	8.5
Total	**8.1**	**7.2**	**9.1**	**8.0**

Source: *YourPlace* database.

The table below highlights something else that requires careful consideration. That is, with strong population growth predicted for the western economy it places much more pressure on business to provide mass employment. This is even more necessary given the western economy already has one of the smallest rates of employment generation in the Melbourne metropolitan region.

Analysing the relationship between industry scale and importance to local employment, consider the transport sector. The industry provides 18.8 per cent of all large businesses (over 50 persons) and 13.7 per cent of all the businesses in the state. This should generate a huge amount of employment for the residents of the region. In fact total employment amounts to 11,996 jobs in the region. Of these jobs approximately 62.7 per cent are taken by local workers and a total of 15,186 residents from western region work in the industry somewhere else in the state.

Table 4.16 Comparison of industry scale and importance to local employment, 2001

	Total employment in business within region	Regional residents employed in regional businesses	Regional residents employed anywhere in Victoria	% of workforce, B divide by total resident workforce	% of business in State
	A	**B**	**C**	**D**	
Agriculture	1,187	917	1,338	0.4	1.5
Mining	141	96	303	0.0	10.5
Manufacturing	37,267	25,504	45,051	10.8	7.5
Electricity, Gas and Water	700	388	994	0.2	5.5
Construction	13,749	9,094	15,424	3.9	9.9
Wholesale Trade	11,252	6,839	13,529	2.9	8.5
Retail Trade	30,026	23,061	34,522	9.8	7.6
Acc, Cafes and Restaurants	5,565	4,191	9,939	1.8	6.0
Transport and Storage	11,996	7,520	15,186	3.2	13.7
Communication Services	1,912	1,240	5,796	0.5	10.6
Finance and Insurance	2,393	1,778	10,129	0.8	6.1
Property and Business Services	13,965	9,293	26,910	3.9	10.4
Government Admin and Defence	5,921	3,742	7,901	1.6	9.9
Education	14,098	9,260	14,177	3.9	8.8
Health and Community Services	14,821	10,155	18,563	4.3	4.5
Cultural and Recreational Services	4,943	3,123	6,436	1.3	8.0
Personal and Other Services	5,772	4,143	7,574	1.8	7.9
Total resident workforce 235,415					

Source: ABS Journey to work data

Based on these figures the industry only caters for 3.2 per cent of the total resident workforce of 235,415 persons. This highlights that whilst a large range of opportunities exist in the transport and storage sector it is not likely this industry alone will produce the large scale employment required to make a significant reduction in the structural unemployment in the western region.

Running down the list of industries in the above table a similar scenario occurs in the communications services sector.

In the property and business services industry, one which does not have a historically strong connection with the West, 10.4 per cent of all businesses in the state are located in the area. This industry supplies 3.9 per cent of all jobs in the total resident workforce, a figure higher than transport and storage. The attraction of these jobs is that they normally require high skills, are more likely to be fulltime, secure and have high levels of remuneration. However, the point remains that while it would be ideal for all the residents in the western region to have these jobs it is often not practical. Socially it is far better to have all residents with access to some type of full time or at least secure employment than a situation where maybe only half have well remunerated employment.

Using the table as a guide the industries that have the best capacity for mass levels of employment are manufacturing which currently supplies 10.8 per cent of the resident workforce but only 7.5 per cent of all businesses in the state. The retail industry supplies 9.6 per cent of the total resident workforce and 7.6 per cent of all businesses in the state. Finally

Health and community services industry provides 4.3 per cent of the total resident workforce and in the western economy the industry is responsible for 4.5 per cent of all businesses in the state.

The sectors of the economy that have appreciably lower levels of business formation are in government administration and finance. For larger firms the sectors under-represented are finance and insurance, property and business services and communication services.

Areas of the economy that would be expected to increase in the future are small and medium size businesses in the personal and other services sector. This may include such things as caretakers, personal and household goods hiring, funeral directors, gardening services, hairdressing and beauty salons, weight reducing services, fortune telling, photographic studios, laundries and dry cleaning. Formation of business of this nature together with general retailing will be important in trapping resident income in the future.

4.4 Infrastructure: Threats and opportunities

In this section a number of infrastructure issues are discussed in terms of their impact on the Western economy.

In Section 3.4 we noted that infrastructure can impact on a local economy in the following ways:

- reduce the cost of operating in a domestic market;
- unlock new markets;
- catalyse innovation;
- expand the effective labour market;
- expand opportunities for individuals;
- enhance broad social outcomes; and
- increase the attractiveness of a region through amenity and lifestyle characteristics.

Infrastructure can have multiple impacts and at times one impact may be positive at the expense of another outcome.

4.4.1 University

One piece of infrastructure that addresses at least five of the points raised is a university. The reason why universities are now so important is because they can simultaneously catalyse innovation, increase social outcomes, attract workforces, reduce costs of operation by increasing skills of workers, and expand opportunities for households in the area. The western region has the Victoria University (VU) that can achieve all of the above.

VU tends to be a far more inclusive than elitist university compared to others in Melbourne. This may be partly due to its infancy as an institution, the desire to grow its market, or a long term social response. International evidence suggests that the important element that universities can give is research, and links between innovation and implementation. Evidence Australia-wide suggests that on the basis of patent development, which is considered a great proxy for innovation, our universities in general are not providing an exceptionally strong innovation catalytic impetus. VU is a comprehensive University that is involved in education, training, research, consultancy and community engagement. The University's Higher Education Division is funded by the Commonwealth Government to deliver educational programs and research training. However, funding constraints mean that a delicate balance needs to be struck between how it disperses its resources between educational programs for its students and the type of research based activity which will drive the sort of innovations that will enhance the Western economy.

The recent round of seemingly endless developments in university funding appears to place VU in a reasonably strong position if recent statements by Victoria University's Vice Chancellor, Professor Liz Harman are an indication. VU had sought additional funding which related to the special circumstances of the West. The Vic Chancellor said,

> "Although our argument for a special loading to improve our base funding to better serve our communities, was not adopted, we nevertheless welcome the outcomes of the Higher Education Reform Package."
>
> "The Minister has personally advised me today that Victoria University can expect new growth places and assistance with a significant contribution to capital works infrastructure over 2005-2006."
>
> Professor Harman said: "In addition we are confident we may end up with more via a significant share of the $50 million additional monies for students in enabling courses, as this University specialises in programs which help students to adapt to the university environment. *VU Press Release 05 December 2003*"

Although it is difficult to compare the performance of universities in different markets, especially between institutions as poorly resourced as Australian universities compared with US institutions it is interesting to highlight the difference between VU and Georgia Tech. One interesting role which Georgia Tech has developed is a leadership role in the transformation of local industry, and manufacturing in particular, to seek higher levels of technological adoption. Nevertheless, it must be acknowledged that Georgia Tech was established in 1885 (more than 100 years before VU) and has a revenue base more than four times that of VU.

Instead of seeking to rectify poor levels of university access through higher funding, or through programs which assist entry into degree course, VU could further its endeavours to deliver back to the community a range of regional engagement activities that includes training and educational programs, research and consultancy, which foster continual growth in employment for all in the West. To disproportionately concentrate on the teaching of individuals would short-change the broader community, and in the name of equity could end up delivering an equality of outcomes within a region which help perpetuate the inertia of economies with poor social outcomes.

4.4.2 Airports

As noted previously, infrastructure can have multiple impacts. One piece of infrastructure with a significant range of positive benefits is the Tullamarine airport. Despite it not being actually physically located in the western region its close proximity means the west still derives many of the benefits of its neighbouring northern region. Airports catalyse innovation, expand markets, and ready access to them reduces costs for many industries. Additionally, unlike some other infrastructure, an airport is also a very large employer of the domestic workforce. Of all of the growth opportunities, the airport is one in which the western region along with the northern region can truly develop significant competitive advantage as Melbourne has only one international airport.

The current Federal government position with respect to the second Sydney airport at Badgery's Creek means that developments which would have otherwise been built in Western Sydney may be able to be captured by Melbourne. Interestingly the Labor

Government proposal to find an alternative place for the second airport has the capacity to reduce this advantage.

4.4.3 Transport infrastructure

The Ring Road is a great piece of infrastructure that has and will continue to unlock the enormous latent demand through connections to the west. Similar opportunities exist in linking to the East and South-East.

In terms of opportunity creating infrastructure, education will continue to play an important role at the community level. There is enormous potential for new school developments in the growth areas to be designed with a broader vision of the role of schools in developing communities and social capital.

Apart from the airport and universities, the West has other advantages that could be exploited. New upgrades on Geelong Rd and the Calder Hwy provide increased transport opportunities, currently and in the future, for the western economy. The resurgence of rail, if successful, will provide opportunities in the west that others will find harder to capitalize on. In addition the recent policy changes with regard to the planning strategy Melbourne 2030 proposes a higher level of population growth in regional Victoria, which is likely to increase the level of trade required between the regions and the Melbourne metropolitan region.

Whilst interstate and inter-regional transport is well served, local domestic linkages require more attention. This will become more apparent along the St Albans line and the Melton line as these regions on the urban fringe become more populated. One recent project that has been completed is the Sydenham Rail Electrification project to electrify the double track rail lines to Sydenham. This included rebuilding the station at Sydenham as well as construction of a new station between St Albans and Sydenham. Such infrastructure produces better access and improves the efficiency for those residents and workers who travel between regions.

In terms of the day to day lives of people living in the West, the issue of congestion and the plight of the Western Ring Rd and the Westgate Bridge will assume high importance. Both roads are reaching capacity; this is problematic as the Ring Rd currently presents business in the region with a genuine comparative advantage, one which will be diminished with the construction of the Mitcham Frankston tollway.

Recommendation: The Western region should lobby the State and Federal government where appropriate to continue to increase the road transport infrastructure in line with current rates of traffic growth. This would necessarily include the widening of the Western Ring Rd and a capacity solution for the Westgate Bridge.

4.4.4 Transit cities

Transit Cities is a joint initiative between the Minister for Planning and the Minister for Transport to encourage new development - particularly housing - close to railway stations. The delivery of transit cities is based on a vision which reduces the impact of the car by developing high density living options which produce vibrant living and working communities.

As their advertising declares;

> "Imagine having a state-of-the-art bus stop, train station and taxi rank a few minutes walk from your front door. Imagine having easy access to a range of shops, services and job opportunities. Imagine living in a safe, vibrant, community that sets a new standard in urban design. By encouraging

> development around public transport, Transit Cities will be able to deliver these outcomes to residents. It's another way the State Government is delivering better social, economic and environmental outcomes to the whole community."

The Transit city proposal in Footscray is an exciting opportunity clearly embraced by local government. Looking at the City of Maribyrnong's vision for Footscray we can see some of the enthusiasm.

> "Maribyrnong Council is working towards creating a city that, by 2020, will be environmentally, socially and economically sustainable. Maribyrnong will be a vibrant place of retail diversity, higher density, mixed-use developments, and quality and affordable cafes and restaurants. It will have an appropriate balance of business activity and a road system that is not overburdened with trucks and cars.
>
> The City will have attractive, walkable neighbourhoods in which jobs are available locally. Maribyrnong and Footscray will be a learning community that embrace new forms of employment and attracts students to study and live in Footscray. It will be an ideal place for a diverse workforce to live, work and play. Maribyrnong will be the hub for economic development in the western region."

The clear linkage between infrastructure development and economic strength is presented in both the transit city initiative and the vision for Footscray. Drawing out that connection is vital in the future, as the realm of infrastructure moves towards virtual provision of technology and innovation. If transit cities can be delivered in the Western economy successfully this should encourage and further strengthen some of the weaker older style activity centres such as St Albans and Sunshine, as well as promoting a far more productive use of new land in the West in the future.

Other Transit city opportunities exist in Sydenham and Werribee.

4.4.5 Werribee Technology Precinct

An example of the way in which the value generated from development, particularly in broad acre industrial land, can be accelerated beyond current returns is the future investment and viability in the Werribee Technology Precinct (WTP). In a report commissioned by Department of Innovation, Industry and Regional Development and completed by NIEIR we noted the enormous advantages which the development of such a precinct could deliver the West. The following commentary utilises key outcomes from this report.

> The Werribee Technology Precinct is a thousand hectare parcel of land adjacent to the Werribee town centre in the City of Wyndham. It has a mixture of uses relating mainly to research and technical services of universities and the state government mainly focusing on the veterinary, agriculture and land resources sectors.
>
> A number of government departments have had a range of responsibilities in relation to the WTP but none have taken responsibility for the coordination of its use as a technology precinct.
>
> Without the passionate activities of a number of individuals who are employed by constituents of the Precinct and the support of the City of Wyndham, the Precinct would simply comprise a number of independent employers using the land for their activities. These individuals have ensured that their own organisations have acted effectively and that there has been some interaction between the constituents of the area.

However, these actions alone will not lead to the area becoming a viable technology precinct in the terms that warrant investment in the site and, in a straight line projection, it is highly likely that the area would gradually be sold off to a series of largely unrelated activities to the point where it would be an uncoordinated business park at best.

The challenge is to embrace two clear directions that are inextricably intertwined to create a successful technology precinct that adds great richness to Victoria, the Western Region of Melbourne and the City of Wyndham. These directions are:

- the development of the Werribee Technology Precinct; and
- the development of the substance and image and reputation of the Western Region of Melbourne.

To create a successful future it is necessary to be *vision driven.* As has been previously mentioned for the WTP to be successful it is also necessary for the Western Region of Melbourne to develop a number of characteristics including a clever work force and an image and reputation that is attractive to potential industry sectors and employees.

Therefore the vision for the WTP needs to accommodate the development of both the technology precinct and the region.

Such an approach immediately requires the successful planning and implementation of the project to being an *all of government* approach, an *across government spheres* approach and the development of *partnerships between government and the private sector.*

In this way the issues, such as educational levels, affecting the viability of the Western Region of Melbourne can be addressed by the relevant government agencies. Cooperation can take place between state, local and commonwealth governments and the private sector can contribute its resources and expertise to the project.

Therefore the vision has been identified as follows:

"To create an environment that supports the sustainable development of a leading new economy precinct that is relevant and contributes to the social, economic and environmental development of the Western Region of Melbourne, Victoria and Australia."

This can be achieved through the development of:

The Physical Capital	primarily on the precinct
The Human Capital	in both the region and the precinct
The Processes	of governance, management, communication, interaction, cooperation, networking, marketing, incubation and so on
Image and Reputation	of both the region and the precinct.

The usual expectation is that, if a demand exists, it will be satisfied by the operations of the relevant market, in this case real estate. However, to date the market has not decentralised business services to suburban locations. A possible reason is that a development market which works incrementally and assumes universal motor transport is not able to grow suburban business service locations to the threshold beyond which additional services are attracted by proximity to the services already in the location. US cities are an obvious exception, where strong push factors have led to the decentralisation of business services.

It is possible, though not guaranteed, that by combining business service development with industry development critical mass can be achieved. The benefits would be:

• additional employment in Wyndham, and reduced commuting; and

• cost reductions and service quality improvements due to greater proximity between service providers and customers.

4.4.6 Driving future infrastructure development

The task of attracting public spending is fraught with difficulty as not only must infrastructure now compete for scarce resources, its rewards are not universally applicable. NIEIR recommends that key stakeholders within the regional economy focus on innovation and market expansion in the places that already have good infrastructure while elsewhere the focus should be on amenity development and labour market access to other areas of Melbourne. Other sections of the report highlight reasons for these being important motivations.

4.5 Developing competitive advantage

Competitive advantage over other regions can be developed in many ways, but fundamentally it must be built on providing the best quality at the best price. The price on offer doesn't need to be the lowest but the product must represent a departure from others either in terms of the way in which a region delivers its economic outcomes or the value created in the process.

In the past the barriers to effective comparisons and the impact of geographical distance allowed regions to operate a vast array of goods and service production within a vacuum of competition. Workplaces faced little completion in terms of product; a worker faced few alternatives in term of employers. This outcome produced suburbs with strong local employment.

As transport costs reduced and real wages increased, the burden of transport was lifted, employers could be confident of sourcing a workforce from anywhere within the metropolitan system. With more competitive uses for land in the inner areas employers could lower costs and expand the scale of production by moving to greenfield sites. Traditional employment moved to the periphery of metropolitan areas.

This trend is changing as the individual and their skills becomes important with the increasing specialization in the workforce and the reduction in the scope of mass workforce requirements together with a growing desire to reduce commuting times.

At the opposite end of the spectrum, the new residential regions on the outskirts of the city are still built on the premise of driving significant distances to access employment. These growth regions have very few employment opportunities, are often devoid of public transport and are not well linked to education and training. These regions will not be able to attract employment in the same way that Maribyrnong and Hobson's Bay did up to fifty years ago.

The competitive advantage of the outer regions such as Wyndham and Melton will be availability of land, scale of infrastructure and transport linkages. In these respects the western region has a definitive advantage over the vast majority of Melbourne. Recent growth in the industrial sector, eg petroleum and chemicals, machinery and equipment, construction, and advances in transport (Ring Road, Citylink and increased capacity of transport stock) is fantastic news for western Melbourne.

What are the barriers to new industries/businesses starting up in the region, and how can they be overcome?

Some of the barriers are the start up costs of running a business. This will depend greatly on the industry that you are attempting to enter. This will also be a function of the rents on offer and in general the West should be able to maintain a clear price advantage in a range of commercial and residential markets.

Infrastructure shortfalls can be another barrier to entry, heavy road congestion, low amenity and accessibility are key components a firm will use to choose one location over another.

The greatest barrier to setting up new business in the West remains the lower skilled workforce from which to draw labour from. Whilst there are programs available to address key skill shortages, when assessing the comparative advantages of one region to another within Melbourne this is an area in which the West struggles to compete.

Developing the skills base of a region requires a long-run commitment to assist firms, individuals and communities to develop these strengths. Increased amenity and improving access can attract higher skilled people and can help retain high skilled residents especially youth. Better co-ordination of policy and education, especially within a commitment to export, will inherently grow the demand for high-skilled positions. Capturing as much of the household wealth in the region when it is spent will help drive this process further.

The danger is that as skills become more valuable and necessary the West could perpetuate the low skilled employment of the past and simply not provide the scale of employment which will be necessary for the growing population.

What incentives are there for new industries/businesses starting up in Melbourne western region, and how can full advantage be taken of them?

The incentives for starting business in the West are proximity, access and price. The way in which full advantage can be taken from these three is through strong planning to ensure the value of investment and its employment generation capacity is maximised

Price is not everything, especially the price of land; in fact estimates as to the importance of land price in the total cost of new business formation can be as low as 10 per cent. If price was the only driver all of the high-value employment in Melbourne would be rushing to the West.

How can we use our established industries to attract support industries/services?

The most important development asset a current firm should have is the supply chain in which it operates. This holds for production businesses, transport business, and white-collar business alike. All have suppliers and clients, all operate within a set of inter or intra firm relationships which sell the idea that proximity to them would be an advantage. The stronger the firm, the more important the relationship, and the more relevant the connections the stronger this urge to co-locate can be.

For many firms, their markets and suppliers are geographically disparate, and a balance must be achieved, for others the cost of proximity to either could reduce the viability of the business itself. It is a complex value determination. Fundamentally however the power that strong local firms provide is that they increase the likelihood of attract other business closer to them to increase the value of, and opportunities in, the supply chain they are part of.

4.6 Returning high grade manufacturing as a political imperative

Manufacturing employs a high proportion of its residents and accounts for an even proportion of full time workers in the western region. The value of output in the western region represents 17.7 per cent of all manufacturing in Melbourne, 13.6 per cent of manufacturing in Victoria and a significant 5.5 per cent of Australia.

"The value of output in the western region is 13.6 per cent of manufacturing in Victoria."

Table 4.17 Manufacturing output, 2001

	Output ($m)	% of workforce
Wyndham (C)	2,404	2.5
Hobson's Bay (C)	5,330	5.7
Brimbank (C)	2,561	2.7
Moonee Valley (C)	185	0.2
Maribyrnong (C)	756	0.8
Melton (S)	1,625	1.7
Western Total	12,861	13.6
Victorian Total	**94,302**	**100.0**

Source: Yourplace database

The past ten years of stagnation of employment in Victoria's manufacturing sector initially had a negative impact on the western metropolitan region. However a recent recovery in employment in the manufacturing sector has meant that manufacturing by the end of the decade is growing in a positive direction. The following table shows the increases and decreases in employment that has been experienced across a range of manufacturing types. There has been considerable development and growth of manufacturing in some areas and more significant decline in others. In general, industry is much stronger and better equipped than ever however the table below demonstrates the level of flux that has occurred in the industry.

It is interesting to note that despite the historical association with manufacturing in the West the 17 per cent of the workforce currently engaged in manufacturing compares to a percentage of 11.3 per cent of all jobs in the U.S. being in manufacturing (2003).

Table 4.18 Manufacturing employment in Western region, 1991-2001

	1991	2001	Change
Food	3,789	4,243	454
Textile, Clothing and Footwear	5,119	4,940	-179
Wood	933	1,397	464
Printing and Publishing	787	1,655	868
Petroleum and Chemicals	7,833	7,479	-354
Non Ferrous Metals	1,666	1,557	-108
Ferrous Metals	5,435	4,832	-602
Machinery	8,604	8,815	212
Building	1,915	2,493	577
Total Manufacturing	**36,081**	**37,412**	**1,331**

Source: ABS JTW

In 1991 there were approximately 36,081 jobs in manufacturing in the western economy. This has risen to 37,412 over the next ten years. Over 600 jobs have been lost in the Ferrous industry and over 350 jobs lost in the Petroleum & Chemicals industry. Just over 180 jobs have also been lost in the Textiles, Clothing and Footwear (TCF) industry and over 100 jobs in non ferrous metals.

Significant growth has been experienced in the Printing and Publishing sector (relating to the movement of a newspaper publishing plant) along with the building sector although much of the latter is likely to be related to cyclical issues. It is noteworthy that in 1991 employment was measured in a period of historically high levels of unemployment as we lurched into recession. Other gains have been made in food, wood and the machinery sector.

Planning to manage these changes occurring across the region is critical because of the rapid way in which our city is evolving. With the new Melbourne 2030 strategy the focus is on how parts of our city can attract people and increase densities.

The west needs to make sure that any reductions in manufacturing in current older locations leads to the creation of new opportunities in the remaining vacant land. Even better the growth of a higher technology production base would be co-located with training and research institutions which were in areas of high amenity for work and leisure.

Such a vision would require the development of a core centre for advanced production in the West in a new activity type centre. The advantage of such a recommendation would be to increase the employment density which is currently being derived from the vacant industrial land take-up in Melbourne's West. The recommendation is that there be an objective valuation technique to be put in place to secure an appropriate degree of employment generating investment in the land currently intended for future industrial uses.

Recommendation: That future vacant land available for industrial purposes is developed within a framework which provides for minimum levels of investment, employment generation and economic development potential within the region as a whole.

The opportunities however will not be around for long, as the forces for residential consolidation will be ever increasing, especially with the UGB restricting supply in the medium term. A second critical force for managing the change relates to the extremely strong growth of the competing Asian economies. Unless we have developed our competitive advantages in the areas of elaborately transformed manufacturing in the next five to ten years the importance of our historical capacity will seem irrelevant. The connections between suppliers and customers, the technical and design skills of our workforces and the incredible capital applied to manufacturing will have dissipated.

Consequently, the chances of being competitive with these growing Asian economies will be reduced and hence the capacity of Melbourne to provide large-scale local employment will be diminished.

4.7 Employment growth: How does the west compare?

As shown in the previous section the western metropolitan economy is subjected to external forces in the same way as all regions. Trends in Victoria, Australia and international industries impact on the viability and employment capacity of all areas.

The following two tables compare the local employment performance[7] of the region and state in terms of employment.

Table 4.19 Victorian employment by industry, 1991-2001

Industry	1991	2001	Change, 1991 - 2001	Gr p.a., 1991 - 2001
Agriculture	77,502	73,996	-3,506	-0.46%
Mining	6,097	4,318	-1,779	-3.39%
Manufacturing	322,882	323,110	228	0.01%
Utilities	28,468	13,087	-15,381	-7.48%
Construction	110,055	139,491	29,435	2.40%
Wholesale trade	114,050	117,364	3,314	0.29%
Retail Trade	248,461	309,458	60,996	2.22%
Accommodation, cafes and restaurants	64,647	93,353	28,706	3.74%
Transport and storage	78,812	79,992	1,180	0.15%
Communications	39,009	42,435	3,425	0.85%
Finance and insurance	89,856	83,298	-6,558	-0.75%
Real Estate, Property and Leasing	23,072	25,868	2,795	1.15%
Technical Business Services	120,660	215,568	94,908	5.97%
Government and Defence	101,509	62,151	-39,358	-4.79%
Education	133,050	150,653	17,603	1.25%
Health and Community Services	165,190	206,065	40,875	2.24%
Recreational	32,556	53,928	21,372	5.18%
Personal Services	58,042	70,625	12,583	1.98%
Total Employment	**1,813,919**	**2,064,759**	**250,840**	**1.30%**

Source: ABS JTW

[7] Persons employed in industries within the region, regardless of their residential address.

Table 4.20 Western economy employment by industry, 1991-2001

Industry	1991	2001	Change, 1991 - 2001	Gr p.a., 1991 - 2001
Agriculture	1,032	1,187	156	1.42%
Mining	224	141	-83	-4.55%
Manufacturing	36,081	37,412	1,331	0.36%
Utilities	1,831	700	-1,131	-9.16%
Construction	8,854	13,749	4,895	4.50%
Wholesale trade	9,535	11,252	1,718	1.67%
Retail Trade	20,938	30,026	9,088	3.67%
Accommodation, cafes and restaurants	3,432	5,565	2,133	4.95%
Transport and storage	9,629	11,996	2,368	2.22%
Communications	2,111	1,912	-199	-0.99%
Finance and insurance	3,524	2,393	-1,131	-3.80%
Real Estate, Property and Leasing	1,827	2,085	259	1.33%
Technical Business Services	5,910	11,880	5,970	7.23%
Government and Defence	7,513	5,921	-1,592	-2.35%
Education	11,431	14,098	2,667	2.12%
Health and Community Services	10,098	14,821	4,723	3.91%
Recreational	2,006	4,943	2,937	9.44%
Personal Services	3,634	5,765	2,131	4.72%
Total Employment	**139,609**	**175,846**	**36,238**	**2.33%**

Source: ABS JTW

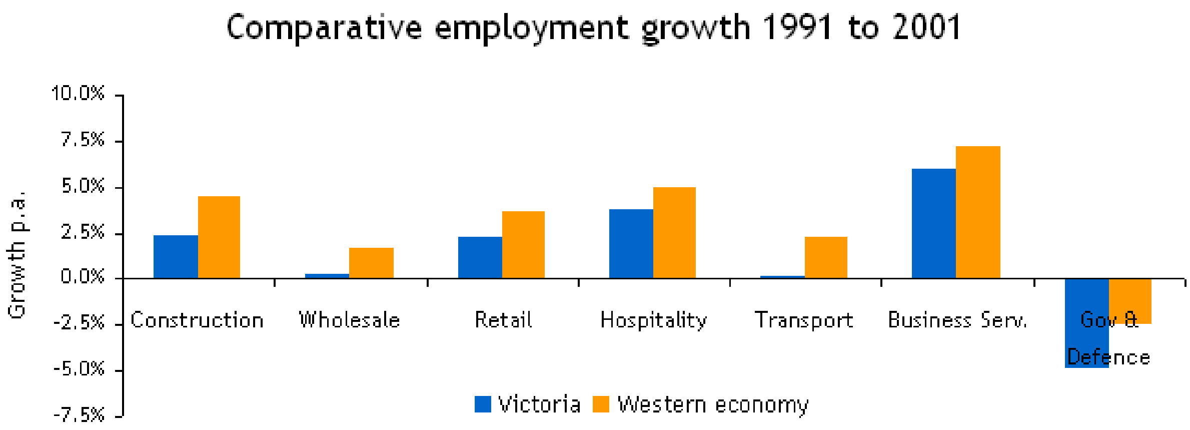
Through comparison of the two tables above, the following key issues are noted:

- employment in the western metropolitan region is growing faster than the Victorian average as well as Melbourne metropolitan average of 1.6 per cent over the period;

- the recreational industry grew faster than the state average, with an additional 2,937 jobs created. Although the original level was low on a comparative basis this trend adequately illustrates the strength of the region in building recreational services given the appropriate environment and planning considerations;

- education services grew at nearly twice the rate of Victoria. However, considering the region had a low base level of provision in 1991, and some areas have experienced strong youth population growth, further focus on this sector should continue or intensify as a priority of public policy; and

- the absence of government administration was exacerbated in the period 1991 to 2001. Despite having a low base level of employment in this sector in 1991 the region suffered even greater declines in employment but not to the same level of that experienced in the state. This main cause of the decline was a contraction in defence positions.



Source: Yourplace database

4.7.1 Is business making an adequate contribution to regional growth?

Gross regional product has increased from $8,135 million in 1991 to $11,615 million in 2001 in the western economy, at a real per annum growth rate of 3.6 per cent. This is about the same as the Melbourne metropolitan average of 3.7 per cent so the region is not losing much ground compared to the other regions in terms of growth. It is interesting to note that it is exceeding the performance of Melbourne North and Melbourne East although both of these regions are coming from a higher base. On a national scale, real growth during the period has been running at 3.2 per cent. Hence from this perspective the region is performing at a reasonable level.

The main source of real growth in the western economy in absolute terms has come from manufacturing, construction, wholesale trade, retail trade, transport and storage and property and business services although there have been also significant individual growth gains in the hospitality industry, health and community services, cultural and recreational and personal and other services.

Table 4.21 Gross regional product (GRP) by region, $ million 2001

	GRP 1991	GRP 2001	Growth p.a.
Western economy	8,135	11,615	3.6%
Melbourne East	15,640	21,963	3.5%
Melbourne Inner	29,192	43,432	4.1%
Melbourne North	10,211	13,693	3.0%
Melbourne South	6,131	8,938	3.8%
Melbourne Westernport	9,620	13,612	3.5%
Melbourne Metro	78,929	113,253	3.7%
Australia	**426,661**	**586,745**	**3.2%**

Source: Yourplace database

In comparing the relative growth of each region it is often more accurate to look at the per capita growth rates over time. A region may grow its GRP in absolute terms however if the population is growing at a faster rate, it is often a signal that business is not growing at a rate fast enough to generate wages and profits similar to previous levels. This can be due to a lack of jobs, infrastructure, low intensity land use or inefficient work practices. The table below provides the growth per capita figures for each region presented for 1991 and 2001.

During the period the western economy has risen from a GRP per capita figure in 1991 of $16,261 to $20,619 in 2001 at a per annum growth rate of 2.18 per cent. While this is better than Melbourne Westernport and slightly better than Melbourne North it is quite some distance below the metropolitan average of 2.69 per cent. It is also dwarfed by the very successful growth rates experienced In Melbourne East and Melbourne South.

Table 4.22 Gross regional product per capita by region, $ 2001

	GRP 1991 per capita	GRP 2001 per capita	Growth p.a.
Western economy	16,261	20,619	2.18%
Melbourne East	19,365	26,492	3.04%
Melbourne Inner	114,036	149,688	2.76%
Melbourne North	15,853	19,622	2.16%
Melbourne South	18,601	25,847	3.34%
Melbourne Westernport	15,020	18,246	1.96%
Melbourne Metro	25,008	32,617	2.69%
Australia	**24,686**	**30,261**	**2.06%**

Source: Yourplace database

Irrespective of the above figures the employment table below shows the western economy is at least creating jobs at a moderately strong rate of 2.33 per cent per annum. This is not only above the metropolitan average of 1.6 per cent but is in fact the best result of all the regions presented. Although it should be mentioned that it has grown from the second lowest based position in 1991, a position that it retains at the end of the period, despite its strong growth.

Table 4.23 Employment by region

	Emp91	Emp01	Growth
Western economy	139,609	175,846	2.33%
Melbourne East	279,420	333,578	1.79%
Melbourne Inner	429,338	471,748	0.95%
Melbourne North	195,460	219,894	1.18%
Melbourne South	105,274	130,990	2.21%
Melbourne Westernport	184,885	231,017	2.25%
Melbourne Metro	1,334,083	1,564,100	1.60%
Australia	**7,210,902**	**8,290,458**	**1.40%**

Source: ABS JTW

The final table measures per capita employment which is otherwise known as local employment provision. Between 1991 and 2001 the local employment ratio grew from 0.285 to 0.314 at a growth rate of 0.96. Again, growth is higher than that experienced in the Melbourne metropolitan area. However, it must be stressed that the western economy in 1991 had the lowest local employment ratio level and is only slightly better off than Melbourne Westernport in 2001. With the only other exception being Melbourne North the western economy in comparison to other regions is really lagging behind in respect to providing jobs for its ever increasing population. This fact is also reinforced in the GRP per capita figures mentioned earlier.

Table 4.24 Per capita employment

	Per capita Emp91	Per capita Emp01	Growth
Western economy	0.285	0.314	0.96
Melbourne East	0.351	0.402	1.38
Melbourne Inner	1.677	1.626	-0.31
Melbourne North	0.303	0.315	0.38
Melbourne South	0.319	0.379	1.72
Melbourne Westernport	0.289	0.310	0.70
Melbourne Metro	0.423	0.450	0.64
Australia	**0.417**	**0.428**	**0.25**

Source: ABS JTW and ERP

4.7.2 Growing and emerging industries

In view of the issues already discussed above particularly with respect to the low levels of employment provision, GRP per capita, strong population growth and the need for mass employment, National Economics uses its national forecasts for industry at the 3 digit ANZIC level to determine what are the emerging industries the western economy should be focusing on. The table is specific to the western economy in that it only lists industries that are not only predicted to have the greatest national growth but already have the necessary scale and resources in place to take advantage of these trends. As a means of measuring the current scale 2001 employment and GRP estimates are used.

The outcome of this analysis for the western economy is the fifteen industries listed below. The most important industry where significant employment and regional growth is predicted is in school education. Given the current stock of educational institutions on offer this will not only provide the platform for mass employment but with increased numbers provide the western economy with more power to extract funds from the government to further improve infrastructure and the quality of education in the region.

Resident workers applying for skilled and well paid jobs can take advantage of the expected increase in other business services and legal and accounting services. Taking advantage of the trend of an ageing society are opportunities in hospitals and nursing homes and other health services. The increasing population and trendier landscape of the region will lead to strong opportunities in retail goods, services and hospitality. This is apparent in specialised food retailing, supermarket and grocery, motor vehicle services, other personal and household goods retailing and cafes and restaurants. Further opportunities remain in road freight transport, storage, government administration and sport.

Table 4.25 Industries with strong growth, western economy

Industry by 3 digit ANZIC	2001 Employment	2008 Forecast GRP ($m)	Forecast growth, 2001-2008, p.a.
842 School Education	9,924	452	1.2%
611 Road Freight Transport	6,395	171	1.9%
786 Other Business Services	6,098	429	4.5%
512 Specialised Food Retailing	6,092	306	0.4%
511 Supermarket and Grocery	5,345	294	2.9%
861 Hospitals and Nursing Homes	5,237	432	0.8%
811 Government Administration	4,411	425	2.6%
532 Motor Vehicle Services	4,164	213	0.4%
281 Motor Vehicle and Part Manufacturing	3,977	83	2.2%
525 Other Personal and Household Good Retailing	3,307	205	2.8%
573 Cafes and Restaurants	3,264	247	1.6%
931 Sport	2,368	112	5.4%
863 Other Health Services	2,135	174	5.4%
670 Storage	1,888	37	6.0%
784 Legal and Accounting Services	1,705	233	2.8%

Source: Yourplace database and JTW data

The table below is introduced to highlight some of the smaller industries which have experienced good employment growth in the last five years and now are of moderate or large scale. Manufacturing is represented in 9 of these industries with food processing occupying 4 of the top 6 places. Another 4 are in service oriented industries with personal and other services represented by corrective centres and sports, health services with pathology and business services with security and investment services. The remaining growth industries have occurred in the retail sector (accommodation) and wholesale trade (household good wholesaling, nec).

Table 4.26 Emerging industries by employment growth, western economy

Industry by 4 digit ANZIC	1996 Employment	2001 Employment	Employment growth, 1996-2001, p.a.
2122 Ice Cream Manufacturing	6.9	64.8	56.4
2121 Milk & Cream Processing	11.2	90.6	51.8
2172 Confectionary Manufacturing	20.0	132.1	46.0
2423 Book & Other Publishing	59.1	388.2	45.7
9632 Corrective Centres	72.3	454.4	44.4
2171 Sugar Manufacturing	27.0	157.8	42.3
2841 Computer, Business Machine Mfg	20.5	108.2	39.5
2422 Other Periodical Publishing	24.1	110.2	35.5
8631 Pathology	32.3	116.1	29.2
2842 Telecmn Brdcstng Trnscvg Eqp	29.5	100.6	27.8
4739 Household Good Wholesaling, nec	66.9	218.4	26.7
2929 Furniture Manufacturing, nec	414.4	1,321.0	26.1
5710 Accommodation	293.7	910.3	25.4
9319 Sports, Services to Sports, nec	333.5	945.4	23.2
7864 Scrty, Invest Serv (Ex Police)	629.9	1,689.8	21.8

4.8 Resident workforce changes

Current employment positions of residents by industry are presented in the following table, along with the hours worked in each. The data is represented as a percentage of total workers who live in the area.

Table 4.27 Resident employment by industry and hours worked (per cent)

Industry	<35hrs	35-50hrs	Over 50 hrs	Total
Agriculture	0.18	0.30	0.11	0.58
Mining	0.02	0.08	0.04	0.14
Manufacturing	2.88	14.27	1.85	19.00
Utilities	0.05	0.33	0.05	0.43
Construction	1.31	4.30	0.89	6.50
Wholesale trade	1.17	3.99	0.64	5.79
Retail Trade	9.06	7.94	1.77	18.76
Transport and storage	1.28	4.14	1.09	6.51
Communications	0.54	1.74	0.25	2.53
Finance and insurance	1.04	3.01	0.31	4.36
Business Services	3.37	6.86	1.23	11.47
Government Admin and Education	3.10	5.62	0.70	9.42
Health and Community Services	3.75	3.77	0.44	7.96
Cultural and Recreational Services	1.27	1.25	0.26	2.78
Personal Services	0.96	1.92	0.32	3.20
Non-classifiable economic units	0.19	0.34	0.06	0.58
Total	**30.16**	**59.86**	**9.98**	**100.00**

Source: ABS Census and JTW

Clear trends from the table above are the importance of manufacturing employment, retail trade and business services to residents. Other points of note include;

"The high degree of casualisation in retail trade with 9.06 per cent out of a total of 18.76 per cent of the workforce employed part time."

- The high degree of casualisation in retail trade with 9.06 per cent out of a total of 18.76 per cent of the workforce employed part time. The high degree of casualisation and exposure to retail employment has the following implications:
  - Little impact if the only people that were accessing this employment were those for whom such employment was conducive to expectations and circumstances.
  - A future weakening of the income potential of the region if there is a high number of young people without other education opportunities accessing such employment.
  - Limited prospects for deriving sustainable retirement incomes if the percentage of older people for whom no other alternatives exist in employment are accessing this low paid retail part time work.
  - Complete exposure of the retail sector to the performance of the remaining sectors of the western economy, as suddenly 10 per cent of the regions employment is dependent on the income of the region's workers in other

industries. Obviously if this proportion becomes too high there is not the scale of other employment to protect this retail employment. Further these workers have very little capacity for real income growth.

- A poor outlook in the medium term, for retail employment growth for the nation as a whole, although regions with strong population growth should expect the population led new employment to continue at a lower pace.

- Compares unfavourably to the relatively low levels of casualisation in manufacturing.

4.9 Investment

Current levels of investment within a region are often used to highlight the work done by policy makers and development organisations alike. In many respects it is the application of new investment in building stock which is a good proxy for investment in job creation, however this is not always the case. Having said that, the data on investment in the region highlights the large amount of investment in non-residential and residential building construction alike, which has occurred.

Data availability dictates that the investment pattern data is only available to 1999; however in the timeframe presented the scale of investment in the region can be seen.

Table 4.28 Regional investment patterns by type

Western economy	Value of residential buildings total ($m)	Value of non residential buildings ($m)	Value total building total ($m)
1995-96	363.4	593.1	956.5
1996-97	424.4	672.8	1,097.3
1997-98	433.9	528.3	962.2
1998-99	1,341.0	584.9	1,925.9
Growth, p.a.	38.6	-0.3	19.1
Share of Vic Total			
1995-96	12.7	14.2	13.6
1996-97	11.8	14.3	13.3
1997-98	12.7	12.7	12.7
1998-99	13.3	10.9	12.5

Source: ABS Building Approvals data

The first trend of note in the table above is the huge expansion that can be seen in the value of residential buildings in 1999. The pull-forward impact of the GST and the emerging housing boom contributed to a strong level of investment in residential construction.

In general the region has been receiving approximately 12 per cent of residential construction and up to 14 per cent of non-residential construction. Considering the region represents 16 per cent of Melbourne's population, and is an area with a large supply of under-developed land, this level of investment would need to be higher if the employment capacity of the region is to grow considerably.

How does the western region compare with other regions in terms of attracting investment and what gives the other regions the edge?

Most regions have relatively good infrastructure and amenity. Places like Melbourne East have a number of businesses parks and firms that work with each other in a supply chain. This allows them to cut back on distribution and retail costs. Generally speaking investment is much higher as a percentage in the inner Melbourne areas and the East because of these supply chain benefits. Working towards buildings more supply clusters in the West particularly in places where scale already exists would be one area in which the west could significantly improve its investment attractiveness.

4.10 Social Security trends

The strength of the economy can not only be measured by its success in employment and incomes but also by its failures. NIEIR analyses social security information to determine the levels of regional social distress in a number of key areas. Measures developed include:

- **NIEIR effective unemployment**

  This measure is an estimate of the level of unemployment in the region, and takes into account benefit recipient numbers and changes in benefits assignment over time to present a more reliable estimate of regional unemployment than provided by DEWR.

- **NIEIR non-job ready**

  This measure includes a broad range of recipient types in order to ascertain the number of people for whom moving back into employment would represent the breaking down of significant hurdles. The term non-job ready refers to the fact that most of these people could not readily accept employment at short notice.

4.10.1 Measurement of social security trends

Three important trends or developments in the determination of unemployment have prompted the need for a new measure of unemployed:

1. Significant growth in the number of recipients of Disability Support Pension between 1991 and 2002. NIEIR believes that a significant number of these people should be considered unemployed.
2. Through benefit reclassification of youth, the numbers of young people considered unemployed is hidden or underestimated in official estimates.
3. The labour force survey question that determines official unemployment is too narrowly defined and has the result of designating a large number of people that actually received unemployment benefits as being employed.

$$NIEIR\ Effective\ Unemployment = \frac{\begin{pmatrix} Newstart + Mature\ Age\ Allowance + Excess\ growth \\ in\ DSP + Estimate\ of\ unemployed\ youth \end{pmatrix}}{\begin{pmatrix} Adjusted\ Labour\ Force = Official\ Labour\ Force \\ + Excess\ growth\ \ in\ \ DSP \end{pmatrix}}$$

To estimate how large the ‘true’ or underlying unemployment rate for a region would have been, if the increase in the number of people receiving the disability support pension had not occurred, we have reconstructed a series called an *effective unemployment rate*. To derive the *corrected unemployment* rate the first step is to take out the effect of the increase in disability support pensioners on the labour force. The DSP changes have made the labour force smaller.

The adjusted or effective labour force is equal to reported size plus the number of people who have been put on disability support pensions who otherwise wouldn’t have been. To determine who would or wouldn’t have previously classified as qualifying for DSP we must make an assumption about each region. We assume that the proportion of the population in 1991 that received the DSP is the best representation of the proportion of that population who would receive it in the long run, i.e. the proportion of people within the population who are receiving disability support pensions is assumed to remain fixed.

Hence, we have assumed that the number of disability support pension recipients in 1991 will only grow as fast as population growth in that region. Any growth in DSP over and above that amount is assumed to be excess growth. Of course a region may have slower growth in DSP than population growth, the excess growth will be negative, and will be allowed to have positive impact on corrected unemployment.

As can be seen in the table below the levels of effective unemployment have remained quite high since 1996 despite the growth in the economy and employment as shown previously.

Table 4.29 Effective unemployment levels by LGA by year, 1991 to 2002

	1991	1996	1998	2000	2001	2002
Wyndham (C)	1,635	3,343	3,567	3,925	4,032	3,869
Hobson's Bay (C)	3,098	4,354	4,653	4,430	4,482	4,003
Brimbank (C)	6,725	10,894	11,906	12,559	13,148	12,617
Moonee Valley (C)	4,199	5,482	5,639	4,757	4,513	4,164
Maribyrnong (C)	4,506	5,802	5,711	5,246	5,065	4,599
Melton (S)	1,042	2,153	2,606	2,978	3,113	3,023
Total	**21,205**	**32,028**	**34,082**	**33,895**	**34,353**	**32,275**

Source: Yourplace database

4.10.2 Non-job ready

The level of non-job ready is determined by considering the levels of DSP recipients, single parents who have restricted access to labour market opportunities and the number of migrant unemployed who experience multiple barriers to re-entering the workforce. This provides a measure of the degree to which structural barriers are present in a region.

$$\%NJ = \frac{\left(Long - term\ unemployed + DSP + 0.5 * Single\,Parent + 0.5 * Migrant\,unemployed\right)}{Population\,18\text{ - }65}$$

The measure is important as whilst the short-term unemployed rate can be an indicator of labour availability, it only represents a small part of the total potential labour force. Because the unemployment rate includes only those actively looking for work (those participating in the labour market), it misses a large group of the population. One reason for not participating in the labour force is the perceived inability to find work (either search costs are too high, anticipated pay rates are too low, or a lack of available positions). Those who have retired from the workforce or partners who have chosen to manage household affairs, are others who are said not to participate in the workforce. A third group who do not participate are those that have structural barriers to finding employment.

Simple market mechanisms such as new employment opportunities cannot change the situation for those unable to readily move into work. The long-term unemployed often need retraining, single mothers need changes to childcare provisions, those receiving disability support pensions require more integrated employment opportunities that reflect their capabilities.

When the region is being assessed for sustainability of growth opportunities, the number of non-job ready is crucial for that determination. When regions face a high level of short-term unemployment coupled with a high degree of non-job ready, the households face a high level of employment stress.

The following table presents the levels of non-job ready in the region.

Table 4.30 Non-job ready rate as percentage of population, 1991 to 2002

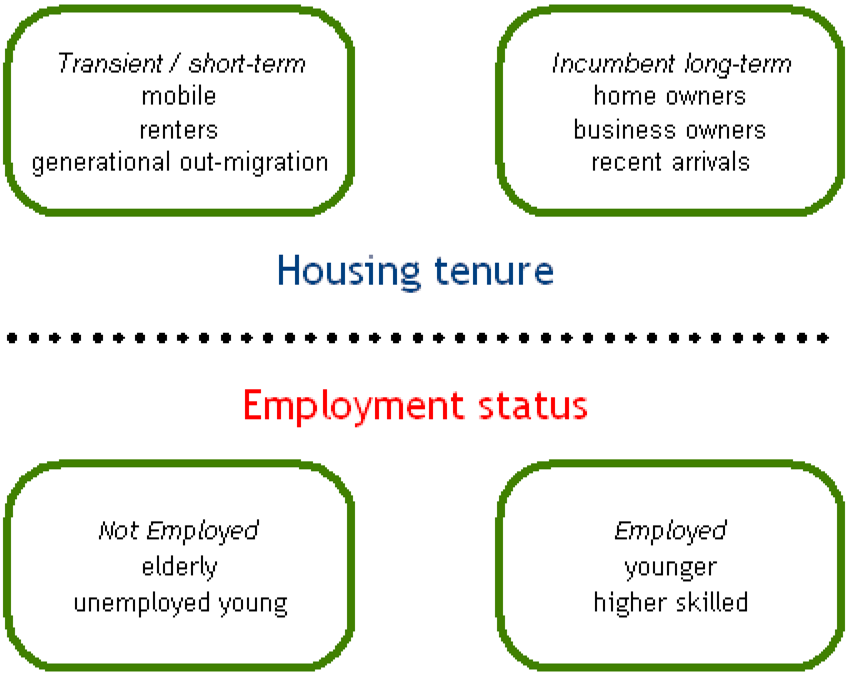
	1991	1996	1998	2000	2001	2002
Wyndham (C)	5.2	7.6	8.4	9.0	9.2	8.5
Hobson's Bay (C)	8.9	11.5	12.6	12.3	12.3	11.6
Brimbank (C)	10.7	14.0	15.6	16.3	16.9	16.0
Moonee Valley (C)	8.3	10.4	11.3	10.5	10.2	9.6
Maribyrnong (C)	15.4	19.7	21.4	20.6	20.3	18.8
Melton (S)	6.4	9.8	11.3	11.9	11.5	10.3
Total	**9.5**	**12.3**	**13.5**	**13.5**	**13.5**	**12.6**

Source: Yourplace database

With almost 13 per cent of the population aged 18 to 65 being non-job ready, unemployment and structural unemployment are very important issues. Any analytical tool developed, or policy objective implemented must seek to address these issues. Clearly one of the paths to a more successful economy is linked to regional capacity to better utilise the latent potential of this large group of people.

4.10.3 Making sense of the demographic anomalies in the Inner West

The four quadrant analysis allows us to clarify the result for much of the Inner West. The indicators which highlight poor social forces will be tending to concentrate on the cohort of the population which is unemployed. This group tends to be independent of the forces which provide better outcomes for employment, and hence moderate incomes overall, and good university degree attainment. The anomalies are really simply a function of the extreme differences between outcomes for various cohorts in the region. The existence of such strong cohorts of unemployment at the same time as pockets of income and affluence are the drivers of changes which are so important in the region.



As the dominance of the employed new home owners increases the segment of the population who are structurally unemployed will fall. The region where these people move to is however the problem in the West as natural migration points already have high levels of unemployment.

5. Broad social and economic trends

A number of social and economic issues and trends inform the analysis of the western region economy. The major issues are described in this chapter and provide a context for consideration of the analytical tool described in Chapter 7.

5.1 Future macroeconomic scenarios

5.1.1 The medium term economic outlook

The nature of the medium term outlook is highly uncertain. On the other hand plausible alternative sources for the economy are limited and these scenarios have a relatively high degree of probability.

The exact nature of the growth profile is uncertain because of growing imbalances in the international and domestic economy. The growing imbalances, however, limit plausible scenarios for the medium term future. The structural imbalances will have to be resolved before sustained high growth can resume.

5.1.2 The domestic economy

The imbalances in the domestic economy focuses on the strong housing market and the debt financing of consumption expenditure. Over the past two years established dwelling prices have been increasing by 20 per cent per annum. Over the same two years the debt financing of consumption expenditure has almost doubled from approximately 5 to 10 per cent. Given the current negative savings ratios, it means that Australian households have to borrow between $40 and $50 billion just to maintain the current level of consumption expenditure. This means that the household debt ratio, which is now at 140 per cent of net disposable income, is increasing by 10 percentage points per year. Australian debt to income ratios are already amongst the highest in the world. This will have to stop.

5.1.3 The two plausible scenarios for the Australian medium term future

Given the current domestic economic environment there appears to be only two plausible scenarios facing the Australian economy to 2008. They are:

- grind-down; and
- meltdown.

The grind-down case represents a relatively soft landing. The world economy may be subdued but growth in the Asia-Pacific region, driven by China and India, means that on a trade weighted basis Australia's trading partners grow at least 3 per cent per annum. This sustains the current build up in energy and mineral exports to Asia.

The housing price boom stands to deflate by its own internal dynamics because of:

(i) rising vacancy rates; and

(ii) declining expectations of future capital gain.

That is, the Reserve Bank of Australia will not have to increase interest rates further. With the world economy in general remaining subdued, and the United States economy in particular remaining subdued, once the housing price bubble starts to deflate the RBA will be able to reduce interest rates. This will give a cushion that will enable a soft landing for housing prices and, more importantly, the take-up of new debt to finance consumption expenditure.

It also allows a relatively soft landing for the dwelling construction sector. Non-residential and engineering construction activity remains strong, at least until 2006.

The critical aspect to of avoiding the meltdown scenario is for private consumption expenditure growth to be lower than income growth on a sustained basis. This will allow savings ratios to increase and the household debt to income ratio to stabilise at around 170 per cent of disposable income.

The grind-down scenario is so-called because the cumulative effects of the build-up of household debt grinds down the growth in consumption expenditure, thereby restoring a resemblance of structural sustainability.

5.1.4 The outlook: the grind-down scenario

The outlook for 2003-04 is, in part, caused by the fact that the June quarter is likely to have a low growth rate, contributed to by the decline in exports. With the recovery in farm production, the quarterly growth rates for the second half of 2003-04 are in excess of 1 per cent at annual rates. However, this is not enough to offset the fact that the second quarter of 2003 has a low point in the current growth cycle.

The recovery from the drought is spread over two years. If the drought ends completely in 2003-04, then the GDP growth rate for 2003-04 will be closer to 3 per cent with the 2004-05 growth rate lower. The 2004-05 growth rate is held back because it is the year for the completion of the downward adjustment to the current dwelling cycle.

Growth in the middle of the decade will also be reasonable because of the production effect of the current industrial capacity being constructed.

The labour market is likely to remain soft for much of the period.

5.1.5 Implications of the grind down scenarios for the Western economy

The likely impact of the grind down scenario for the western economy is lower regional growth rates initially during the 2003 to 2004 period. During the 2004- 2005 period growth is likely to improve slightly and by the middle of the decade improve further as a result of the current industrial capacity being constructed.

Throughout the period as the housing market deflates, manageability by its own internal dynamics means interest rates are not expected to rise significantly. This will provide a softer landing for the construction industry, which is expected to experience a contraction in the next couple of years before making a recovery in 2006. This will tend to reduce the impact on industries associated with property services.

The cumulative effect of the build –up in household debt will tend to grind down the growth in consumption expenditure. As a result the drop in private consumption is likely to cause lower growth in retail and wholesale trade as well as hospitality. This overall drop in activity is likely to filter down to the services industries including business, communication, finance and insurance, cultural and recreational and personal services.

Internationally, the grind down scenario assumes that China, India and Europe will eventually drive world growth. Fortunately, good growth is predicted for Australia's major trading partners while there should be relatively costless adjustments to US exchange rates thereby allowing for good domestic export growth. This should impact positively on export oriented manufacturing firms in the western economy. Other manufacturing industries that provide the components for these exporting firms should also experience reasonable growth during the forecast period.

The overall effects of the above scenario should see average incomes remaining soft but rising steadily. Employment growth will initially drop off but remain positive and pick up later in the period. This will be associated with an initial rise in the unemployment rate to 2004-2005 but will subsequently level off for the rest of the forecast period.

5.1.6 Impact of macro-economic scenarios on manufacturing

The chances of a more intensive economic downturn increase if a few factors eventuate. One of these is a sharp devaluation of the $US dollar and an increase in interest rates to foster better internal and external balance as has already occurred. This will have the effect of reducing house prices, as demand for credit and debt financing of consumption falls sharply as households increase savings.

This is likely to impact more heavily on the western economy due to the sector's importance to the region. This will occur on two levels. One, due to the overall downturn in economic activity at the domestic level and secondly since the rise in the Australian dollar will reduce the cost competitiveness of those manufacturing firms that compete on the world stage. This contrasts to the scenario above where manufacturing as a key exporting industry drives the recovery of the western economy. The table below provides 2001output estimates for each manufacturing industry at the 2 digit levels for the western economy, Victoria and the share of Victoria and Australia nationally. The statistics reveal that the western region is at the mercy of the health of the domestic and international economy due to its strong manufacturing presence, particularly in the areas of Hobson's Bay, Maribyrnong and Brimbank.

Table 5.1 Share of manufacturing output

Manufacturing Industry	Western economy	Victoria	Share of VIC	Share of Australia
Food, Beverage and Tobacco	1,663	18,929	8.8	2.9
Textiles, Clothing, Footwear and Leather	792	4,608	17.2	8.0
Wood and Paper Product	348	5,042	6.9	2.5
Printing, Publishing and Recorded Media	247	5,543	4.5	1.4
Petroleum, Coal and Chemicals	4,571	18,467	24.8	8.2
Non-Metallic Mineral Products	419	2,901	14.4	3.8
Metal Product	1,315	10,917	12.0	2.9
Machinery and Equipment	3,257	25,375	12.8	5.7
Other Manufacturing	250	2,531	9.9	2.9
Total	**12,861**	**94,302**	**13.6**	**4.6**

Source: Yourplace database

Textile clothing and footwear (TCF) industry

The importance or the vulnerability of the TCF industry to the western region can be seen in the table above. The industry not only provides 17.2 per cent of all TCF output in Victoria but nationally this figure stands at 8.0 per cent.

Like its equivalents in other developed economies the Australian TCF industry has been in decline due mainly to competition from low-wage countries. This competition has been increasing due to tariff reductions.

Over the past decade the loss of firm-specific and industry-specific skills from the TCF industry while not affecting the short-term unemployment rate has resulted in a sharp rise in structural unemployment. This is because those people who are readily employable in the TCF industry are very difficult to re-employ elsewhere. Due to the structural barriers to re-entry they eventually become part of the long-term unemployed, underemployed or in some cases remove themselves from the workforce altogether.

What has the impact been? The following table highlights the results at the local government level.

Table 5.2 Summary of employment – key TCF regions

	Census year	Brim-bank	Hobson's Bay	Maribyrnong	Melton	Moonee Valley	Wind-ham	Victoria
Total TCF employment	2001	1,500.0	305.6	2,238.9	157.9	352.9	385.1	29,854
%Change in TCF employment	1991-2001	-3.7	-51	2.7	751.4	-39.2	-15.9	-39.7
%Change in total employment	1991-2001	28.7	18.4	1.2	101.9	2.2	88.8	20.1
Percentage point change in structural unemployment	1991-2001	6.2	3.4	4.9	5.1	1.9	4.0	3.2
Percentage point change in unemployment (% of labour force)	1991-2001	-6.2	-5.8	-9.6	-5.4	-5.5	-6.2	-5.7
Sole parent families[1]	2001	19.3	20.5	27.3	20.2	19.7	19.4	20
LOTE at home[2]	2001	53.7	29.2	44.1	17.2	30.8	19.0	19.8

Notes: 1. NIEIR. % families with dependent children.
2. % of population.
Source: ABS Census.

One would expect with continued tariff reduction the trend that has been experienced in the last decade will continue and in all probability intensify sending a number of workers to the structural unemployment scrap heap.

The next section covers the new government policy.

Given the serious implications to the western region economy that follow from the government's policy, what action can be taken to ameliorate that impact?

As a partial offset to its tariff cuts, the Commonwealth introduced a TCF Strategic Investment Program (SIP), which provides grants that contribute to the finance of investment by firms in the industry.

The objective of the SIP is to basically overcome the constraints on Australian industry successfully exporting. That is, the objectives of the scheme are to:

(i) increase TCF industry investment; and

(ii) increase TCF research and product development.

A key concept underlying the SIP scheme is that financing constraints on capital investment, research and development, and related marketing expenses is a fundamental obstacle for local firms in their ability to transform themselves into successful exporting enterprises. The key assumption underlying the scheme is that the main route to improving labour productivity is by increased capital intensity. In turn increases in labour productivity lead to increases in export intensity.

The significant mechanisms of the SIP are:

(i) the first program year was 2000-01;
(ii) certain expenditure in pre program years can be claimed;
(iii) the grants are for:
    - plant/building capital expenditure;
    - R and D/product development expenditure;
    - product value added enhancement;
    - grants to assist firms in TCF to overcome development constraints;
(iv) a minimum $0.2 million of investment expenditure must be accumulated over the life of the scheme to become a grant beneficiary;
(v) an annual grant to a successful applicant cannot exceed 5 per cent of sales; and
(vi) total grants to be limited to the total funding available.

The Department of Industry, Tourism and Resources (DITR) in 2002 made an initial assessment of the operations of the SIP scheme in terms of the responses of the first year successful grant recipients. The report was entitled "*Review of the Textile, Clothing and Footwear Strategic Investment Program Scheme*".

The DITR concluded that the initial assessment of the scheme was having the desired effect of increasing the efficiency of the "industry through the renewal of modernisation of the capital base". The SIP scheme "has contributed positively in reducing labour intensity of operations, increasing levels of productivity and opening up new product and market opportunities". (DITR, page 21)

SIP grants have a crucial role because enhanced export production, though profitable in the long run, requires investment in research, development, equipment and training that is beyond the capacity of the typical Australian TCF firm. The typical Australian TCF firm is too small to finance upgrading to export standard from retained earnings, and at current real interest rates it is not profitable to do so on borrowed finance. SIP grants can assist firms to reach export standard, and hence also to remain competitive within Australia. The alternative is continued decline as tariff cuts undercut the prices of standard products on the domestic market.

While a number of TCF firms are likely to benefit greatly from this scheme, for some domestically driven firms the SIP may be considered a case of too-little too-late. In this case it is important for regional policy makers to determine what firms are most at risk of closure. For employs from these types of industries are the people, as discussed above, who are most at risk of facing structural barriers to re-employment.

Simple market mechanisms such as new employment opportunities cannot change the situation for those unable to readily move into work. The long-term unemployed often need retraining, single mothers need changes to childcare provisions and people receiving disability support pensions require more integrated employment opportunities that reflect their capabilities. Hence, the number of people who are structurally unemployed or considered not job ready is crucial when a region is being assessed for the capacity of its current workforce to benefit from sustained growth in employment opportunities.

Reducing the impact of lack of job readiness requires specific local training and support in geographically differentiated areas.

In the regional sense some areas will have both a high level of structural unemployment and a workforce that is vulnerable to structural unemployment should its current employed status change. Hence regions that have had industries capable of employing migrants from non-English speaking backgrounds, or providing the flexibility of hours required by sole parents or the adaptability of the workplace required by those with illness or disability, are at risk of descending into structural unemployment, if those industries contract. This is precisely the case in most sub-regions in the western economy.

5.1.7 Exchange rate scenarios and the implications for the western region

The implications of the most likely scenario for exchange rates was discussed above. The poor performance recently of the US dollar has allowed the $A to sky rocket to 6 year highs. At the same time interest rates are at near historically low levels, yet household debt to income ratios continue to rise. The Reserve bank is keen to stop the economy from over heating any further by slowing current consumption levels. However with the dollar currently at such high levels it really is at the mercy of international markets. Any further interest rate increase will put more pressure on the $A to appreciate against all other currencies and make export oriented firms even less competitive on the world stage. At the same time by maintaining low interest rates at current levels the inevitable crash of the housing price bubble is prolonged even further plunging the domestic and western economy into a more intense and lengthy downturn. Eventually this will lead to high domestic interest rates which will impact negatively on housing construction. Due to the strong recent intake of housing in the western economy, particularly in Melton and Wyndham the initial drop in the local construction industry is likely to be more severe. National Economics modelling suggests that the industry in these circumstances is not likely to recover to the same levels until 2010.

5.2 Local employment

The economy of the western metropolitan region has a large employment base that serves households from both within and external to the region. NIEIR recommends that policy and planning should focus on the growth of local employment, as this strategy has a number of positive impacts.

If the population of the region is assumed to be constant then an increase in local employment has the following effects.

- An effective increase in income of the region as travel costs are reduced as it can be assumed that local residents will access these jobs at least at the rate of past local employment. In addition, with the creation of additional local jobs, residents will be encouraged to move back into local employment.
- The stimulus that would not otherwise exist provides tertiary or services employment, promotes education and training and facilitates community development .The bigger the scale of local employment and hence local demand from the mix of residents and workplaces the broader the types of services which will be offered. The combination of stronger infrastructure and scale leads to increases in education and training options.

In general, the most vibrant local outcomes will be achieved when the employment outcomes are the strongest. However in regions of exceptionally high incomes local employment is not required to develop these features because the incomes of the residents alone generates sufficient demand.

The importance of local employment within a city such as Melbourne with its very large geographical base can seem at odds with experience in many areas. For instance stronger local employment in Melton, which has limited current opportunities, high unemployment and long distances to travel to employment in other areas, appears to support this policy. However, strong local employment in Toorak or South Yarra appears to be less important, considering the linkages that exist between the region and the city. These examples are important but their relevance to the Inner West extends further than simple proximity to the CBD. Rather they highlight the role of capacity, skills and economic rents.

In general the importance of local employment in non-retail / service sectors can be said to diminish in the following circumstances.

- Where there is considerable access to large scale employment in close proximity. In this case there are low travel costs and generally good access to public transport.
- Where the levels of labour utilisation, that is the amount of work accessed by residents is generally strong.
- Where the region’s skills are sought after, extract higher incomes than residents of other proximate areas and are likely to be able to drive innovation locally.
- Where local equity considerations are not significant motivations for policy. Equity primarily relates to the provision of opportunities for current residents, rather than policy simply reflecting the aspirations and market potential of new residents.
- Where the regions resources are highly utilised, reflected in high rents, strong competition and often rapid economic growth. In such circumstances, strong rents promote the maintenance of strong economic performance of companies utilising an area’s resources.

The value of local employment in non-retail / service sectors as a goal of economic development increases when:

- there are high levels of unemployment. Local employment in such cases, reduce the structural impediments to the unemployed in accessing employment;
- there is a strong mix of industry and occupation skills of the residents, and a need for low skilled work;
- equity considerations are important in local policy;
- there is under-utilised capacity in terms of the stock of building and land. In such circumstances lower rents can promote new opportunities for emerging industries, can support the on-going operation of current businesses which cannot compete with rents extracted by housing.

In many areas of the Western economy there are high levels of unemployment, significant equity considerations, a range of skills of residents including exposure to low skills, and a level of under-utilisation of resources in many areas of the city which are consistent with maintaining local employment as a goal.

Recommendation: Recognising the importance of local employment the Western region should be seeking in the next 20 years to increase rate of local job creation so as to provide 40 local jobs per 100 residents.

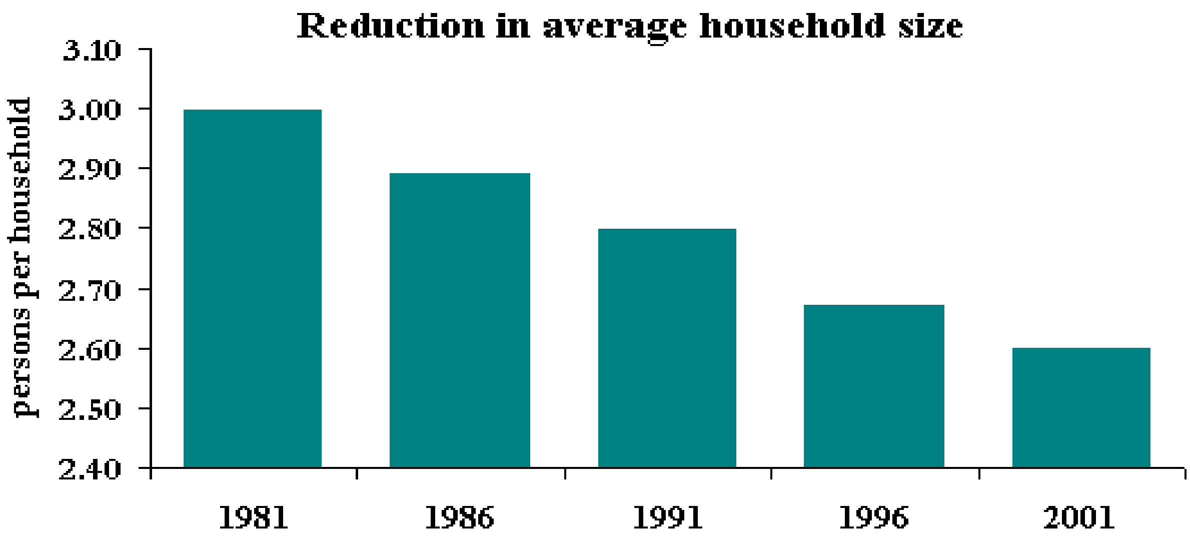
5.3 Working patterns

The importance of local employment will increase in the next 25 years due to changes in demographics and working patterns. The nature of employment has changed in Australia over the past 20 years, and a number of trends need to be taken into account in forecasting employment.

In summary these trends are:

- the growth in 2 income households;
- development of social infrastructure that increasingly enables mothers to reconcile work with the raising of children;
- increases in part time, casual, contract work and other flexible work practices; and
- ageing of the population, and increasing participation rates through to aged 70 years.

At the same time we are choosing to live in smaller households, as a result of decreasing fertility, higher divorce rates and lower mortality. The reduction in household size is seen below.



The combination of these forces, that is, more people wanting to work, lower household size and an increase in part-time jobs, results in a larger number of jobs per head of population being required in most areas of Sydney and Melbourne. Depending on the number of hours available for work in the economy this leads to changes in the average hours worked.

5.4 Travel

The social fabric has changed along with these work practices and the somewhat outdated stereotypical scenario of a single income, work from '9 to 5' and a once weekly grocery shopping trip seems to have been permanently transformed by the intense focus in today's society on flexibility. This flexibility extends beyond work patterns to also include social and retail patterns. Industries have in part driven changes and in part adapted to our demands to accommodate such practices, for example, 24 hr a day/7 days a week production schedules. Extended trading hours and the concentration of social activities within the metropolitan region have dramatically increased the levels of travel trips generated by households.

These forces focus the household more clearly than ever before on minimising the household's total travel task. Travel and associated opportunity costs become significant issues for forecasting the future land use patterns. Those regions that have not concentrated on increasing local employment supply and therefore decreasing travel costs including time lost, will be subject to the greatest falls in real incomes and the highest rates of effective unemployment.

For Hobson's Bay and Moonee Valley significant advantage with respect to lifestyle eg, cultural, and restaurant/cafes and city based work already exists. When combined with a greater emphasis on local employment and retail the virtuous[1] cycle of development based around locational advantage becomes significant.

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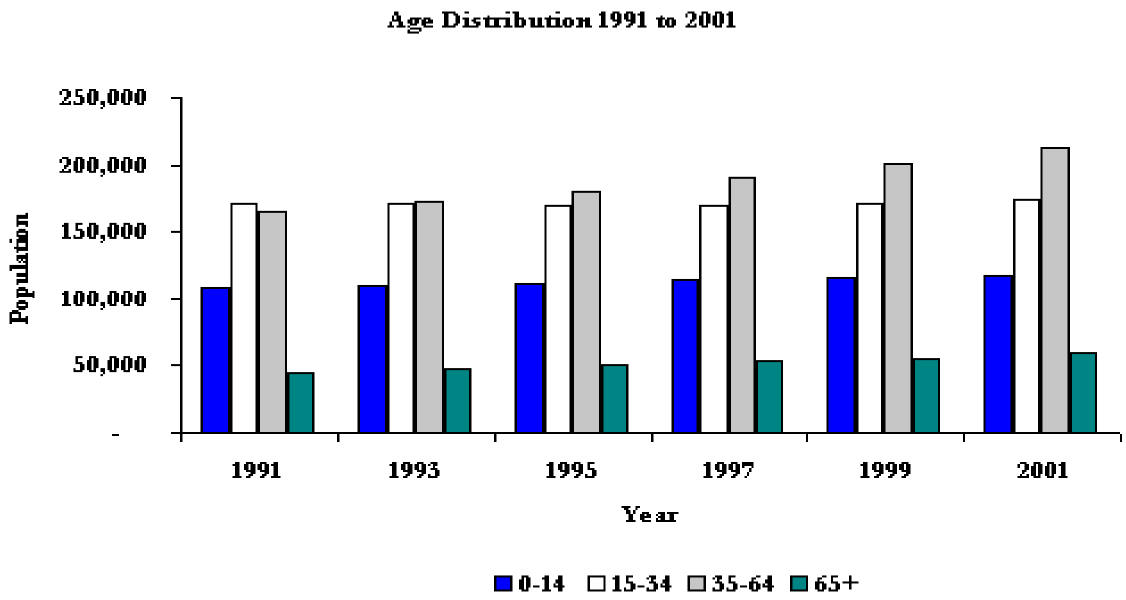
[1] Virtuous cycle – The NIEIR uses this term to mean having virtue and a cycle with outcomes that continue to grow ie,an in-built multiplier.

5.5 Ageing

5.5.1 Age distribution



Source: ABS ERP

The largest population increase has occurred in the 35 to 64 age group with a 29 per cent increase over a ten year period. This group also represents the largest age group category. The vast majority of this increase has occurred in municipalities of Wyndham, Brimbank and Melton although all regions have experienced a reasonable increase in this category. Despite the increase being lower in absolute terms the 65+ group has grown at a faster rate over the 1991-2001 than the 35 to 64 age group. This trend is expected to intensify in the future due to the current magnitude of the 35 to 64 age group and the projected increase in life expectancy. At the LGA level the highest growth in the 65+ age group has occurred in Melton and Wyndham although in absolute terms the Brimbank and Moonee Valley have experienced the biggest changes. Maribyrnong has experienced the lowest growth levels in this age group reflecting the higher costs associated with living in this area. This not only causes a disincentive for the elderly already living here but also is a deterrent to others of this age group moving in. Further, the trends of gentrification, medium density housing and increased congestion in this region are generally other reasons for this age group to look elsewhere to live. By far the lowest growth has occurred in the 15-34 age group, which has only grown by 2 per cent in the 1991 – 2001 period. This is a cause for concern given this is the group that contains those most expected to become parents in the near future. Not surprisingly, the largest growth in this category occurred in Melton and Wyndham. In Moonee Valley, Hobson's Bay and Maribyrnong this group actually declined by up to 11 per cent. The 0 –14 population group has increased by 8 per cent over the ten year period from 1991. Most of the gains have occurred in Melton, Brimbank and Wyndham, while numbers have contracted in Moonee Valley and Maribyrnong. With declining numbers in the 15 –34 age group for most of the inner core these numbers can be expected to further contract in the near future.

Table 5.3	**Age distribution in Western region versus Australia 2021**				
	Proportion of population				
	Less than 25	25 to 54 years	55+ years	Total population	Average Age
1954			0.13	214,000	
1996	0.37	0.45	0.18	521,530	33.7
2001	0.35	0.46	0.19	567,260	34.5
2011	0.31	0.45	0.24	662,682	37.3
2021	0.27	0.43	0.30	744,710	40.5
Change 1954 to 2001			0.06	353,260	
Change 2001 to 2021	-0.08	-0.03	0.11	n.a.	6.0

Source: *ABS Census*

Table 5.4	**Age distribution in metropolitan Melbourne**				
	Proportion of population				
	Less than 25	25 to 54 years	55+ years	Total population	Average Age
1954			0.19	1,554,000	
1996	0.35	0.45	0.20	3,284,010	35.3
2001	0.33	0.45	0.21	3,459,334	36.0
2011	0.30	0.45	0.25	3,954,714	38.2
2021	0.27	0.42	0.31	4,317,097	40.9
Change 1954 to 2001			0.03	1,905,334	
Change 2001 to 2021	-0.07	-0.03	0.09	n.a.	4.95

Source: *ABS Census*

Table 5.5	**Age distribution in Australia**				
	Proportion of population				
	Less than 25	25 to 54 years	55+ years	Total population	Average Age
1954			0.16	9,234,500	
1996	0.36	0.44	0.20	18,307,518	35.1
2001	0.34	0.44	0.22	19,452,686	36.2
2011	0.31	0.43	0.27	21,879,720	38.8
2021	0.27	0.41	0.32	23,822,380	41.6
Change 1954 to 2001			0.06	10,218,186	
Change 2001 to 2021	-0.07	-0.03	0.10	n.a.	5.33

Source: *ABS Census*

An issue of significant importance to the nation as a whole is ageing. With the bubble of baby-boomers moving through the economy together with low levels of immigration and fertility the consequent greying of the nation is well understood. All things being equal the Western economy should be well-placed in terms of this trend. The region is not exposed to a relatively high level of aged persons at present, and with the expected growth in population through new housing to be substantial in the next 30 years it is unlikely the level of ageing will be in excess of Victorian average levels as illustrated in the figure above.

The regional impact of ageing will be a function of housing and retirement income policy and possible scenarios include:

- significant increases in labour force participation by those over 65 years providing higher incomes and extended links to original communities of residence. Increased flexibility of employment and incomes policy to match expectations of service delivery predominantly health but perhaps recreational, infrastructure and housing; and

- property prices and poor taxation policy contributing to a significant movement of elderly residents to disparate parts of Australia, with each destination suffering terribly through the lack of services and infrastructure.

As is evident from the extremes presented above the anticipated impacts on the western metropolitan region will also vary widely. NIEIR believes that a mix of the two is likely with the regions that demonstrate the highest levels of innovation, creativity and skills intensity likely to perform more in the manner of the first scenario, with those regions falling into the trap of domestic oriented activity facing the forces of the second scenario.

The most fundamental demographic change in Australia is that we are ageing. While the Western economy will be in a relative sense younger than most regions the change will nevertheless have a significant impact on the economic, social and environmental structure of the region.

From an economic perspective an ageing community will mean that either people work longer or the remaining working population will need to support services for a proportionately higher aged community. The most likely impact of this is that taxes will need to increase thereby reducing the disposable income and wealth building capabilities of society. Of course, whether the government decides to this or not becomes a major social issue. It has been suggested that the elderly should be encouraged to move to other regions where services, amenity and infrastructure are adequate and provide good lifestyle oriented outcomes.

5.6 Innovation and export

One paradox of the information age revolution is that although it is now possible to access codified knowledge electronically from anywhere in the world, the qualities and assets of a region have become more important in determining the capacity of individuals to grow wealth.

This paradox is explained by the fact that there has been a knowledge revolution happening along side the information revolution. The knowledge revolution means that the ability to convert knowledge into commercially successful innovation is now the driver of economic growth.

For a variety of reasons explored in this section the characteristics and assets of a region are the key determinants of successful innovation.

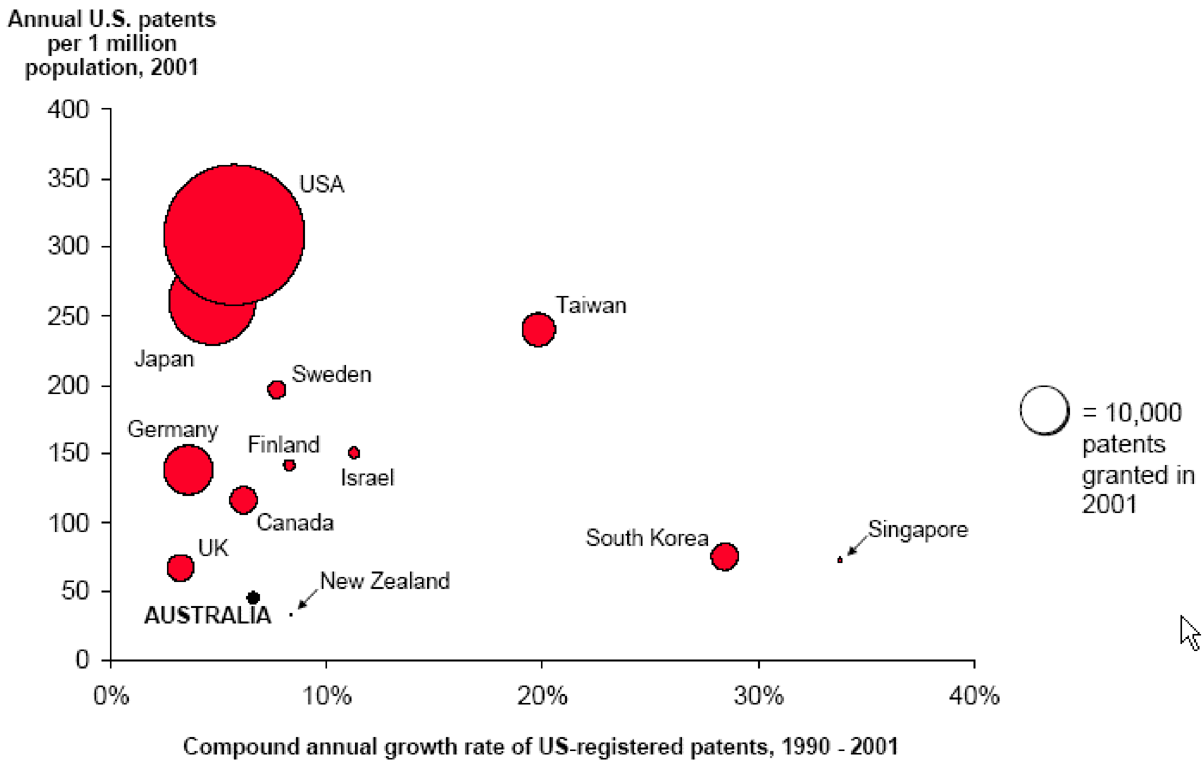
5.6.1 The knowledge economy and the global content

The strategic value of the region is connected to the so-called “globalised” economy. Political and institutional change at the end of the 1980s has allowed almost all low income countries access to world markets, best practice technology and world capital resources. This allowed these countries to drive the increase in their living standards by specialising in scale production of low and medium technology products and services.

High income countries are now faced with a stark choice. Either they rapidly develop the capacity of their economies to create knowledge and translate this knowledge into innovation and wealth creation by commercialisation, or their living standards will come under threat as the competitiveness of their traditional industries steadily declines.

5.6.2 The modern learning economy: the regional dimension

The Western Europeans and North Americans were faster than Australia in recognising how the challenges and opportunities of the onset of the global economy increased the strategic value of a learning economy, and how the strategic value of a learning economy could best be applied by taking a regional perspective. (see below)



Source: Michael Porter, Australia IIR Leading Minds Conference, 1 August, 2002.

The concept of a learning economy was once restricted to one of educational activity and attainment. The concept of a learning economy now means the quantity and quality of the totality of learning that takes place between and within firms, research institutions and all other institutions that collectively contribute to regional economic development. Once again an educational institution that increases access and produces degree attainment may miss the opportunity for the engagement process that will drive true growth regional competitiveness.

The importance of the regional perspective arises because innovation and competitiveness requires effective knowledge creation, while knowledge creation requires an enabling context. The region is a core factor in knowledge creation, knowledge is dynamic and based on human action while, in turn, human reaction depends on their environment and their inter-relationships with other humans. Human relationships are bounded by space, that is, by the boundaries of the regional area in which they operate.

Part of the reason for the importance of the regional context is that knowledge creation requires both codified knowledge (or information) and tacit knowledge. Tacit knowledge is:

- generally specific to a local physical attribute, especially skill set, or the unique experience of individuals;
- cannot be easily codified; and therefore
- is most effectively converted to wealth creation when the wealth creation occurs in the region.

An efficient knowledge economy combines codified knowledge and tacit knowledge (defining the regional competitive edge) to create new knowledge which leads to innovation and wealth creation.

In recent years tacit knowledge, which in the main can only be exploited at the regional level for effective wealth creation, has become by far the more important input. This is because codified knowledge is now largely available to all (provided the appropriate global knowledge workers are available in the region) thanks to the information technology revolution of recent years. Although codified knowledge is still a necessity for competitive success, it is tacit knowledge that is a necessity for a competitive edge in both innovation and commercialisation.

It has to be kept in mind that knowledge creation only leads to competitive success if the region has all the attributes required to translate knowledge into commercially successful goods and services.

In industry generally, it is the creation of the so-called “flexible entrepreneurial networks” that drive wealth creation. These networks replace the 1970s to 1980s companies which formally controlled most aspects of an industry’s supply chain by slow complex bureaucratic structures. Informal networks allow all the resources for success to be quickly enabled and coordinated. Successful coordination does, however, require sophisticated supply chain management (that is, commercialisation) skills. Flexible entrepreneurial networks are created out of the fusion of micro-communities amongst themselves and the fusion of micro-communities within organisations (such as multi-national companies) which can provide the finance access and market access for successful commercialisation. The creation of entrepreneurial networks comes from the creation of strategic alliances between organisations.

5.6.3 Innovation performance in the Western economy

The following table highlights the lack of innovation potential that currently exists within the West. This situation can only be rectified, in the long run, within a broader framework of Australia performing better as a whole and the West successfully moving from a place that services education and research to one which generates research and an industry cooperative version of learning.

In many respects the failure of the homogenous suburban context to deliver innovation is not astounding. The issue in the modern economy however is that with high-skilled people continually growing the connection between living and working in close proximity in areas of high amenity, and high skills receiving the strong income growth, those regions which cannot innovate will not be able to harness the inherent drive of a metropolitan economy in the manner in which they once did. Instead, as regional inequalities grow, it will only be the sub-regions which harness the opportunities which growth can deliver in terms of a healthy mix of residential and mixed business / commercial endeavours, that will prosper.

Table 5.6 Innovation by local government area, total 1991 to 2001

Local government area	Patents per hundred thousand people
Brimbank	60
Hobson's Bay	32
Maribyrnong	111
Melton	54
Moonee Valley	60
Wyndham	42
Stonnington	138
Monash	201

Source: Australian Patent Office

Recommendation: In the light of the low levels of innovation demonstrated in the Western economy the region should lobby government to increase the general provision of tertiary opportunities in the West, and to provide VU with resources to contribute more to the economic development aspirations, particularly employment based objectives, of the West in terms of research and community engagement.

5.6.4 Export performance in the Western economy

The importance of exports in the Western economy can be seen clearly in its structure that relies heavily on the manufacturing and transport sectors. Its importance can also be seen at the sub-regional level in the following table. In the year 2000 the total value of exports from the six local government areas which make up the Western region totalled 15.8 billion dollars in nominal terms.

Table 5.7 Exports in the Western region		
	$M Year 2000	
Local government area	Export within Australia	International exports
Brimbank	1,507	177
Melton	68	10
Moonee Valley	1,809	355
Maribyrnong	3,227	1,308
Wyndham	2,654	756
Hobson's Bay	3,340	617
Total Western economy	**12,605**	**3,223**
	Percentage of total exports	
Brimbank	9.5	1.1
Melton	0.4	0.1
Moonee Valley	11.4	2.2
Maribyrnong	20.4	8.3
Wyndham	16.8	4.8
Hobson's Bay	21.1	3.9
Total Western economy	**79.6**	**20.4**

Source: Yourplace database

What are the barriers to business innovation, growth and diversity that exist in Melbourne's western region?

The nature of the barriers to innovation and diversity is similar to those of general business formation. One of the biggest barriers is the relative lack of skills in the region compared to the rest of Melbourne. It becomes a deterrent to high tech business because they are unable to service labour locally. Instead they rely on people coming to the region, who then expect a premium to account for the extra travel that is required.

Other than skills – if the current industry structure is not conducive to entry then firms will choose not to go there. One such shortfall in structure could be firms requiring access to technical and business services support that will be easier to source in other areas of Melbourne.

For instance based on the historical land use pattern of the region, clusters of firms have naturally built themselves around the region while others have not. The extent to which clusters already exist and firms can exploit chain opportunities will have a significant bearing on the barriers of the question listed above.

What can be done to create more incentive for local businesses to innovate, grow and diversify?

More funding for universities and or greater efforts to match skills learned to the requirements of established industries in the region or to those that are likely to be required in the future. For example the boom in property in businesses services in the 90's. One example may be the development of skills to cater for the anticipated increase in demand for personal services in the future.

Are there significant opportunities for businesses in Melbourne's western region to export?

The bulk of relevant exporting from the region comes from manufacturing and property and business services.

In the new knowledge economy the bulk of Australian exports are going to occur in industries in which we have a comparative advantage. Due to shortages in labour relative to other nations our comparative advantage will come from new innovations. It is therefore these industries that the western economy should be focussing on.

Table 5.8 Emerging industries by employment growth, western economy

Industry by 4 digit ANZIC	1996 Employment	2001 Employment	Employment growth, 1996-2001
2122 Ice Cream Manufacturing	6.9	64.8	56.4
2121 Milk & Cream Processing	11.2	90.6	51.8
2172 Confectionary Manufacturing	20.0	132.1	46.0
2423 Book & Other Publishing	59.1	388.2	45.7
9632 Corrective Centres	72.3	454.4	44.4
2171 Sugar Manufacturing	27.0	157.8	42.3
2841 Computer, Business Machine Mfg	20.5	108.2	39.5
2422 Other Periodical Publishing	24.1	110.2	35.5
8631 Pathology	32.3	116.1	29.2
2842 Telecmn Brdcstng Trnscvg Eqp	29.5	100.6	27.8
4739 Household Good Wholesaling, nec	66.9	218.4	26.7
2929 Furniture Manufacturing, nec	414.4	1,321.0	26.1
5710 Accommodation	293.7	910.3	25.4
9319 Sports, Services to Sports, nec	333.5	945.4	23.2
7864 Scrty, Invest Serv (Ex Police)	629.9	1,689.8	21.8

Source: ABS JTW

These industries are typically high skilled, and they already have reasonable scale compared to the rest of Melbourne.

5.6.5 Competitive advantage, opportunities in endogenous innovation

One of the issues raised in the analysis of innovative capacity is the importance of transforming tacit knowledge into commercial reality. Inherent in such a concept is the value created within communities who have particular skills, experience or exposure to knowledge or creativity which has the capacity to provide differentiation in the future.

The multi-cultural background of the West mixed with its historical association with manufacturing, especially in the TCF industry can provide a great deal of tacit knowledge which in the right set of circumstances could be commercialised.

Whilst the residents of the West cannot buck the trend of international TCF reductions there may be skills in many facets of fashion or design which can apply the tacit knowledge of the past to new commercial successes of the future.

These opportunities for endogenous innovation cannot be under-estimated, and are primary drivers of incubators and the like. The West is no different to other regions in terms of needing to improve the chances of such innovation occurring.

6. The key to success – an integrated economy

The concept of an integrated economy has been presented in various formats by NIEIR in the past two years. The following text relates closely to a similar chapter in a report for NACC/NIETL in Melbourne's North. Very similar issues face Melbourne's North and West as they both emerge as complex supply chain led production and service based economies. Both have strong growing populations; have higher than average levels of unemployment and shortfalls in economic capacities in key areas. As this report shows there are significant differences between the two in many areas, but the battle to become a more integrated economy is shared by both.

One of the paradoxes of the new knowledge economy is that proximity has remained a key strategic advantage. Despite the fact that information and goods are transported further and faster than ever before, there are significant advantages for businesses working in clusters of like industries. Another key strategic advantage is to be located close to a high-skilled workforce.

The success of the manufacturing sector, and the well-being of households in general, is dependent on the ability of the region to develop modern complex supply chains and provide connected business services and high-skilled workers. A strong interconnected and effective supply chain requires that each of the many components in the chain, and preferably those that provide the strongest employment and incomes, need to be large enough to contribute to the chain’s strength, resilience and knowledge integration. In a successful supply chain the transfer of risk and information along the chain is accentuated in order to provide higher quality outcomes. In turn the connections drive the relative competitiveness of products produced in these environs vis-à-vis those produced in comparative isolation.

When the complex supply chain is further supported by a population and an environment that is invigorating and vital, its real cost is reduced. Consider an outback mining community, which is the epitome of a well structured but not complex supply chain: intermediate goods, labour and personal needs are all supplied in house. The problem is that in such an environment the cost of providing workers is enormous, as is the cost of ensuring the supply chain is kept stable.

Compare this to a firm in the region of Ryde in Sydney; it too needs ready access to intermediate goods, but is in close proximity to a large number of firms possibly competing to provide goods. The firm would also need skilled workers, who in turn would require appropriate amenity to meet their personal needs. However, instead of having a high cost of providing this chain the firm in Ryde is provided with this support at no additional cost.

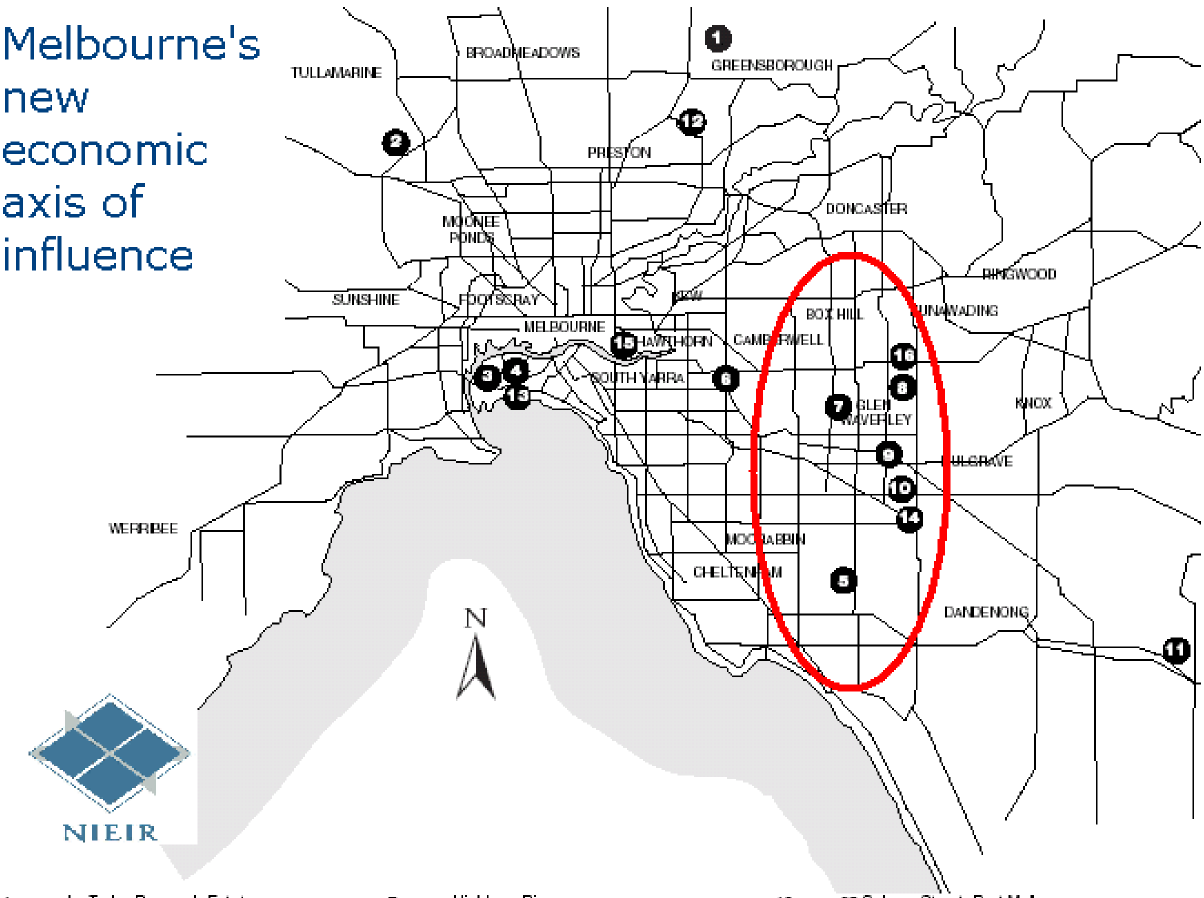
To develop a complex supply chain and achieve strategic advantage a range of economic activities must be provided within a region. NIEIR research shows that whilst economic theory suggests a region should concentrate on only what they are good at, the regions with the best employment and incomes have a healthy mix of manufacturing, retail, government and business services. In the analytical tool applied in subsequent chapters the level of integration will be an important component.

From national research, NIEIR has identified a number of regions that have strong economic outcomes. Analysis of these regions provides a wealth of information that point the way forward for the western region. These regions are evolving concentrations of activity in the four key areas of economic development:

- quality manufacturing;
- business services;
- retail; and
- government administration and education.

One of the strongest performing regional economies surrounds Ryde in Sydney because it provides a strong mix of manufacturing, business services, retail, government administration and education. In this area Macquarie University is located in close proximity to a large retail complex, a high-tech park with tenants including Compaq and Microsoft along with high tech manufacturing.

Another region developing economic integration quickly, with consequent healthy economic outcomes, is the eastern region formed along the path of the Mitcham Frankston (Scoresby) Freeway Corridor. This region has healthy levels of activity in each of the key areas. An illustration of the region is shown below along with key high-tech sites of interest in Melbourne.



1. La Trobe Research Estate
2. Tullamarine International Trade Park
3. Southport Technology Park
4. Portside Business Park
5. Wellington - Gipps
6. Hawthorn Technology Centre
7. Highbury Rise
8. Tally Ho Technology Park
9. Monash Business Park
10. Monash Science & Technology Park
11. Berwick Business Park
12. La Trobe University Research Park
13. 22 Salmon Street, Port Melbourne
14. Monash Gateway
15. 658 Church Street, Richmond
16. Woodvale

The eastern region is achieving very strong economic growth, strong employment growth, higher than average skilled employment and incomes are rising. Most importantly the region is becoming a viable location for future high-tech business to locate in a non-CBD region. The addition of the new Mitcham – Frankston Tollway will further enhance the connections between the region and the manufacturing centres to the south of Dandenong as well as the workforce in the north east from Doncaster and Templestowe through to the north of Ringwood.

Given the current size of the western economy, that is, large enough to be considered an economic zone, the rapid degeneration of manufacturing in the inner areas and the significant anticipated population growth, it is imperative for the region to act as an integrated economy.

In a non co-operative scenario, the success of the manufacturing sector in the west could continue and perhaps provide 10 per cent of the local employment needs. However, the level of success would be stifled by limited access to business services. The region would continue to face deficient provision of government services locally, and a constrained retail sector.

If on the other hand, there were a significantly increased level of employment in high-skilled manufacturing, this would stimulate growth in business services and perhaps government and education. Furthermore, well-integrated supply chains would increase the value created at all stages of production and contribute to strong real income growth. This of course provides additional retail spending potential which will drive further expansion of retail output. Juxtapose this scenario, to one in which growth is driven by increasing income of those workers living in the west and working elsewhere. Undoubtedly retail in the West would grow, but to a lesser extent because a large component of retail spending is linked to broader economic activity. But how would this increase in income drive other types of employment such as in manufacturing or business services? It wouldn't, these positions would simply grow in the areas that the West’s workers travel to.

If the advantages of amenity and scale of the activity centres located in the inner regions are not maximised through increasing employment, the populations of Moonee Valley, Hobsons Bay and Maribyrnong will increasingly continue to access opportunities in the City or in the Inner Core, and the remaining areas of the western economy will suffer.

The amenity relates primarily to access, diversity of opportunities and the eclectic nature of the built form. The eclectic nature of these inner suburbs provides for the many forms of individual and organisational expression. In other ways it will also allow for a density that could not be achieved as easily in a homogenous suburban context. Scale is related to the concentration of population, the network of public transport and proximity to the key education region of Parkville.

It is true that there is tension between additional residents being attracted to the inner region and finding jobs for those that are already there, however the alternative isn’t simply less people and more opportunities for the current population. Without growth, increased population and utilisation of the amenity of the inner western region, the employment per population may actually be lower.

7. Measure and compare – the analytical tool

7.1 Introduction

In order to measure and analyse the strengths and weaknesses of a region NIEIR has developed a series of economic indicators based on data collected across time and from a variety of sources. These indicators are grouped under broad headings and are described both in brief and in detail in this chapter.

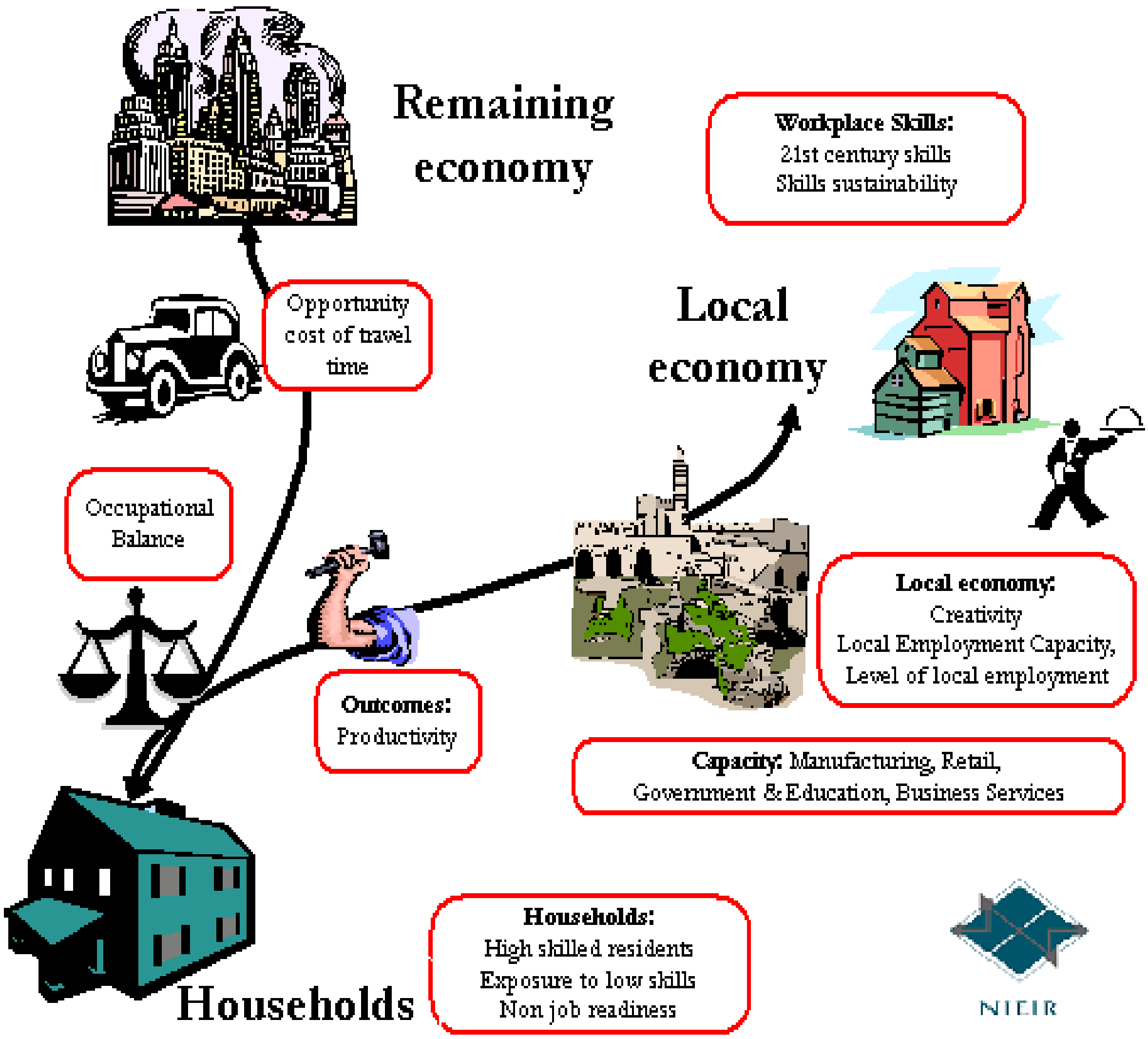
Each group of indicators relates to a critical component of a region's employment strength or productive capability and represents a path to improving outcomes for the region. The indicators are unequivocally positive in orientation, that is, all other things held equal, an improvement in an indicator will lead to an improvement across the region's economy.

7.2 Overview of the economic indicators

The economic indicators that make up the analytical tool fall into broad groupings as shown in the diagram below. NIEIR describes this diagram as a roadmap because economic and social outcomes are dependent on the various characteristics described and measured with planning and policy decisions impacting upon the future success of the regional economy.

This section provides a brief introduction to each of the indicators.

Road map of the economic indicators



7.2.1 Households

High skilled residents, Exposure to low skills, Non job readiness

This group of indicators builds an understanding of the skill level of households, the proportion of highly skilled and lowly skilled residents and estimates the number of residents who are considered as not ready to move into work or are unable to find work.

The level of highly valued skills and exposure to low skills within the resident population will not only provide an indication of the capacity of the local economy to build strong employment and innovation, it will also point towards the expected levels of income growth which will help drive the local employment potential of the future.

When the capacity for employment is measured it is important to assess the capacity of the resident workforce to provide workers. In many regions the levels of non-job ready individuals is very high. This reduces the effective size of the labour force and introduces weakness into the labour market. In these circumstances it is likely that businesses will face increased costs in hiring and retaining staff. As the labour supply decreases business is likely to have additional costs associated with retraining existing staff.

7.2.2 Workplace skills

21st century skills, Skills sustainability

These indicators build our understanding of the changing nature of the workforce, the workplace skills required by industry currently in the region and provide signposts to the capacity of the resident workforce to meet the employment requirements of the future that could be attributed to technological change.

7.2.3 Capacity

Manufacturing, Retail, Government & Education, Business Services

The capacity of a regional economy to deliver employment outcomes is inherently related to the integration and balance across industry sectors. The degree to which a region suffers shortfalls or surpluses in the key areas of manufacturing, retail, government/education and business services provides the primary indication of the structural adequacy to support the region moving forward.

7.2.4 Local economy

Creativity, Employment Generation Ratio, Local Employment Capacity, High-Tech Capacity, Power Employment

This cluster of indicators measures the ability of a regional economy to generate opportunities and provide employment and growth from current local activity and future economic developments.

The past twenty years has seen a phenomenal increase in the returns to high-skilled labour. These highly creative individuals are now demanding a lifestyle return for their skills, not simply high pay. The result is that regions that can consistently attract and retain these individuals are developing key strategic advantages in the modern economy. Based on work in the US by Richard Florida[2] we rate the success of regions in Melbourne in terms of ‘creativity’. The regions that have the best creativity will have significant advantages in the future.

“The past 20 years have seen a phenomenal increase in the returns to high-skilled labour.”

The future prosperity of the region also relates to the intensity of ‘high-tech’ industries. These industries typically promote technological transfer, encourage the development of human capital and provide the basis for research and development.

The Employment Generation Ratio compares the number of jobs available in the region to the resident population. This indicator provides analysis of the scale of employment offered

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2 “The Rise of the Creative Class’, Richard Florida 2000.

and, in a modern economy, an indication of the breadth of employment. With the decline of the large scale employer in Australian cities a region with high levels of employment is very likely to be highly diversified.

To provide further insight we also consider the number of residents employed locally compared to the number of residents employed and compared to the number of jobs available locally. This indicator builds an understanding of impact of local employment on the region and the local capacity to generate employment outcomes.

The capacity of the regional economy to offer 'power jobs' that are well paid, full-time and on-going rather than casual is crucial in the development of successful social outcomes.

7.2.5 Outcomes

Productivity, Labour utilisation

Productivity and labour utilisation are both outcome-oriented indicators that warrant attention. The productivity indicator tests the ratio between the levels of income actually received and the levels of income expected based on national trends given the level of employment and nature of employment provided to residents in the area. Labour utilisation measures the percentage of total available hours that were worked by residents in an area. A region that is utilising a high percentage of available hours is likely to be suffering less unemployment and underemployment. The community is also more likely to be able to support the types of education and services crucial for local economic development.

7.2.6 Occupational balance

The comparison of the skills available within the resident workforce to the skills required by employers within a region provides signposts for the future development. Where the level of skills in the resident population is not as high as the average level employed in workplaces in the area, the region is a net importer of skills. The implications being that there is a reduction in the levels of effective income that is retained in the area and a capacity for training that is not necessarily being met.

Assuming all other factors being equal, the advantage of being a net exporter of skills, that is, a region where the skills intensity of residents is higher than the intensity of the workforce, is the capacity to generate imported income with the economic multiplier effects building further positive outcomes.

7.2.7 Opportunity cost of travel

This indicator measures the opportunity cost of travel, incorporating the time taken to travel to and from work, the cost as a percentage of weekly income and the social implications of time lost to interact with the local community.

7.3 Definitions of the economic indicators

In this section each of the economic indicators used to evaluate the western regional economy is described in detail. The indicators are grouped to correspond to the road map and summaries provided in Section 7.2.

7.3.1 Households

High Skilled Residents

Historically highly skilled residents attract the highest rates of income and employment growth. Strong rates of growth in residential income stimulate local retail and social infrastructure and generate the wealth required to employ local people. Those areas that have high skilled residents are more likely to be able to generate high skilled industries. This dynamic will strengthen in the future as industries are less likely to require access to a large unskilled population base for labour and there is less reliance on geographic and transport links to raw materials.

"The past 20 years have seen a phenomenal increase in the returns to high-skilled labour."

For occupations that do require the person to travel to a CBD, a university or industrial production centre, the trend has been for those people to choose to live in areas that provide high convenience and good lifestyle outcomes.

The skill level of residents also impacts on confidence to make long-term investment decisions. For instance a household that has moderately paid but low skilled positions is far less likely to invest long term in the local community if they cannot be sure of employment in that area in the future. High skilled persons living in households in the region can more readily take on risk, for example, by developing small business opportunities, increasing specific skills through further education, or by investing in housing, as they are more likely to be comfortable with future income prospects.

This ability to manage risk cannot be underestimated when considering the strength of a region to generate economic development. With Australian governments wary of specific risk-reducing industry support and training that is tailored to specific outcomes, the households are left with the burden of risk management. Specific support in Australia is pejoratively called 'picking winners', and is avoided. This leaves the region to generate its own critical mass of risk management to underpin development.

This critical mass can be generated through development of extensive networks of small and medium enterprises that diversify the risk in any production process through cooperation. This model dominates the Silicon Valley in the United States and is developing around a university or research base in Australia. More commonly, development relies on the total wealth of the community being large enough for the most risk taking amongst it to forge ahead with new ideas.

The indicator is calculated as follows:

$$High\text{-}skilled\ Residents = \frac{High\ skilled\ workers\ living\ in\ region}{Total\ resident\ workforce + 200}$$

Data source: 2001 ABS Census residents 4 digit ASCO occupations.

The addition of 200 to the denominator is used to reduce artificial variation in small communities, in larger SLA's such as those in the western metropolitan region the impact is minimal.

Table 7.1 Regional correlation between resident skills and local industry (per cent)

Victoria and NSW	1991	1996	1998	2001
High skilled residents / Global knowledge workers	23.9	41.8	47.9	54.6
High skilled residents / Industry skills sustainability	81.9	86.8	86.4	82.2
All Australia				
High skilled residents / Global knowledge workers	14.1	34.3	39.9	46.4
High skilled residents / Industry skills sustainability	83.0	87.5	87.3	83.1

Source: Yourplace database

The emerging issue in the economy over the past decade has been the impetus for the location of new high skilled work opportunities to be driven by the supply of high skilled local residents. The table above shows that there has always been a high level of correlation between the locations of high skilled residents and areas which have low exposure and strong reliance on high skilled work as measured by the skills sustainability measure.

The emergence of the knowledge economy in the past decade has followed a distinct pattern. It its infancy knowledge workers were predominantly based in the capital cities, and they may have lived in a range of areas. Hence the correlation between high skilled households and the location of knowledge workers was low (23.9 per cent in NSW and Victoria and 14.1 per cent in Australia as a whole). However, the evolution of the highest skilled regions has been driven by the preference of global knowledge workers in terms of house location. Put simply, knowledge workers have been very likely creating employment in the locations in which they live. This is evidenced by the much stronger relationship that now exists in the correlation between high skilled households and the location of knowledge workers which has grown to a level of 54.6 per cent in 2001 in Victoria and NSW and to 46.4 per cent nationwide.

Using the above relationship, measuring the level of high skilled residents in a region can also serve as a strong pointer towards the expected level of endogenous (from within) development in emerging high skill sectors. In addition, as these occupations are also those which have experienced the strongest growth in incomes, this force has been one which has led to the increase in the inequality between regions in Australia.

Exposure to Low Skills

The prosperity of a region is linked to both the region's industry growth and the income and employment of its residents. It is important to identify when the income and employment of residents is at risk. Over time, the trend in employment and associated income levels has been for a movement away from low or general skills to higher and more specialised skills.

Production processes in all industries have achieved productivity improvements by replacing the most basic processes with some form of codification or automation. There is no reason to suggest that this trend will not continue. If the proportion of full-time equivalent low skill jobs continues to decrease, those previously employed in low skilled positions will be made unemployed and/or will require retraining. When a region is slow to adapt to production processes that utilise the more high skilled occupations, this fall in low skilled employment can come at great social cost. Natural ageing of the workforce is inclined to move the lower skilled, who on average are older, out of the workforce at an earlier than anticipated age. For the younger low skilled, this can mark the beginning of long-term unemployment.

The recent changes to workplace relations and the current boom in retail sales have seen the worst elements of this risk played out in the suburbs of Australia. Despite the historically unprecedented growth in retail sales the levels of effective wealth that are being created in local communities is appalling.

Table 7.2 Employment

Occupation	1996 Aust. Employment, 000’s	2001 Aust. Employment, 000’s	2001, average hrs	2001, average income ($per wk)
Sales assistants	375	471	24.1	358
Checkout operators & cashiers	76	88	19.1	240
Waiters	64	80	20.3	268
Storepersons	104	127	30.3	451
Receptionists	100	114	29.4	439
Cleaners	170	181	24.4	369
Total	**889**	**1,061**	**24.8**	**363**

Source: *ABS ASCO data*

Occupations such as those shown above provide both evidence for and proxies of the evolution of the ‘working poor’ within Australia. Conversely, the figures are also indicative of increasing opportunities for those seeking only a small role in the workforce. When the proportion of low-skilled and clerical workers in the resident workforce approaches high levels, NIEIR is confident that this signals the existence of a large population of working poor.

The indicator measures the proportion of residents employed in low skilled and clerical positions. Again 200 is included in the denominator to smooth variations in smaller SLAs.

$$Low\,Skills\,\&\,Clerical\;Exposure = 1 - \frac{Low\,Skilled\,\&\,Clerical\,Worker\;Residents}{Total\;resident\;workforce + 200}$$

Data source: 2001 ABS Census residents 4 digit ASCO occupations.

Non-job ready

The significance of this indicator has been extensively discussed in Chapter 10, 'Introduction to the western region economy', please refer to Section 4.10.2. As stated previously:

> "When the region is being assessed for sustainability of growth opportunities, the number of non-job ready is crucial for that determination. When regions face a high level of short-term unemployment coupled with a high degree of non-job ready, the households face a high level of employment stress "

In the face of employment stress it is exceptionally difficult for a region's residents to fund self-education, to overcome the search costs of new employment opportunities, to save for investment in private small or medium enterprises or to fund the development of non-labour income opportunities. In short, managing the level of non-job ready is crucial to the road map of regional success.

The indicator provides a measure of the structural barriers facing unemployed residents through consideration of the long-term unemployed, recipients of the Disability Support Pension, single parents who face difficulties in accessing the labour market and migrant unemployed who experience multiple barriers.

$$\%NJ = \frac{\left(Long - term\ unemployed + DSP + 0.5 * Single\,Parent + 0.5 * Migrant\,unemployed\right)}{Population\,18\text{-}65}$$

Data source: 2001 Centrelink recipient information + ABS estimated resident population (ERP)

7.3.2 Workplace skills

The two economic indicators in this group, Workplace 21st Century Skills and Skills Sustainability build our understanding of the impact of the changes to our workforce. Those changes include: the development of a global economy, the focus on the exchange of information, the growth of the bio-technology based industries and the general increase of skill level required across all industries.

The NIEIR has developed an occupation classification scheme that is based on an understanding of how these changes and future trends will impact on job creation. The scheme is built on the work of Robert Reich[3]. The system divides occupations into three broad groups: Routine Workers, In-person Service Workers and Symbolic Analysts.

A sub-classification within the system is the Global Knowledge Flow Worker. This group spans both the Symbolic Analysts and the In-person Service Workers. Occupations in this category are fundamentally involved with the transfer of information within an economy. Whether they provide the technical expertise behind this transfer, eg computer programmers or technicians or whether they designed the information content, they play a pivotal role in the dissemination of knowledge.

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[3] "The Work of Nations', Robert Reich 1996.

Workplace 21st Century Skills

This indicator measures a region's connectedness to the global flow of knowledge and innovative capacity. It assesses how well placed the region is to take advantage of global information flows and participate in innovative value creating enterprise networks.

"In the knowledge economy, dense flows of knowledge and learning within a region and between global centres are critical for innovation and regional competitiveness."

In the knowledge economy, dense flows of knowledge and learning within a region and between global centres are critical for innovation and regional competitiveness. Regions with a high proportion of global knowledge flow workers are best equipped with the skills needed to emerge as hubs and nodes in creative global networks.

In the early nineties the building blocks of these hubs and nodes were in place. The differences between regions were small. In 1991, metropolitan Melbourne had an average proportion of global knowledge flow workers of 3.3%. In fact, the nation's best-placed and most successful region, North Sydney, only had 13% of its workforce classified as global knowledge workers. The explosion in the importance of global knowledge workers since has dramatically affected these concentrations. North Sydney now has over 42 per cent of its workers in these occupations, whilst the City of Melbourne has 34.5 per cent.

It is not possible for all regions to be hubs of global knowledge capable of competing on a worldwide basis. Therefore planning and policy are critical to ensure that the western region benefits from the outcomes generated by being an effective hub of knowledge flows. Local and government planning must focus on meeting the needs of local business, in particular business services, education/training and personal services. This strategy will ensure the amenity to retain and attract global knowledge workers and information focused businesses. There is the potential for the inner western region to attract businesses from these sectors as they are squeezed out of the CBD.

This indicator measures the number of workers employed in the region in jobs that require 21st century skills (refer following table) divided by the total number of workers employed in the western region.

Table 7.3 21st century skills

Accountants and auditors	Business and organisation analysts
Chemists	Computing professionals
Computing support technicians	Designers and illustrators
Economists	Electrical and electronics engineers
Film, TV, radio and stage directors	Finance managers
Financial dealers, brokers and advisers	Geologists and geophysicists
Human resource professionals	Importers, exporters and wholesalers
Information technology managers	Journalists and authors
Legal professionals	Librarians
Library technicians	Life scientists
Marketing and advertising professionals	Mathematicians, statisticians and actuaries
Media presenters	Media producers and artistic directors
Medical scientists	Medical technical officers
Natural and physical science professionals	Policy and planning managers
Project and program administrators	Property professionals
Sales and marketing managers	Science technical officers
Science, building and engineering professionals	Technical sales representatives

Data source: 2001 ABS Census journey to work 4 digit ASCO occupations

Workplace Skills Sustainability

This indicator measures the potential for growth based on the ratio of skilled workers to routine workers. The definition of skilled workers used here is broader than that of the global knowledge workers and is based on the Reichian definition of symbolic analysts.

A region with a high score has the higher ratio of symbolic analysts to routine workers and therefore the highest potential for externally driven job growth. A large number of symbolic analysts is a positive sign for future externally driven job growth because it is the application of skills and technology which drives innovation, maintains margins and promotes export capacity.

However a relatively large proportion of routine workers suggests that many in the local economy are vulnerable to future job losses through automation and codification. Because the indicator is generated as a ratio, it successfully accentuates the extreme of industrial structures. At one end will be a large-scale production process with a very limited number of analytic supervisory positions. This process may have only one symbolic analyst for every thirty processing type workers. Examples of this type of process include: traditional manufacturing firms, large-scale retail centres and distribution centres.

At the other end of the scale, a company marketing technical components, an accountancy business or a design/desk-top publishing company can easily accommodate five symbolic analysts that are supported by one or two routine workers.

$$Workplace\ Skills\ Sustainability = \frac{Symbolic\ Analysts\ employed\ in\ the\ area}{Routine\ Workers\ employed\ in\ the\ area + 200}$$ [4]

[4] The addition of 200 to the denominator is purely used to reduce artificial variation in small communities, in larger SLA's such as those in the MWACC region the impact is minimal.

7.3.3 Capacity

Manufacturing, Retail, Government & Education, Business Services

Research and analysis of regions across Australia has focused attention on four key sectors of industry: Manufacturing, Government and Education, Retail and Business Services. Regions achieving strong economic outcomes have robust concentrations of each sector, in many instances well above the expected share when compared to the share of population.

There may well be argument about cause and effect, however the NIEIR believes that balance and integration across the four sectors in combination with an appropriate share of activity in line with a region's share of population will create an environment that produces employment outcomes, encourages economic growth and fosters opportunity.

The surplus or shortfall for each industry sector is calculated using the following formula:

$$Surplus\ (Shortfall)_i = \frac{Share\,of\ Metro\left(NonCBD\,or\ Rural\right)\ employment\,in\,industry\ i}{Share\,ofMetro\left(NonCBD\,or\ Rural\right)\,population}$$

where,

$i\quad is\ \ Manufacturing\,(nonPetro,TCF\,),Retail,Government/Education\,or\ Business\,Services$

The calculation incorporates the region's share of Melbourne's population along with its share of workplace employment in each industry type. The industries analysed are retail, government services including education, business services and manufacturing (excluding petroleum and textile clothing and footwear (TCF)). All other manufacturing, including chemicals and automotive are included. As the Central Business District (CBD) has a very high concentration of government and business services it is excluded from the calculations.

The removal of the petro-chemical and TCF industries is designed to minimise the impact of the locational specific advantages of the port and the historical placement of the TCF industries, which have been in rapid decline. NIEIR doesn't believe the TCF will improve in the medium to long term and therefore removes any possible incorrect inference of future success of a region due to remaining TCF concentrations. It is worth noting that the areas of the western metropolitan region that have remaining TCF businesses generally have strength in other areas of manufacturing.

The removal of the CBD from the analysis of the government / education sector is crucial to ensure that the comparisons made are on the basis of the current level of decentralisation. Of course if more decentralisation was to occur this would provide additional benefits to the regional economies.

7.3.4 Local economy

Creativity

The rise of the new global economy has radically altered the ways that cities and regions establish and maintain their competitive advantage. In the new economy, regions develop advantage based on their ability to quickly mobilize talented and creative people, resources, and capabilities required to turn innovations into new business ideas and commercial products.

The nexus of competitive advantage shifts to those regions that can generate, retain, and attract the best talent. This is particularly so since Global Knowledge Flow Workers and other symbolic analysts are extremely mobile and the distribution of talent is highly skewed. How do regions attract this type of talent to their communities? How do these talented individuals make their residential decisions? What are the distinguishing factors that set the high-technology centres apart from other areas?

"Competitive advantage shifts to those regions that can generate, retain and attract the best talent."

Richard Florida[5] and his colleagues in America theorize that a city's tolerance and acceptance of diversity – its level of tolerance for a wide range of people – is a key to its success in attracting talented people. Diverse, inclusive communities that welcome unconventional people – same sex households, immigrants, artists, and free-thinking "bohemians" – are ideal for nurturing the creativity and innovation that characterize the knowledge economy. More specifically he has created the "creative capital theory". This theory postulates that economic growth is determined by the locational choices of the holders of creative capital. The theory identifies the type of human capital, creative people who are the key to economic growth, and secondly, it identifies the underlying factors that shape the locational decisions of these creative people.

Consequently, Florida has developed a suite of indicators that benchmark regions against others in order to identify areas with a high "Creative Class" component in their regional demography. We have adopted Florida's techniques to derive the same set of indicators for Australian regions, to facilitate comparison between the two countries and identify correlations between the indicators and high-tech regions.

The application of the creativity measure to the western metropolitan region is very important to identify how the region is traveling in terms of attracting and retaining its talented and creative individuals. Due to data availability the creativity measure can only be provided at a local government area level and will be expressed as the rank of the local government in Australia.

The formula used is very complex and has not been reproduced here. A wide range of factors are taken into account including: diversity of the residents based on for example qualifications, country of origin and family structure; bohemian occupations; number of patents; and high tech output.

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5 The Rise of the Creative Class, 2002, Basic Books, New York.

Employment Generation Ratio

The most important of all of the indicators utilised is the relative level of local employment capacity defined as the number of jobs in workplaces in the region as compared to the number of people that live in the area. A thick layer of employment provides a significant advantage for residents through opportunity and proximity to a wider range and greater number of jobs.

This basic measure is critical to the analysis of the strength of a local economy and as such is included in this analysis with an increased weighting to other measures of interest.

$$EGR = \frac{Employment\ in\ workplaces\ in\ the\ region}{Estimated\ Resident\ Population\,(ERP)}$$

Local Employment Capacity

The employment generation ratio measured the level of employment in the area as compared to the resident population. There is a possibility for any given area that the nature of the workplaces are not consistent with the skills of the residents which can result in quite low levels of local residents employed.

Therefore NIEIR have employed a dual measure of the percentage of residents employed locally along with the percentage of employment that is provided to locals. The use of the two components is important because if a region has a relatively low level of total employment, but many of those jobs are provided to local residents then there is significant benefit to local capacity.

$$Local\ Employment = \frac{Residents\ employed\ locally}{Total\ resident\ employment} + \frac{Residents\ employed\ locally}{Total\ local\ employment}$$

High-tech Capacity

Strategies to create knowledge-based economies at the regional level must underpin the future planning and policies of the western metropolitan region. Increasingly, value adding will emanate from knowledge rather than physical assets. The NIEIR defines a knowledge-based economy as an economy where the acquisition and application of knowledge is paramount. In this economy - product development, coordination of production and distribution, management and marketing - have become increasingly complex. The knowledge intensity of products, processes and most jobs has increased. Successful regions are those where households, firms and institutions can acquire and create useable new knowledge faster than other regions.[6].

The knowledge economy is not confined to scientists in lab coats and academics, but straddles all industries and most occupations. Farmers, for example, are acquiring new skills in environmental management – ranging from maintaining the health of fragile soils, replanting and developing systems to managing scarce water supplies. They are also linking into market intelligence systems, developing accounting and financial management skills, and tapping into new ideas about diversification and product development.

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[6] State of the Regions 2001, Australian Local Government Association.

A well-managed and resourced retail franchise business is an example of the application of knowledge in a traditionally low-tech environment. The franchisor can help manage inventories, marketing, product development and manage and disseminate system wide information to the local area. In turn local experience in one store or location can be spread around the rest of the system to increase profitability.

Competitive manufacturers are engaging in continuous process and product development, and participating in local and global networks that draw on the expertise and resources of customers and suppliers. The western region needs these manufacturers as well as the local networks to support them.

Local businesses are becoming more knowledge intensive, particularly in regions where new employment opportunities are predominantly through self-employment. Running your own business requires a number of knowledge intensive skills such as business planning, financial management, computer literacy, product development, inventory control and marketing. A regional economy becomes knowledge-based not only by increasing levels and access to formal education, although this is an important part of the process. The western economy should demand world class education facilities – universities, TAFE and schools. The process of driving the demand begins with educating residents to understand that local education equals new jobs that they and their children can access.

The high-tech indicator ranks a region on two criteria:

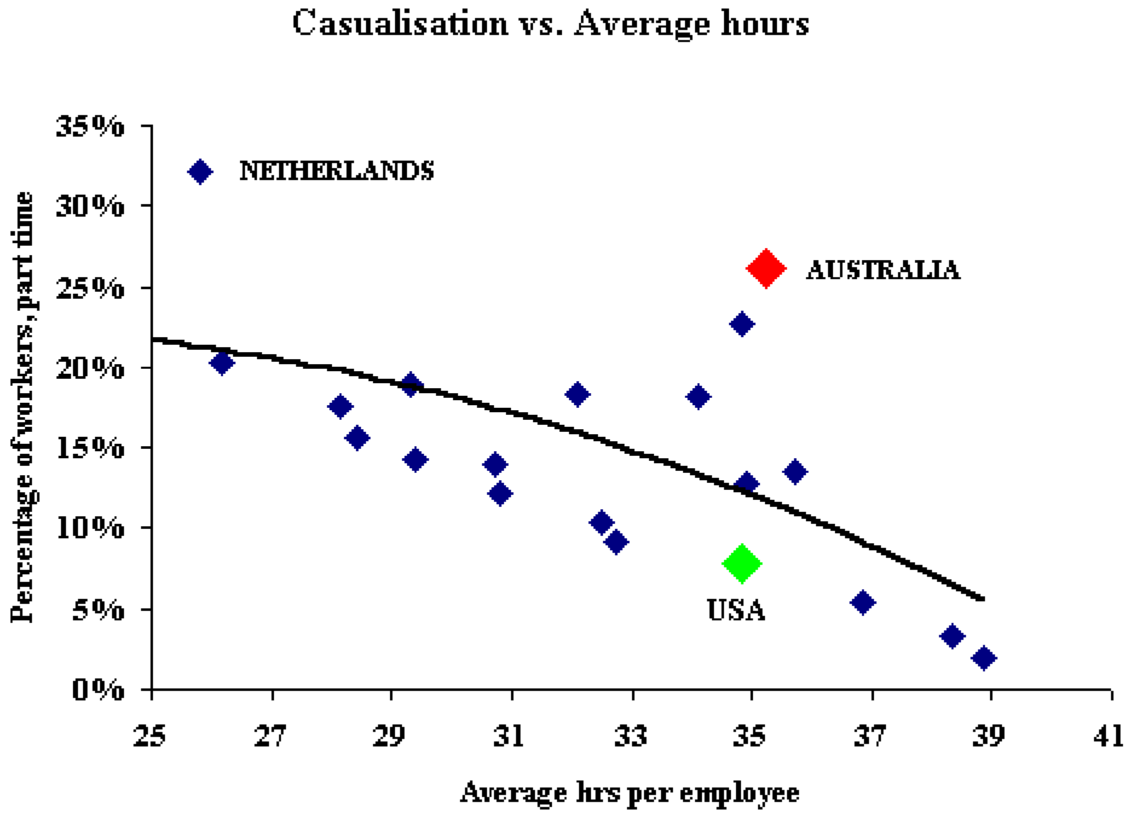
- One is the percentage of the output of the nation's high-tech industry that is contributed by the particular region; i.e. if Australia had 1000 units of high tech output and the West had 100 units then the percentage of output would be 10 per cent.
- The other compares the percentage of high-tech output as a percentage of total output in the region, to the nationwide share of total output that high-tech output represents. If the region had 500 units of total output then the 100 units would represent 20 per cent of local high-tech output. If Australia produced 10,000 units of total output then its share of output would be 10 per cent. The West’s ratio would therefore be 2 as its local share is twice as high.

The combination of these two criteria purports to identify regions that contribute significantly to the nation's high technology output. i.e in the example above the West would have a score of 10 per cent times a ratio of 2 or a score of 20 per cent.

Power Employment

Previously we noted that as the proportion of low skilled and clerical workers increase within a region there is likely to be a corresponding growth in the numbers of working poor. The increasing casualisation of the workforce together with Australia’s inability to distribute more evenly the total pool of working hours in the same way as the rest of the world is promoting a significant underclass in Australia. The capacity of the western metropolitan economy to provide significant employment in occupations that can be characterised as well paid, full time and plentiful is crucial in the development of successful social outcomes.

“The capacity of the western metropolitan economy to provide significant employment in occupations that can be characterised as well paid, full time and plentiful is crucial in the development of successful social outcomes.”



The degree to which Australia fails to equitably share employment is shown clearly in the graph above. Despite having a very high share of part-time work (the 2nd highest in the OECD) the average hours worked is still very high. This implies that the average hours worked by full-time workers will be very high and therefore Australia will have a higher level of unemployment than other nations.

Table 7.4 International comparison of hours worked and levels of casualisation

Country	Total Hours per year per person	Average hours per week per person	Proportion of part-time workers
Slovak Republic	2,026	38.9	0.0189
Mexico	1,863	35.7	0.1347
Australia	1,837	35.2	0.2619
United States	1,821	34.9	0.1282
New Zealand	1,817	34.8	0.2265
Canada	1,780	34.1	0.1812
Portugal	1,708	32.8	0.0924
Ireland	1,674	32.1	0.1837
Italy	1,606	30.8	0.1223
France	1,532	29.4	0.1423
Norway	1,364	26.2	0.2030
Netherlands	1,346	25.8	0.3214

Source: OECD 2002

It is clear from recent Census statistics describing by occupation average hours worked and income levels that professional and management roles are continuing to provide strong employment outcomes. Other than these jobs in management it is increasingly difficult to find similar occupations that deliver.

The following non-professional non-key managerial occupations continue to provide average income greater than $35,000 p.a, average hours worked greater than 37 hrs per week and more than 8,000 jobs nationwide.

Table 7.5 Power employment occupations

Project and Program Administrators	Plumbers
Real Estate Associate Professionals	Printing Machinists and Small Offset Printers
Hotel, Motel and Club Managers	Fire Fighters
Customer Service Managers	Chemical, Petroleum and Gas Plant Operators
Transport Company Managers	Insurance Investigators, Loss Adjusters & Agents
Ambulance Officers and Paramedics	Transport and Despatching Clerks
Safety Inspectors	Sales Representatives
General Mechanical Engineering Tradespersons	Motor Vehicle and Related Products Salespersons
Metal Fitters and Machinists, Toolmakers	Prison Officers
Aircraft Maintenance Engineers	Intermediate Plant Operators
Structural Steel and Welding Tradespersons	Mobile Construction Plant Operators
Electricians	Crane, Hoist and Lift Operators
Refrigeration and Air-conditioning Mechanics	Engineering Production Systems Workers
Electrical Distribution Tradespersons	Intermediate Stationary Plant Operators
Communications Tradespersons	Truck Drivers
Carpentry and Joinery Tradespersons	Train Drivers and Assistants
Fibrous Plasterers, Bricklayers & Floor Finishers	Structural Steel Construction Workers
Concreters	

Source: Yourplace database

By utilising occupational shares by Australian & New Zealand Industry Classification (ANZIC) 4-digit industry for Victoria we can assess the likely share of employment in the local area that would be in these ‘power’ occupations. In the western economy this share is very important considering the regions socio-demographic characteristics of lower than average incomes and higher unemployment.

Increasing the number of jobs across the range of power employment is important to provide quality outcomes especially for youth who are not destined for managerial roles. It is these jobs that can support a household and family, because they provide moderate incomes from full time employment. In addition, apart from the cyclical influences in sectors such as construction many of these occupations will provide a degree of employment security.

7.3.5 Outcomes

Productivity

The recent release of the 2001 Census provides a new insight into the comparative productivity of sub-regions of our economy. By utilising detailed information about the occupational structure and average hours worked of all individual residents within a region, we can determine the expected total income that the region would achieve if paid at average national rates for each occupation. Comparing the expected income with the actual income reported provides an insight into the comparative remuneration of workers in a region, which in turn provides an indication of the average productivity of a region. Of course at the micro-occupational level there will always be discrepancies that exist for a variety of seasonal, cyclical and local factors however when measured across the entire population for a substantial population size the inference is highly informative.

$$Productivity = \frac{Total\ regional\ income}{\sum_{i=1}^{All\ industries} Hrs_i \times AusRate_i}$$

The productivity indicator, which is an outcome oriented measure, provides an understanding of the region's strength because it indicates at a macro level the success of a region in matching its skills to those required in the national economy. Importantly, it is not a measure that discriminates on the basis of income or occupation but measures the ratio of the expected level of income to the level actually achieved.

For instance if all resident workers were sales assistants the productivity ratio would measure the total income of the region in comparison with the expected income of the region based on the average rates of pay for sales assistants and the numbers of hours worked by sales assistants in the region. If the region was paid on average 5 per cent more than expected this would be a better result than if the region's residents were doctors who achieved an average level of income that was 5 per cent lower than the expected level on national trends.

As the region become more successful the levels of productivity will increase as wage premiums are paid in relation to the higher value activity that would be occurring within the area.

Labour Utilisation

The Labour Utilisation indicator measures the hours worked by the resident labour force compared to available working hours. The available working hours are estimated by taking the labour force and multiplying by 37.5 (average full time weekly hours). A low rate reflects lower levels of total income and therefore lower spending within the region, which will constrain local economic growth prospects.

$$LU = \frac{Total\ hours\ worked\ by\ residents}{Population\ 18\text{ - }65 \times 37.5}$$

Participation rate variations and the growing number of workers in part time and casual work has undermined the usefulness of the unemployment rate as a measure of a community's success in winning work. This is because a worker is counted as employed even if he/she is able to obtain only 1 hour of work per week. As much job growth is now casual and part time, and many full time positions are being down scaled to part time, this measure is crucial in capturing these changes.

When we combine the rates of labour utilisation with the previously discussed issues of employment stress (short term unemployed and non job-ready) some connection between current employment outcomes and future economic progress is highlighted.

7.3.6 Occupational balance

This indicator measures the balance between the skills of the region's residents and the skills of the industry that exists in the local area. Any mismatch between the skills intensity of the region's residents and workplaces will have implications for future development.

In general NIEIR has found from previous research that, all other issues held constant, the higher the ratio between the skills intensity of the regions residents to the regions workers the stronger the path of development in the future as the human capital of the residents more successfully drives local development. This local development may take the form of small business start-ups, expansion of personal services or new industries which in turn will create further new employment growth.

The skills intensity is determined through the use of a weighting scheme based on broad occupational groups giving more weight to higher skilled employment and more senior positions. This weighting scheme has been utilised in the development of the NIEIR supply chain strength analysis used in the 2000 State of the Regions report.

Occupation Group	Value
Professionals	2
Managers and Administrators	1.6
Associate Professionals	1.2
Tradespersons and Related Workers	1
Advanced Clerical and Service Workers	0.8
Intermediate Clerical, Sales and Service Workers	0.5
Intermediate Production and Transport Workers	0.5
Labourers and Related Workers	0.3
Elementary Clerical, Sales and Service Workers	0.3

Using the weighting matrix the total score for residents and workers are both calculated. Dividing the two totals by either the number of residents or workers respectively provides a skills intensity of residents and a skills intensity of workers working in the area. The measure is then calculated as the ratio of both averages.

Once again the regions with lower than average skills are not disadvantaged as the measure is the relationship between the origin skills to the destination skills.

7.3.7 Opportunity cost of travel

Utilising the newly released 2001 Census Journey to Work data it is possible to construct an average travel time estimate for all workers in each area. NIEIR has purchased courier driver based drive time details for over 1000 origins and destinations within the metropolitan area.

The cost of travel will be a function of the time taken, the average amount of work done and the average level of income. To investigate the time impact of travel we measure the total two-way travel time in a five-day week divided by the average hours worked. To determine the opportunity cost of the travel we make an assumption of a single opportunity cost per hour of $16 for the entire economy. This amount is consistent with the behaviour of Australian drivers when faced with road tolls. Using the time taken and the opportunity cost per hour we can compare this amount to the average income per person in the region.

The car based drive time fails to include those residents that use public transport or utilise multi-purpose trips such as home to school to work. In general, however these options tend to be even more time-consuming and positively related to the car drive time. That is, the trends in drive time tend to match times taken for public transport use.

Assuming a single opportunity cost of time is problematic when only considered in terms of the income that could be derived in travel. The contention that is often expressed is that the loss of time should be related to the income generating capacity of the person who lost it. As such, time lost in the West is worth less than time lost in the East. Of course from a social viewpoint the costs are more importantly expressed in terms of loss of time with family and community and therefore it can be strongly argued that a single opportunity cost of time is consistent with the social impacts.

$$Opp\,Cost\,Travel = \frac{\$16 \times 10\,trips \times Average\,travel\,time\,(hrs)}{Average\,Income}\ \forall\ all\ variables$$

8. Analysis of the West Melbourne economy

8.1 Introduction

The NIEIR has utilised the analytical tool described in the previous chapter to assess each of the 12 statistical local areas (SLAs) that make up the Western economy. A score or ranking is provided for each economic indicator together with an interpretation and comparison of the region as a whole to 8 other regions from the Melbourne metropolitan region and Geelong. These regions include the following:

- Northern region
- Eastern Axis
- Inner Core
- South East Melbourne
- Geelong
- Inner South
- Inner East
- Melbourne.

Each region is formed as a combination of local government areas (LGA's) with the appropriate concordance found in Section 8.4.1.The above analysis will give a clear picture of the relative position of the Western economy in terms of where its strengths lie and where and to what extent any weaknesses are occurring.

By considering each indicator as a measure of a key element making up the pathway to quality economic outcomes it will also be apparent how inventions in one area are likely to impact across a broad range of measures and hence contribute to the evolution of the Western economy in terms of its success in providing employment.

8.2 Households

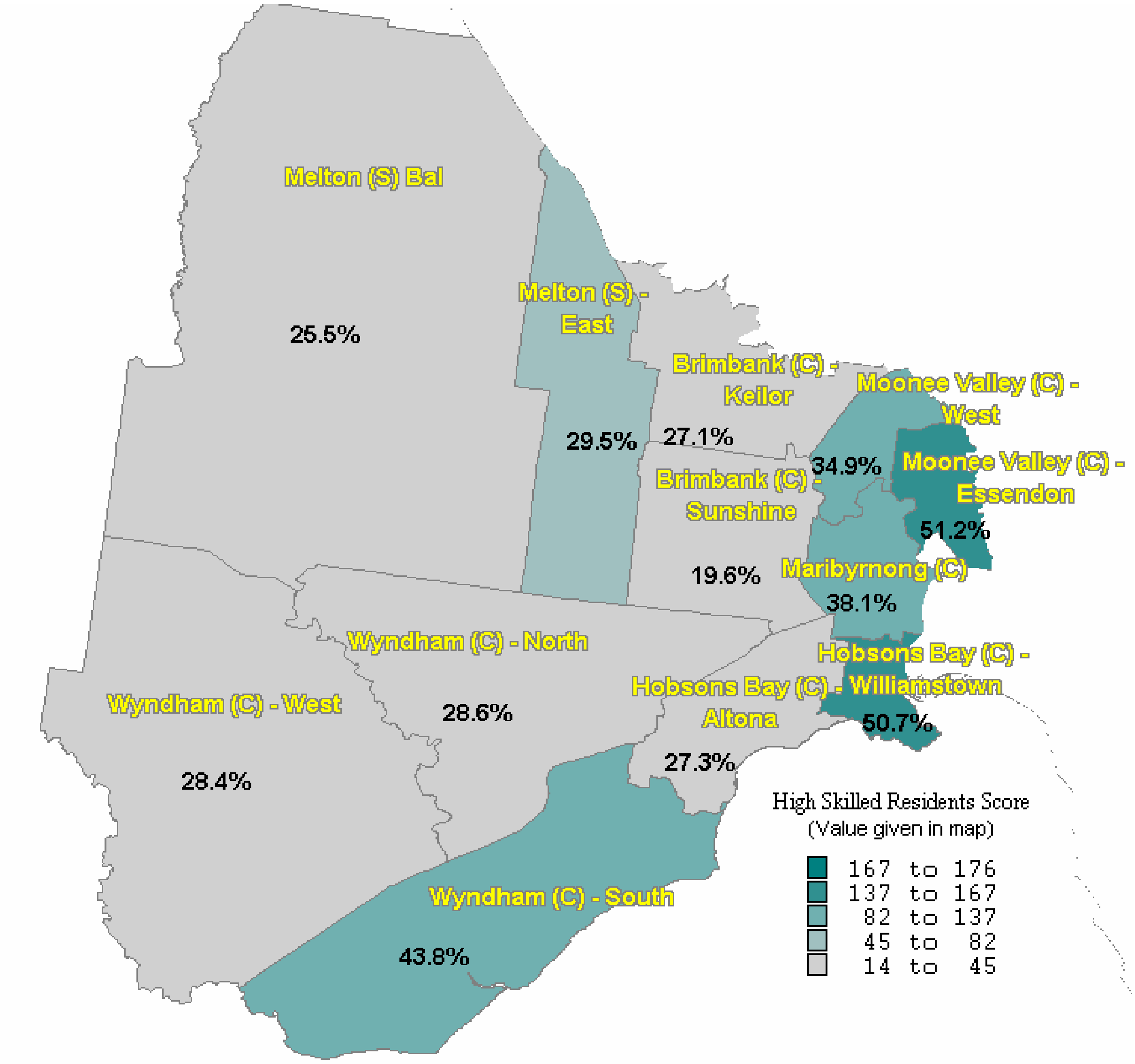
8.2.1 High Skilled Residents

Historically, in the Western region, outcomes of economic activity have largely flowed from local physical resources and proximity to markets rather than from the application of human capital. This is evident from the previous levels of low wealth and the significantly increasing skills base for the Western economy.

Economic trends appear to be moving away from returns generated by local resources such as the amount of clay in the ground to make bricks or the historical good luck of having a major car manufacturer in the region thereby determining the level of economic growth. Instead the focus will be on the level of skills that the region can assemble quickly to generate export dominated goods and services. The movement away from resources or locational advantage will adversely impact on the future locally derived wealth of the Western region unless new income streams can be generated. This has become even more important as the income aspirations of current residents continue to rise and property prices increase.

These forces of skills and connectivity will shape future planning pressures. Instead of battling to curb the impact of industrial activity, some regions especially in the inner west, are battling to keep some level of employment generating activity. The advantage of these new forces is that they are fundamentally driven by local demands rather than exogenous macro-economic effects that have dominated the prospects of the region for the past 20 years.

When we examine the skill level of residents we witness the variations that one would expect across a wide range of socio-demographic factors such as income and qualifications. Such differences, or regional disparities, in high-skilled residents are stark when we compare the proportion of high skilled workers within the Western region. The map below shows the indicator value for each of the statistical local areas presented while the shaded area gives an indication of the score as outlined by the legend.



The score for the high skilled residents is a standardised value based on the average level of skills, with an average of 100 for Victoria as a whole.

The strength of the local residents is generally poor although there are some sub regions such as Moonee Valley – Essendon, Hobsons Bay – Williamstown and Wyndham – South with high scores. The average for the Melbourne metropolitan area is 86.1 and for Western region the average is 46.2. This is the lowest in terms of the 8 larger regions examined and is only comparable to southeast metropolitan Melbourne, which scored 53.2. The skill levels of local residents represent a significant disadvantage to the region, particularly since competition for higher skilled businesses is high meaning that without the appropriate local human capital the potential to attract such business in the region is severely diminished.

Table 8.1 High Skilled Residents

SLA	Value*	Score
Wyndham (C) - North	28.6%	43
Wyndham (C) - South	43.8%	134
Wyndham (C) - West	28.4%	42
Hobson's Bay (C) – Altona	27.3%	37
Hobson's Bay (C) - Williamstown	50.7%	158
Brimbank (C) – Keilor	27.1%	36
Brimbank (C) – Sunshine	19.6%	14
Moonee Valley (C) - Essendon	51.2%	159
Moonee Valley (C) - West	34.9%	82
Maribyrnong (C)	38.1%	102
Melton (S) - East	29.5%	47
Melton (S) - Bal	25.5%	30
Metro High and Low		
Nillumbik (S) – South	64.6%	176
Brimbank (C) – Sunshine	19.6%	14

Source: YourPlace database

** See 7.3 for indicator definition*

The challenge is to take steps to drive local high skilled employment by encouraging the appropriate businesses to employ highly skilled residents in areas such as Essendon, Williamstown and Wyndham - South. The employment of these residents locally instead of travelling to other regions has a multiplier effect across the local economy.

8.2.2 Exposure to Low Skills

The scores for this indicator show that many of the SLAs have significant exposure to low skills and clerically based employment and that there is considerable variation amongst the different regions.

The importance of heavy industry and agriculture to the economy of metropolitan Melbourne exposes the uncertainty of employment for those communities with higher numbers of low skilled residents. The reliance on raw inputs and process rather than on human capital necessarily means that if the supply of raw inputs or the demand for finished product moves adversely the communities have few skills to transfer to other areas of its economy or to develop locally. In addition to external pressures, internal forces can also impact on low skilled residents, for example, when a successful company develops or imports new technologies into its production process the demand for skilled positions will exceed that of low skilled positions.

The actual prospects for the industries in the area are discussed separately. This indicator reflects the idea that, in a rapidly changing economy, significant employment pressures are borne by these low skilled positions. As explained in Chapter 5, it is not surprising to note the connection between the low-skilled and clerical measure and the levels of non-job ready.

Table 8.2 Low skills Clerical by region	
SLA	**Value***
Western Region	31.8%
Melbourne	25.8%
Australia	25.9%

Source: YourPlace database

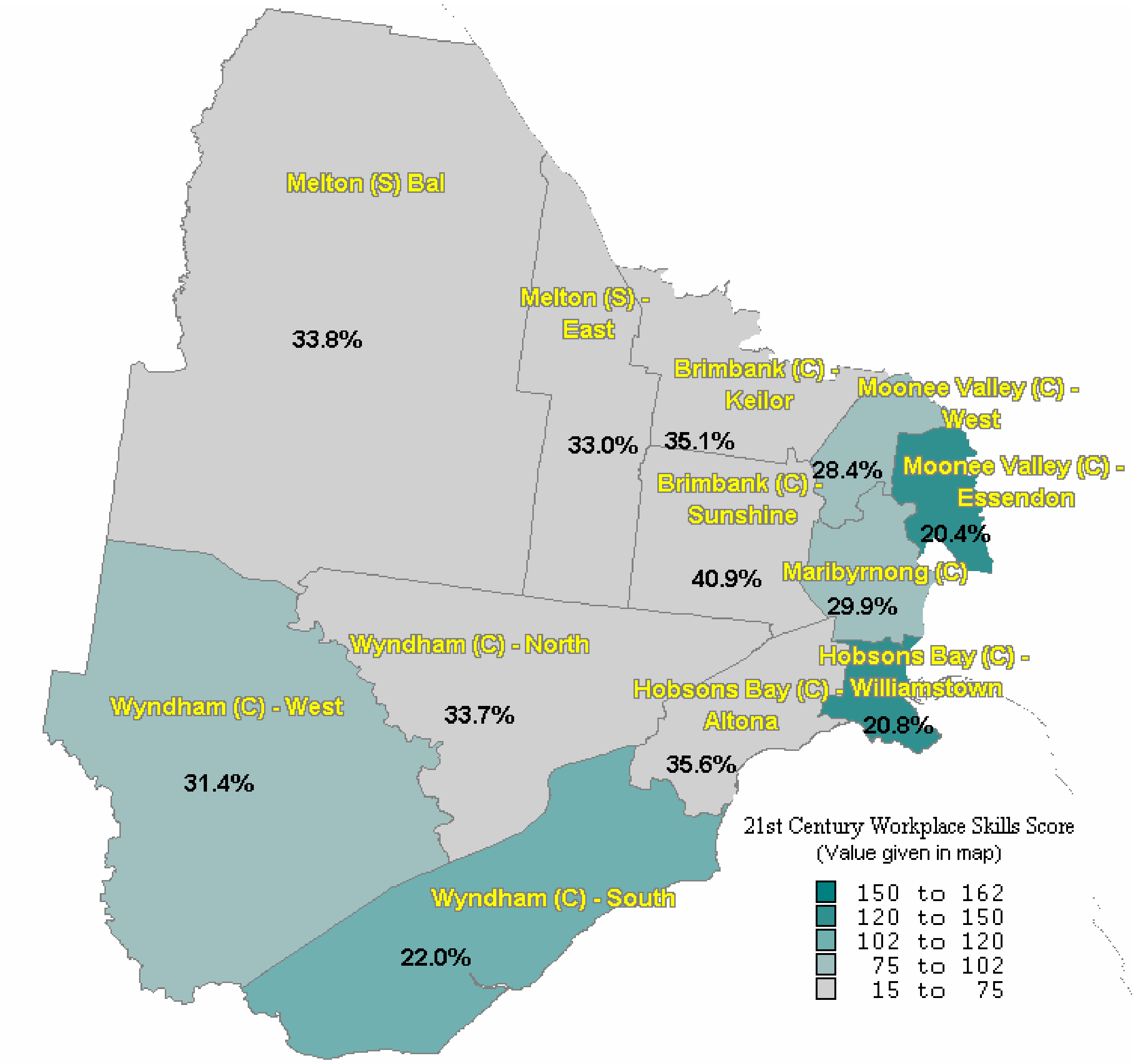
See 7.3 for indicator definition

The Western region has more average exposure to low skilled and clerical work compared to the Melbourne and Australian averages. In particular, the LGA's of Brimbank, Maribyrnong and Melton and some sections of Wyndham and Hobson's Bay have significantly more exposure to low skills than other areas of Australia. These regions must therefore work hard at developing industry policy designed to actively engage training for those who need skill development.

Reconciling the fact that growth in employment may lead to an increase in the proportion of low skills:

- One, the overall level of employment can increase without necessarily increasing the share of low skilled and clerical jobs, which is what this measure captures. That is the exposure to low skills may not increase if other employment growth keeps pace.

- Two, if the employment growth was predominantly low skilled this would still be advantageous in the broader evaluation as it would increase the level of local employment, decrease social security, and reduce the social costs of travel.



The score for the low skilled and clerical workers is a standardised value based on the average level of skills, with an average of 100 for Victoria as a whole

Table 8.3 Low Skills Clerical

SLA	Value*	Score
Wyndham (C) - North	33.7%	28
Wyndham (C) - South	22.0%	132
Wyndham (C) - West	31.4%	40
Hobson's Bay (C) – Altona	35.6%	20
Hobson's Bay (C) - Williamstown	20.8%	146
Brimbank (C) – Keilor	35.1%	22
Brimbank (C) – Sunshine	40.9%	9
Moonee Valley (C) - Essendon	20.4%	149
Moonee Valley (C) - West	28.4%	63
Maribyrnong (C)	29.9%	50
Melton (S) - East	33.0%	31
Melton (S) - Bal	33.8%	28
Metro High and Low		
Melbourne (C) – S'bank – D'Lands	11.8%	213
Gr. Dandenong (C) - Bal	43.3%	6

Source: YourPlace database

** See 7.3 for indicator definition*

The average for the Melbourne metropolitan area is 119.9 and for Western region it is 59.6. This score is clearly the lowest of the 8 larger regions defined and demonstrates the magnitude of the problems that may exist in the region if changes in inputs occur.

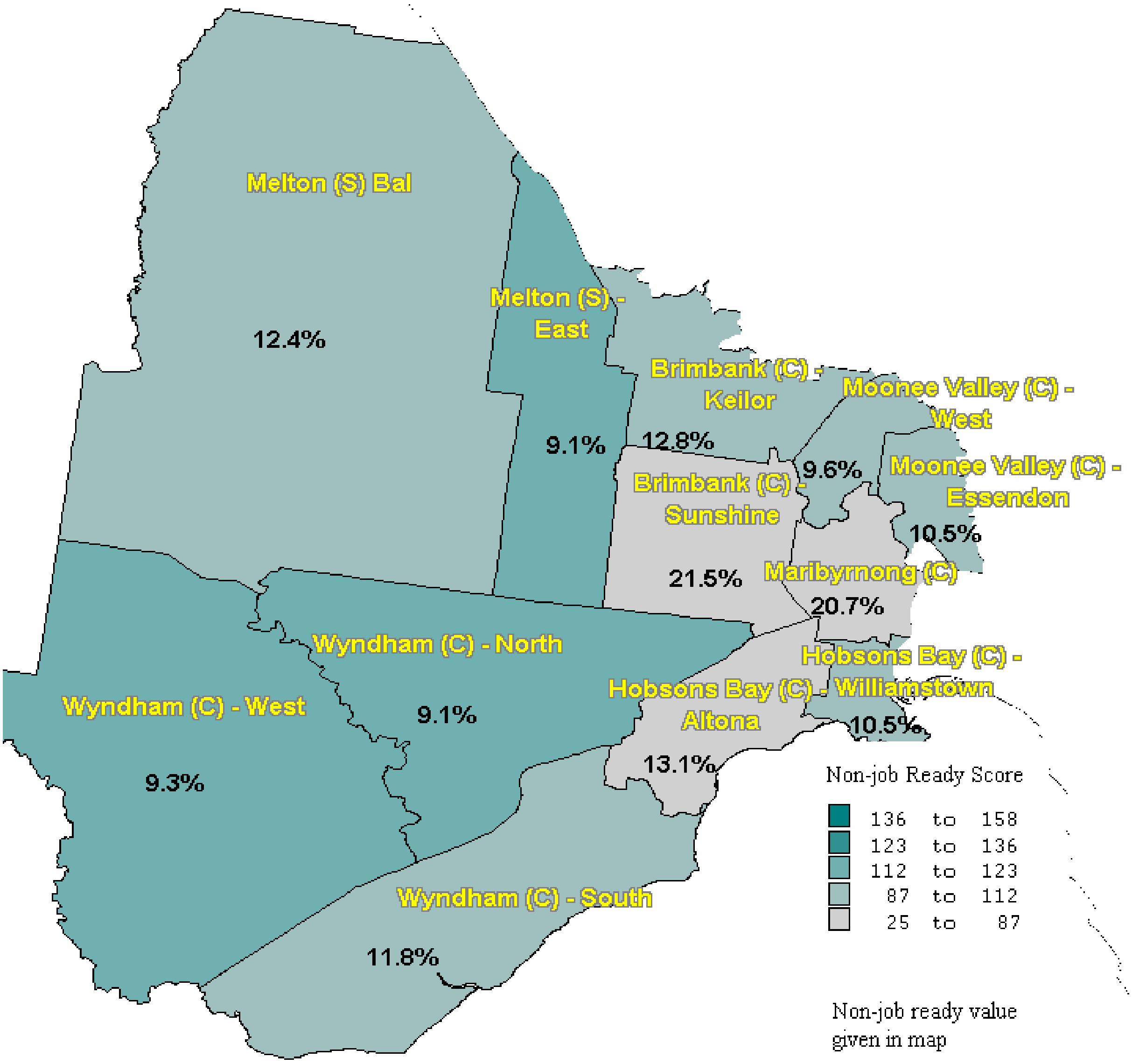
8.2.3 Non-job ready

The following table details the level of dependency of residents of the Western region to government-supported income. In general with such a large group of people either looking for work or unable to move into work, the community suffers from an inability to support non-employment alternatives such as education, training and the various forms of work experience for its inhabitants. The increased pressure on locally provided support services is also heightened.

In contrast to this general trend, a local government area such as Nillumbik has a non-job ready rate of only 3.7%. When combined with a low rate of short-term unemployment and solid incomes, the result is that a large proportion of the population can be supported in activities such as education, training, volunteer work or other work related experiences. The key for economic development is for residents to have a level of employment sufficient to have the opportunities to undertake activities - education, training and retraining to build guarantees of future prosperity.

For the Western region the average non-job ready level for 2001 was 13.5%, which compared to the metropolitan average of 9.8% for the same period is quite high. The challenge for the community is that there is a nationwide trend towards greater regional variation partly due to external factors such as the socialisation of support dependency but mainly due to internal migration, forcing those that are non-job ready to areas with lower housing prices or specific lifestyle outcomes. The growth and prosperity of a particular area of the Western region produces a tendency to export the non-job ready to other areas in northern and western metropolitan Melbourne.

The sub-regions with exceptionally high levels of non-job readiness combine a set of factors such as public housing, which tend to concentrate the unemployed. For an area such as Sunshine, the relatively cheap housing and the historically low-skilled workforce combine to increase concentrations. Such sub-regions also have a higher level of intergenerational dependency.



The non-job ready score is directly based on the percentage non-job ready. The score is equal to 179 minus 714 times the non-job ready value (expressed as a decimal). This provides an average score of 100 for Victoria as a whole.

The answers to reducing the impact of this trend include specific local training and support in geographically differentiated areas. In the Western region, the non-job ready rate of over 10 per cent of the population has not improved since 1991, despite the highest levels of economic growth in Australia's history.

"non-job ready by definition require additional support, training and structural adjustment compensation."

Recommendation: The non-job ready by definition require additional support, training and structural adjustment compensation to enable their transition back to work, and therefore require targeted and integrated solutions that broad industry policy doesn't provide.

Table 8.4 Non – Job Ready

SLA	Value *	Score
Wyndham (C) – North	9.1%	113
Wyndham (C) – South	11.8%	94
Wyndham (C) – West	9.3%	112
Hobson's Bay (C) – Altona	13.1%	85
Hobson's Bay (C) - Williamstown	10.5%	104
Brimbank (C) – Keilor	12.8%	87
Brimbank (C) – Sunshine	21.5%	25
Moonee Valley (C) - Essendon	10.5%	103
Moonee Valley (C) - West	9.6%	110
Maribyrnong (C)	20.7%	31
Melton (S) – East	9.1%	114
Melton (S) – Bal	12.4%	90
Metro High and Low		
Nillumbik (S) – South	3.7%	152
Brimbank (C) – Sunshine	21.5%	25

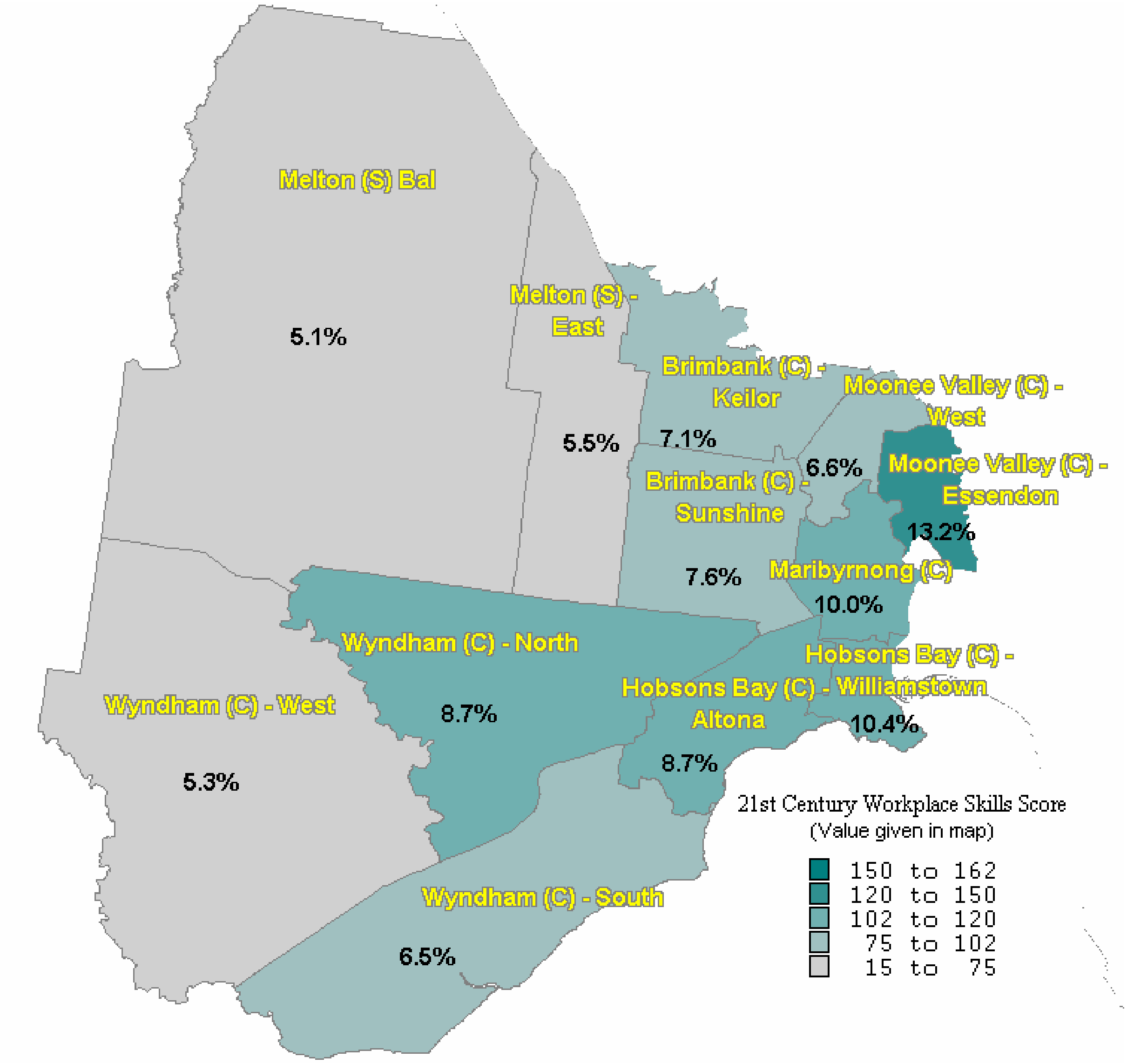
Source: YourPlace database

** See 7.3 for indicator definition*

8.3 Workplace Skills

8.3.1 21st Century Skills

The following table provides an assessment of the capacity of each SLA to take advantage of global information flows and to participate in innovative value creating enterprise networks.



The score for the workplace 21st century skills is a standardised value based on the average level of skills, with an average of 100 for Victoria as a whole.

An area of relative advantage for the region has been the successful application of 21st century skills in local workplaces. In regions such as Hobsons Bay, Essendon, and Maribyrnong the level of the 21st century skills scores provide an indication that industry and therefore the region is likely to benefit from technologically based innovation.

One of the difficulties in the measurement of the capacity of a region to grow is that we do not know exactly the minimum levels of 21st century skills that are going to be necessary to drive the desired outcomes. It may be that the success of regions in the technologically based industries will only be possible given extreme concentrations of these types of skills, such as the concentration available in Essendon. However without pre-empting the future, those regions that are likely to be best placed are those with the highest levels of application of 21st century skills.

Table 8.5 21st century skills

SLA	Value *	Score
Wyndham (C) – North	8.7%	102
Wyndham (C) – South	6.5%	78
Wyndham (C) – West	5.3%	62
Hobson's Bay (C) – Altona	8.7%	102
Hobson's Bay (C) - Williamstown	10.4%	117
Brimbank (C) – Keilor	7.1%	86
Brimbank (C) – Sunshine	7.6%	92
Moonee Valley (C) - Essendon	13.2%	135
Moonee Valley (C) – West	6.6%	79
Maribyrnong (C)	10.0%	114
Melton (S) – East	5.5%	65
Melton (S) – Bal	5.1%	60
Metro High and Low		
Melbourne (C) – Inner	40.3%	162
Cardinia (C) – South	1.2%	15

Source: YourPlace database

See 7.3 for indicator definition

The average for the Melbourne metropolitan area is 135 with the Western region scoring an average of 122.1. In a comparative sense the region does well against places such as south-east Melbourne with an average score of 107.8 and is equal with Geelong. Nevertheless the region still has some way to go if it is going to compete with places such as the Eastern Axis (149.1) and the Inner South and Eastern regions which all score above 150.

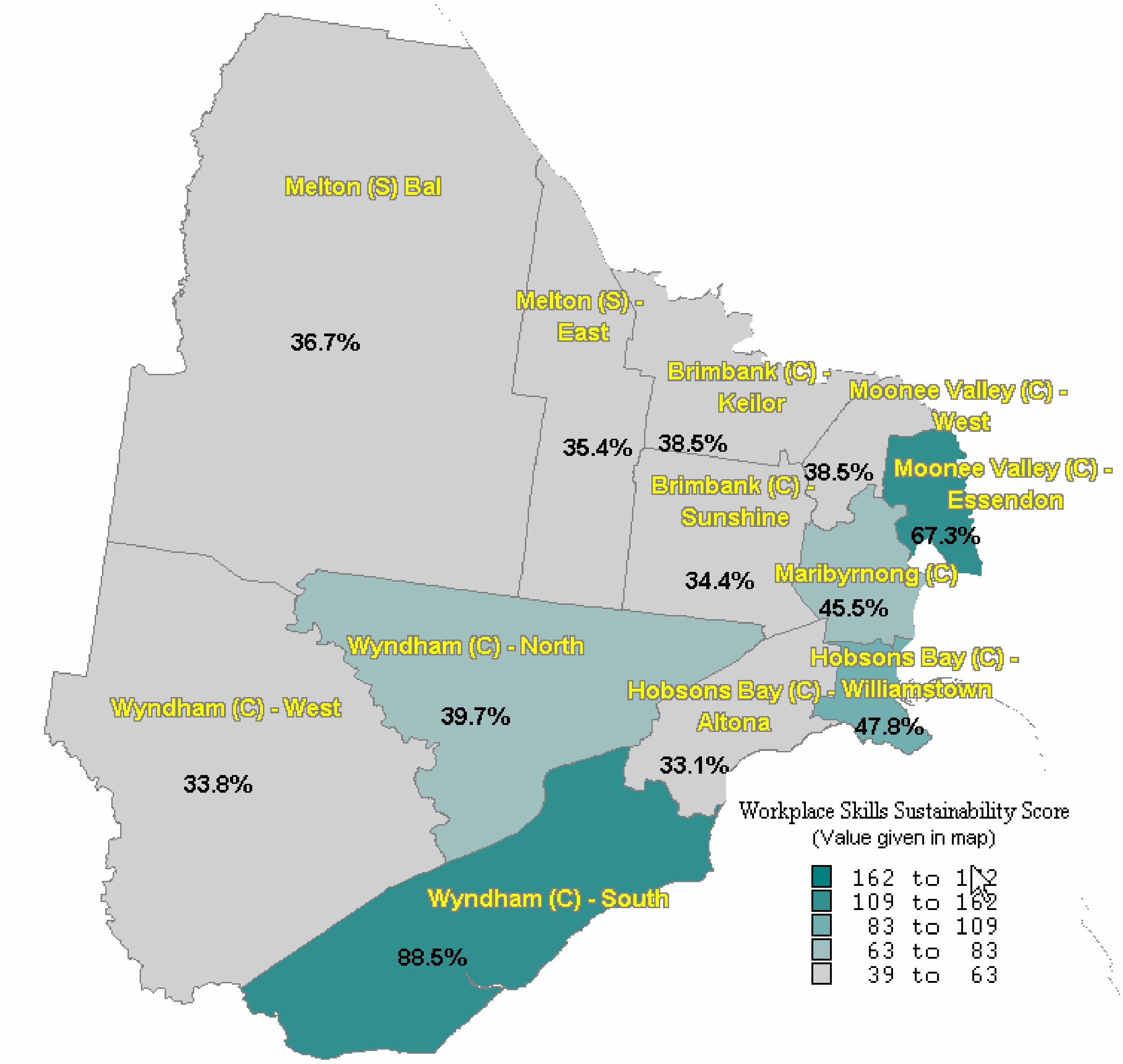
8.3.2 Skills Sustainability

The scores for this indicator show that most SLAs have exposure to routine worker replacement with many scores well below 100 points. As the indicator measures the ratio of skilled workers to routine workers, scores below 100 reflect a greater proportion of routine workers and hence vulnerability to future economic trends.

The growth of symbolic analyst occupations represents an enormous change in the nature of the economy and the intensity of skills employed. Instead of new skills being placed in the hands of in-person service workers such as lawyers and doctors, the new skills are developing in the fields of business services, technical support services as well as in production processes. The recent trend in the skill development for businesses of the region is one of an improving profile. However, where the goal is to direct this force to provide local employment the region is very much restricted by the low skill base of its residents.

The low scores for most sub-regions reflect that many businesses in the area, whilst improving, still have low skill requirements. The sub-regions such as Wyndham – South and Essendon demonstrate the outcome of technical business service growth. These sub-regions have transformed from a manufacturing base that would undoubtedly have had a value of less than 40% fifteen years ago to one in which there is at least one symbolic analyst employed for every routine worker.

The average for the Melbourne metropolitan area is 66.2 and for the Western region it is 30.2. At such a low score the only region it outperforms is south-east Melbourne with a score of 28.6.



The score for the workplace skills sustainability is a standardised value based on the average level of skills, with an average of 100 for Victoria as a whole.

Table 8.6 Skills sustainability		
SLA	**Value ***	**Score**
Wyndham (C) - North	39.7%	63
Wyndham (C) - South	88.5%	153
Wyndham (C) - West	33.8%	48
Hobson's Bay (C) – Altona	33.1%	46
Hobson's Bay (C) - Williamstown	47.8%	86
Brimbank (C) – Keilor	38.5%	60
Brimbank (C) – Sunshine	34.4%	49
Moonee Valley (C) - Essendon	67.3%	126
Moonee Valley (C) - West	38.5%	59
Maribyrnong (C)	45.5%	79
Melton (S) - East	35.4%	52
Melton (S) - Bal	36.7%	55
Metro High and Low		
Melbourne (C) - Inner	169.2%	172
Casey (C) – Cranbourne	30.6%	39

Source: YourPlace database

** See 7.3 for indicator definition*

What are the likely areas of labour shrinkage and what can be done to increase employment opportunities for those who are displaced?

The areas with the greatest likelihood of labour shrinkage will occur generally in the industries that require low skill. It is these jobs that are under the greatest threat of losses due to automation. Alternatively the firm may move overseas due to cheaper labour. A recent example of this has occurred with Kodak who are moving their operations overseas. Below is a table of the jobs that are either already under threat or are expected to be in the future.

The key to providing employment for these displaced workers is providing the training that they require to move from production worker to a production machinist, for example. The following table highlights key occupations that are expected to see some of the largest absolute movements in total usage in the next 7 years in Victoria. Those positions, or occupations, which are considered routine workers, and hence subject to increasing marginalisation, are highlighted in the table.

Table 8.7 Occupation	
Occupations with growth opportunities	**Number employed in the Western economy**
Computing professionals	3,999
Sales assistants, limited compared to past 5 years	13,568
General managers	1,679
Shop managers	3,738
Sales and marketing managers	2,346
Registered nurses	3,584
Occupations likely to suffer declines	
Secretaries and personal assistants	4,453
Sales representatives	3,201
Engineering production systems workers	831
Accounting clerks	3,014
Metal fitters and machinists	2,540
Wood products factory hands	153
Clothing and footwear tradespersons	591
Other food factory hands (*up-skilling*)	1,143

Source: YourPlace ASCO

8.4 Capacity

8.4.1 Integration Shortfalls

Aside from the shortcomings the region is faced with in terms of the skill profile of its residents and workers against other regions in Melbourne, the region also suffers from a lack of integration within the economy. This is clearly shown in the following series of tables.

The score of each of the surplus/shortfall tables is simply calculated as 100 times the net shortfall value or alternatively 100 times the ratio of the regions share of employment in each sector compared to the share of resident population. As such a region whose share of business services matches its share of population would receive a score of 100 and a value of 0.0%. A region that had twice as much employment in business services as compared to its share of population would have a value of 100% and a score of 200. A region with only half its expected business services employment would have a value of –50% and a score of 50.

The first table provides an analysis of the level of manufacturing across the sub-regions. Despite the removal of the petro-chemical and TCF industries from the analysis, Hobson's Bay and Maribyrnong are well placed in terms of the surplus of manufacturing within the region. If the results were re-calculated with the petro-chemical industry included the surpluses would be higher, however this would also render comparison impossible. The industry is a great asset for the region and despite uncertainty with its future viability in

Australia as a whole, the longer the region has such employment generating capacity, the better the outcome for its residents.

The average for the Melbourne metropolitan area is 105.1 and for the Western region it is 85.6. The report has previously noted the importance of manufacturing, however the score for manufacturing appears low. The result is largely due to the removal of the petro-chemical industry for purposes of regional comparison. Including the petro-checmical industry would lift the score to approximately 98. In comparison with the inner east with a score of 23.4, and the inner south with a score of 40.1 the western region has a significant advantage in the manufacturing sector.

It is interesting to note that the inner core sub-regions of Melbourne, Port Phillip, Stonington and Yarra have achieved relative success with a score of 115.7 while the eastern axis of Kingston, Monash, Maroondah and Whitehorse have achieved a score of 170.5. It appears that simply having strong manufacturing does not maximise the local area benefit, that sector must be backed up by a broad range of activity across all other sectors.

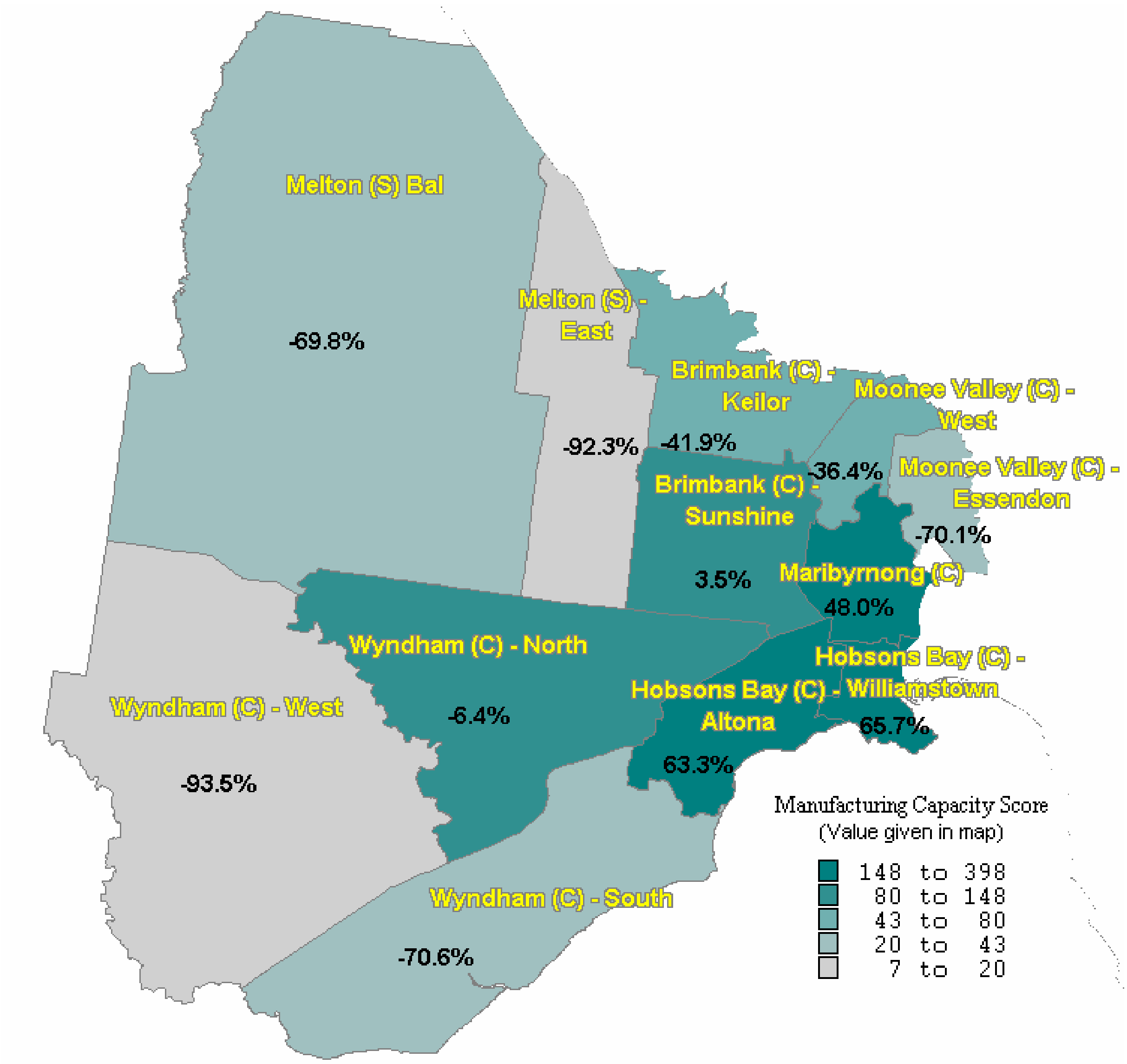


Table 8.8 Manufacturing

SLA	Value*	Score
Wyndham (C) – North	-6.4%	94
Wyndham (C) – South	-70.6%	29
Wyndham (C) – West	-93.5%	7
Hobson's Bay (C) – Altona	63.3%	163
Hobson's Bay (C) - Williamstown	65.7%	166
Brimbank (C) – Keilor	-41.9%	58
Brimbank (C) – Sunshine	3.5%	103
Moonee Valley (C) - Essendon	-70.1%	30
Moonee Valley (C) – West	-36.4%	64
Maribyrnong (C)	48.0%	148
Melton (S) – East	-92.3%	8
Melton (S) – Bal	-69.8%	30
Metro High and Low		
Kingston (C) – North	297.5%	398
Wyndham (C) – West	-93.5%	7

Source: YourPlace database

** See 7.3 for indicator definition*

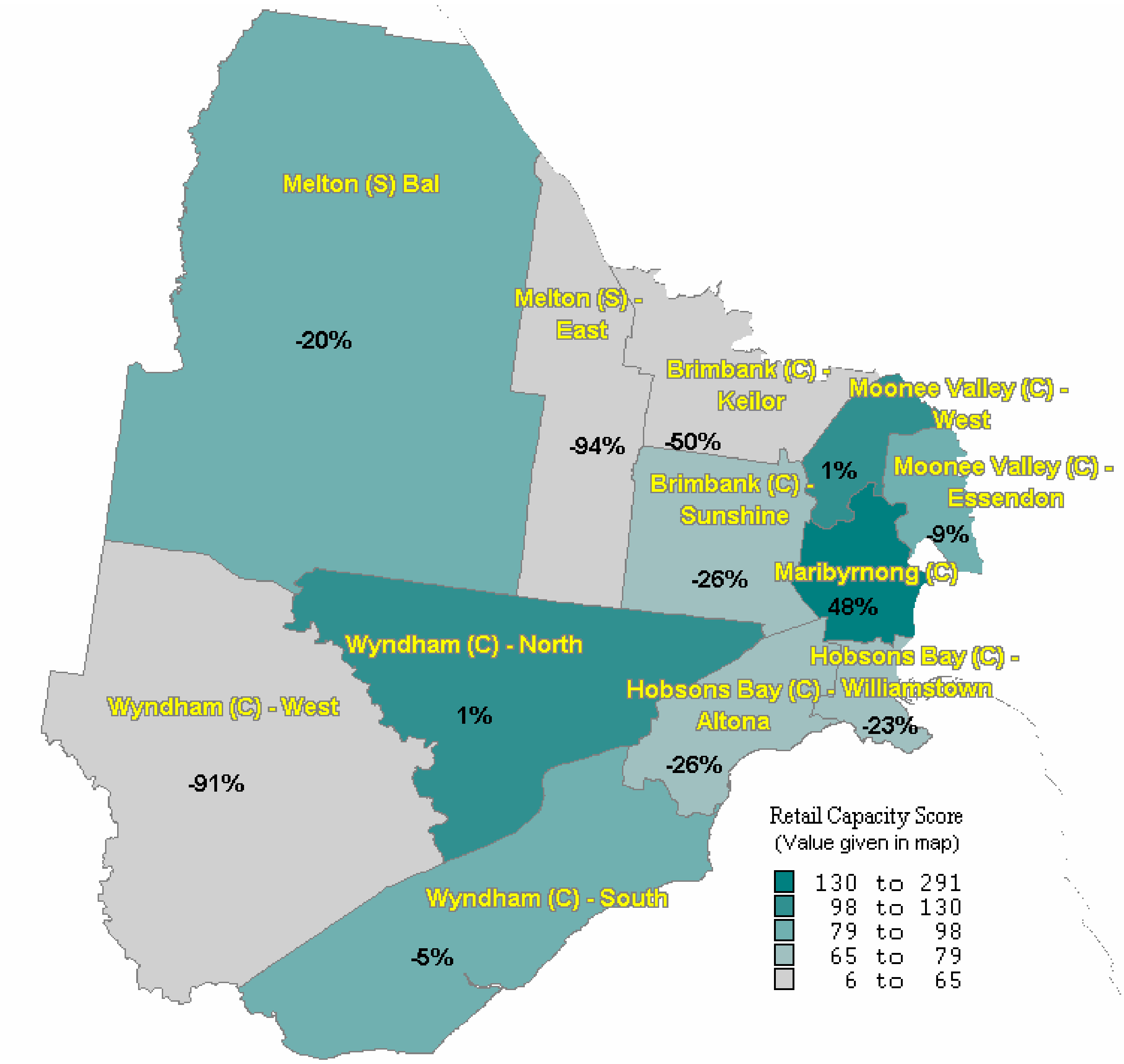
The following table shows the retail surpluses/shortfalls for the region. The table shows that the western region suffers from a lack of capacity in retail, which is responsible for an increased level of retail leakage from local households and consequential reduction in regional incomes. In fact, outside of the City of Maribyrnong the only other SLA's to have a surplus is Wyndham – north and Moonee Valley – West.

This shortfall is a critical waste of resources that have been hard earnt by the households of the region. Part of the retail shortfall is a function of larger numbers of low income residents located within some SLA's that do not support the same level of employment as other areas of Melbourne, but the remaining element of the shortfall can be attributed to poor provision of major retail complexes.

The average for the Melbourne metropolitan area is 105.0 and for the western region it is 81.8. This is comparable to the scores of the inner south with a score of 78.6, which has a shortfall of close to 20% in retail employment. The disappointing nature of this score is demonstrated by the advantage the eastern axis region has with a score of 120.3, despite not including Knox City or Chadstone shopping centres, both of which service the area, but are not within the Eastern Axis.

Table 8.9 Retail		
SLA	**Value***	**Score**
Wyndham (C) – North	0.7%	101
Wyndham (C) – South	-5.2%	95
Wyndham (C) – West	-90.5%	9
Hobson's Bay (C) – Altona	-26.0%	74
Hobson's Bay (C) – Williamstown	-23.1%	77
Brimbank (C) – Keilor	-50.5%	50
Brimbank (C) – Sunshine	-26.4%	74
Moonee Valley (C) – Essendon	-9.4%	91
Moonee Valley (C) – West	1.1%	101
Maribyrnong (C)	48.0%	148
Melton (S) – East	-93.7%	6
Melton (S) – Bal	-20.4%	80
Metro High and Low		
Yarra (C) – Richmond	190.8%	291
Melton (C) – East	-93.7%	6

Source: YourPlace database See 7.3 for indicator definition



The next table provides an evaluation of the shortfall in government administration and education.

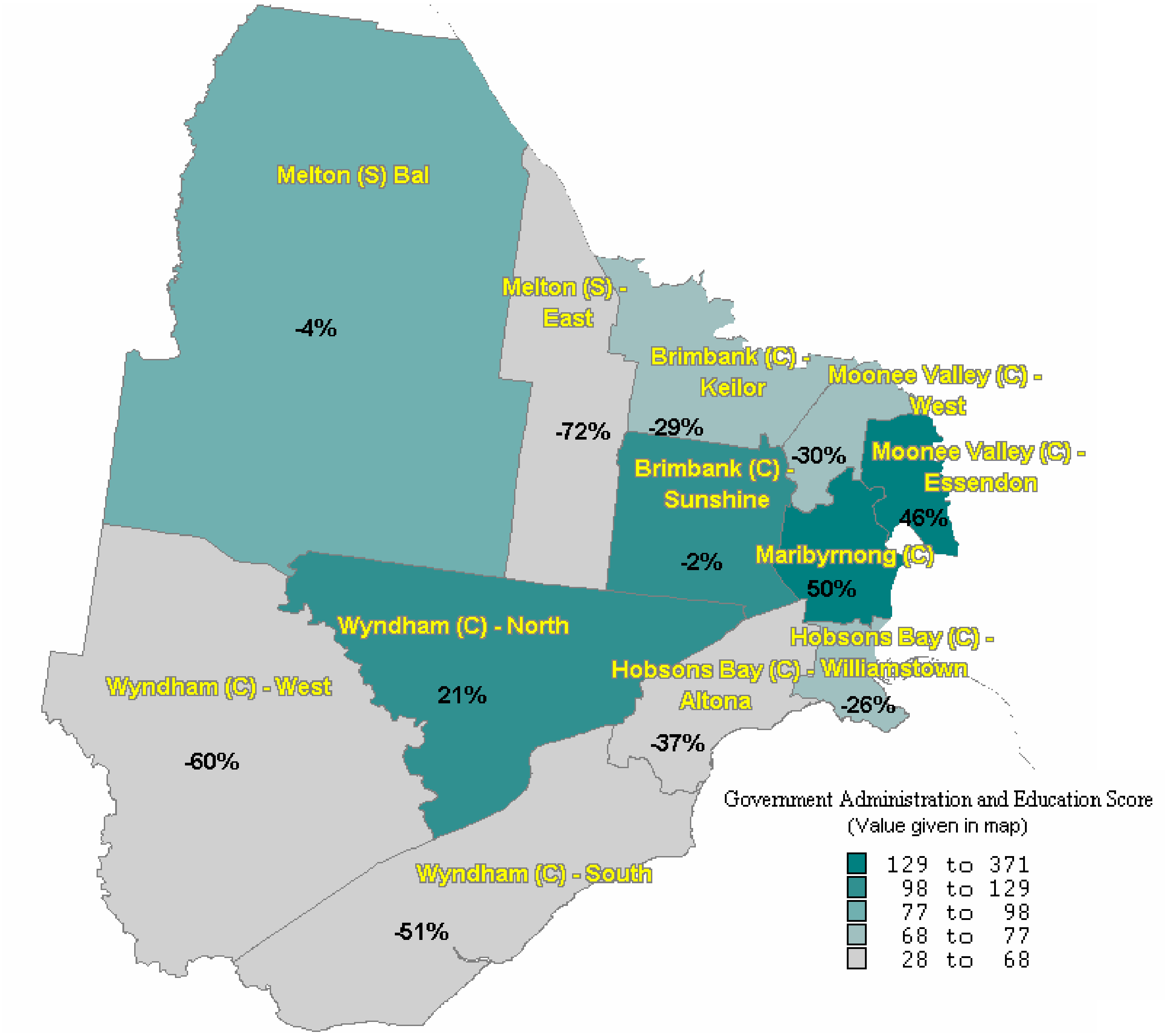
Table 8.10 Government

SLA	Value*	Score
Wyndham (C) - North	21.3%	121
Wyndham (C) - South	-50.5%	49
Wyndham (C) - West	-59.8%	40
Hobson's Bay (C) – Altona	-36.6%	63
Hobson's Bay (C) - Williamstown	-25.5%	74
Brimbank (C) – Keilor	-28.5%	71
Brimbank (C) – Sunshine	-1.6%	98
Moonee Valley (C) - Essendon	46.4%	146
Moonee Valley (C) - West	-30.0%	70
Maribyrnong (C)	50.1%	150
Melton (S) - East	-72.3%	28
Melton (S) - Bal	-3.6%	96
Metro High and Low		
Monash (C) – South - West	270.7%	371
Melton (C) - East	-72.3%	28

Source: YourPlace database

** See 7.3 for indicator definition*

The average for the Melbourne metropolitan area is 105.6. The western region has an average score of 97.0. That is, the western economy has a shortfall of 3.0 per cent in this sector employment. The deficiency of this score is illuminated when compared to the inner east with an average score of 119.8, the inner core suburbs with a score of 135.0 and the eastern axis with 135.0. These scores illustrate the bias towards the eastern area of Melbourne to the detriment of the western and northern metropolitan areas.

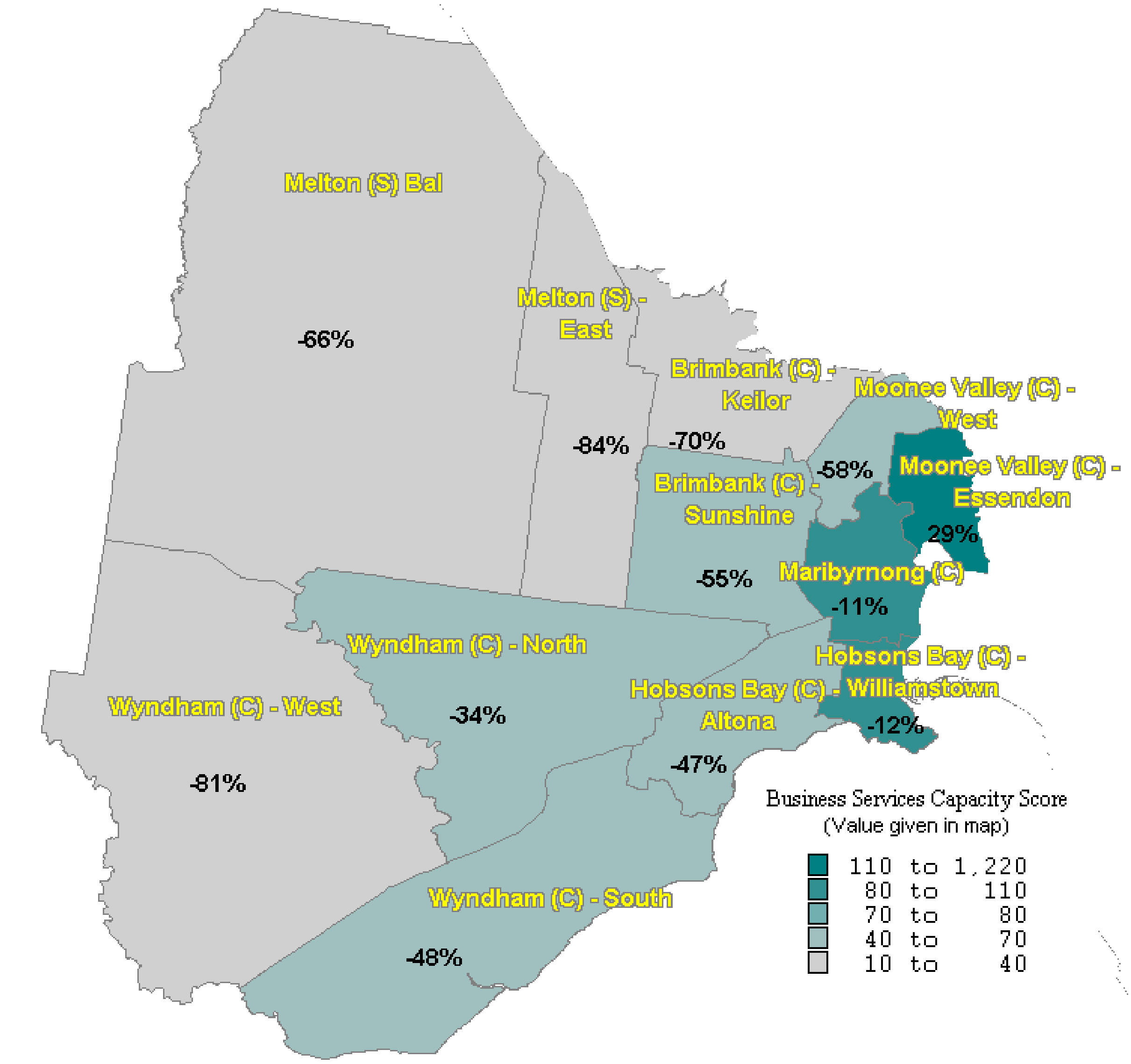


The linkages between government and business, and most importantly between education and business, are the key to innovation. Despite being resident to institutions such as Victoria University the region should seek continued improvement. Planning should focus on utilising these existing institutions as a base to extend the role of education in the future:

- to serve the rapidly growing areas of Wyndham and Melton
- to develop centres of excellence in the diverse and bohemian areas of Williamstown, Essendon and Maribyrnong

Centres of excellence in manufacturing, textile finishing, transport and logistics, and motor repairs are all possibilities.

The final area of shortfall / surplus analysis is that of business services.



The results of this analysis are the most concerning as the entire region except for Essendon is deficient in their share of business services. Historically there was less need for business services so places like the western and northern economies were not as disadvantaged by places such as Boroondara and Stonnington who already had established businesses. Ten years ago there were very few computers and there was no internet. Such tools have significantly increased efficiency in recent times and not surprisingly coincided with the growth and importance of business services. These days a region cannot be successful now or in the future without a quality level of business services support.

Households require a range of business services, if this demand is not met then there will be further leakages of income to other regions. As the trend to outsource a range of services continues to grow, local business will increasingly require local business services support. For the vast majority of the region the amount of business services is at least 30 per cent less than the amount expected.

The region as a whole must work quickly and cleverly to build local capacity in this area. Crucial to this development will be innovative planning, as the historical development of a number of SLAs has unfortunately closed many options for amenity driven, well-connected business services hubs. Areas that must be at the forefront of this development will be the activity centres highlighted in the Melbourne 2030 strategy.

Table 8.11 Business Services

SLA	Value*	Score
Wyndham (C) – North	-33.7%	66
Wyndham (C) – South	-48.3%	52
Wyndham (C) – West	-81.4%	19
Hobson's Bay (C) – Altona	-47.2%	53
Hobson's Bay (C) – Williamstown	-12.3%	88
Brimbank (C) – Keilor	-69.7%	30
Brimbank (C) – Sunshine	-55.2%	45
Moonee Valley (C) – Essendon	29.0%	129
Moonee Valley (C) – West	-57.8%	42
Maribyrnong (C)	-11.2%	89
Melton (S) – East	-84.2%	16
Melton (S) – Bal	-66.2%	34
Metro High and Low		
Port Phillip (C) – West	1115.8%	1216
Melton (C) – East	-84.2%	16

Source: YourPlace database
** See 7.3 for indicator definition*

The average score for the Melbourne metropolitan area is 110.9 while the western region has an average score of 60.4. This means that the western economy has a shortfall of 39.6 per cent of employment. The disappointing nature of this score is the concentration of businesses services in the eastern area of Melbourne to the detriment of the west and north. The inner east has an average score of 142.4, the inner core metropolitan area has a score of 364.4 and the eastern axis scores 134.3.

Table 8.12 Regional Comparison of Integration Shortfalls and Surplus

	Employment Share				
	Manufacturing ex Petro TCF	Business Services	Retail (non automotive) & Acc Rest	Government (ex Defence) & Education	Population Share
Western region	14.4%	10.1%	13.7%	16.2%	16.7%
Northern region	25.5%	18.9%	20.8%	22.3%	22.7%
Eastern Axis	27.1%	20.1%	19.5%	21.8%	16.1%
South East	14.9%	7.5%	12.2%	13.2%	13.9%
Geelong	5.8%	5.1%	8.4%	8.6%	7.1%
Inner Core	6.9%	28.8%	14.6%	8.6%	7.2%
Inner East	1.9%	11.4%	8.1%	9.6%	8.0%
Inner South	2.5%	6.1%	4.9%	5.5%	6.3%

Source: YourPlace database
Notes: Population share all of Melbourne metropolitan (excluding City of Melbourne)
Employment share of Melbourne metropolitan excluding City of Melbourne
Doesn’t total to 100 as some LGA’s are not included and some are included twice.
Regions:
West: Brimbank (C), Hobson’s Bay (C), Maribyrnong (C), Melton (S), Moonee Valley (C), and Wyndham (C)
Northern Region: Banyule (C), Darebin (C), Hume (C), Moreland (C), Nillumbik (S), Whittlesea (C), and Yarra (C)
Eastern Axis: Kingston (C), Maroondah (C), Monash (C), and Whitehorse (C)
South East: Cardinia (S), Casey (C), Frankston (C), Greater Dandenong (C)
Geelong: Colac-Otway (S), Greater Geelong (C), Queenscliffe (B), Surf Coast (S)
Inner Core: Port Phillip (C), Stonnington (C), and Yarra (C)
Inner East: Boroondara (C), Manningham (C)
Inner South: Bayside (C), Glen Eira (C)

8.5 Local Economy

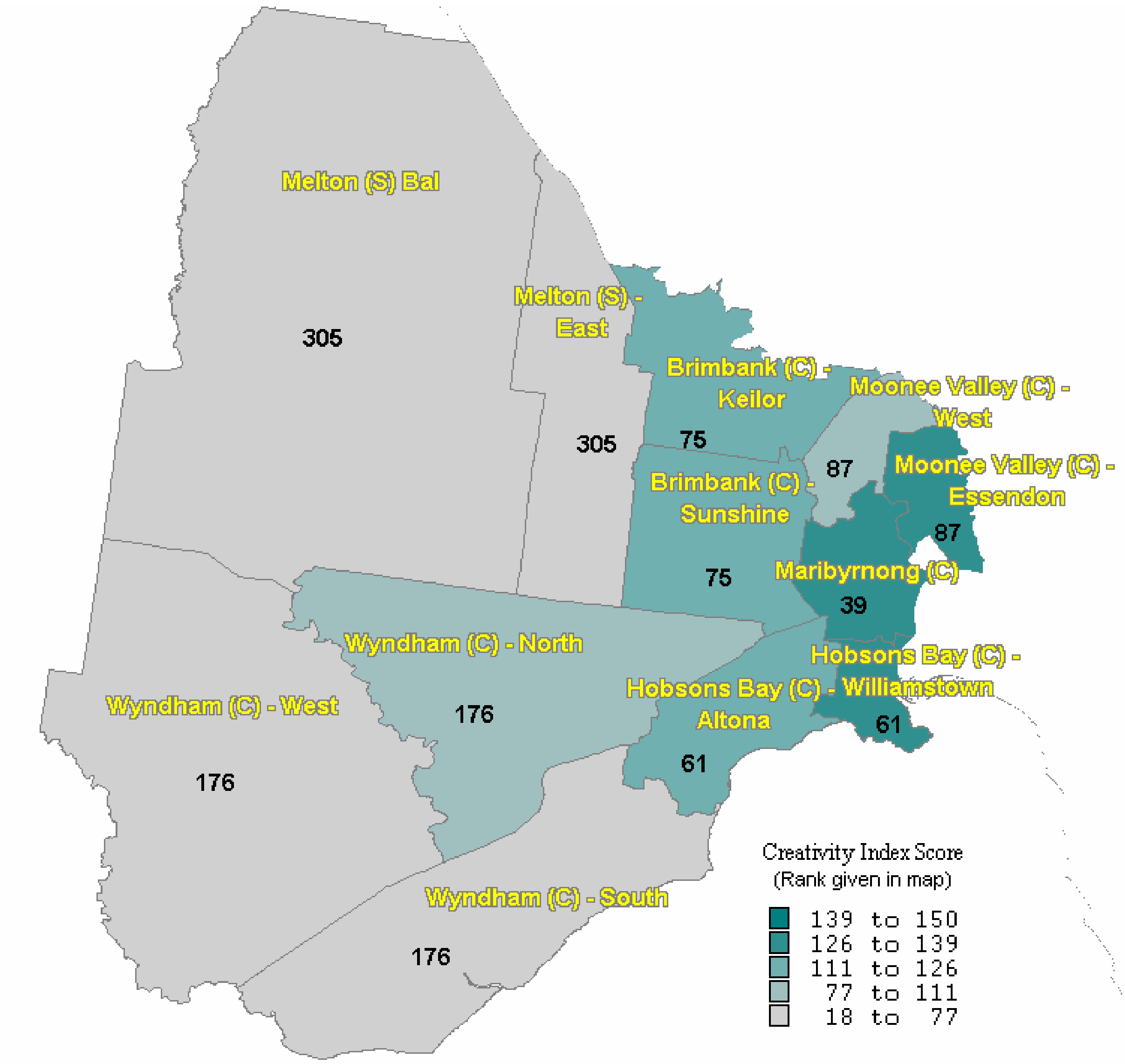
8.5.1 Creativity

One advantage the western economy has over much of the rest of Melbourne is its 'creativity' as measured by NIEIR, which is based on the work of Richard Florida. Although the indicator is only available at the LGA level the scores of Maribyrnong, Hobson's Bay, Brimbank and Moonee Valley indicates the strength of many areas of the west.

A major strength of the region that contributes to the high creativity scores is the rich multicultural history of the area. Strengthening the diversity, high tech output and skills mix of the western economy, will be crucial in the development of the business services sector (Refer section 6.4).

The table below ranks each local government area in comparison to all 632 in Australia. In general the west has a moderately high ranking in terms of Australian creativity levels. However this is largely due to the significant number of smaller rural and regional local government areas spread throughout Australia that have almost no creativity capacity.

The lower scores for outer suburban areas reflect the traditional view of a lack of creativity as expressed by commentators from Dame Edna, Robert Hughes through to John Safran. Outer suburban areas have low levels of diversity, bohemian residents, very little in the way of high-tech industry, and lower levels of university qualifications.



The average creativity score for the Melbourne metropolitan area is 151.9 with the average for the western region at 151.0. This gives it a considerable advantage over places such as south east Melbourne which has a similar suburban focus but only has a score of 103. It is also comparable to the northern region, which scores 153.5. The eastern axis has another critical advantage in this creativity indicator with a score of 167.5.

Table 8.13 Creativity Index		
SLA	**Value***	**Score**
Wyndham (C) - North	176	98
Wyndham (C) - South	176	67
Wyndham (C) - West	176	63
Hobson's Bay (C) – Altona	61	125
Hobson's Bay (C) - Williamstown	61	134
Brimbank (C) – Keilor	75	116
Brimbank (C) – Sunshine	75	122
Moonee Valley (C) - Essendon	87	135
Moonee Valley (C) - West	87	108
Maribyrnong (C)	39	133
Melton (S) - East	305	51
Melton (S) - Bal	305	45
Metro High and Low		
Melbourne (C) - Remainder	2	149
Cardinia (C) - Pakenham	419	37

Source: YourPlace database

** See 7.3 for indicator definition*

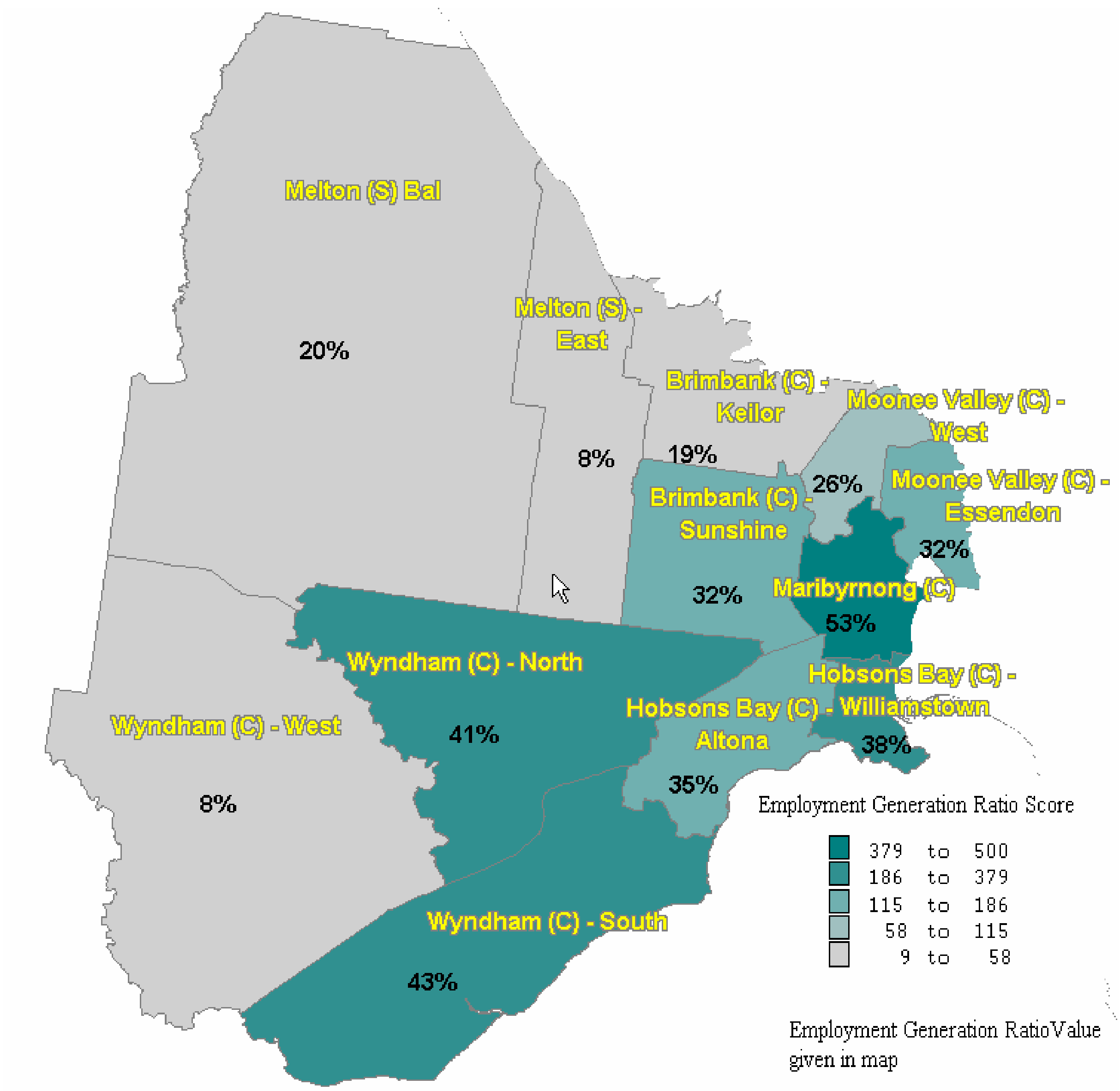
8.5.2 Employment Generation Ratio

The large differences between the local employment capacities of the SLAs are apparent in the table above. The regions with the strongest local employment include Maribyrnong, Wyndham – North, Wyndham – South and Hobsons Bay. The strength of employment in Maribyrnong is clearly shown in its employment generation ratio of 53 per cent. The lowest values are attributed to the Melton region and Wyndham - West, which have chosen to be predominantly dormitory suburbs although they are still very much in their infancy.

The challenge for areas such as Maribyrnong, Melton and Wyndham - West will be to continue to grow local employment as quickly as the population grows. The average for the Western region is 30 per cent.

The average score for the western region is 148, compared to 216 for the Melbourne metropolitan region. This difference provides further evidence of the employment shortfall experienced within the western economy.

The difference between the western region and the east is very large indeed with the eastern axis scoring 333.8. The only other place with a smaller score is the inner south which obtains a score of 103.5 and this place as a whole has chosen to remain a dormitory region.



The score for the employment generation ratio is a standardised value based on the average level of employment generation with a maximum score of 500, and an average of 200 for Victoria as a whole.

Table 8.14 Employment Generation Ratio		
SLA	**Value***	**Score**
Wyndham (C) - North	41%	233
Wyndham (C) - South	43%	256
Wyndham (C) - West	8%	9
Hobson's Bay (C) – Altona	35%	174
Hobson's Bay (C) - Williamstown	38%	202
Brimbank (C) – Keilor	19%	50
Brimbank (C) – Sunshine	32%	139
Moonee Valley (C) - Essendon	32%	145
Moonee Valley (C) - West	26%	91
Maribyrnong (C)	53%	394
Melton (S) - East	8%	10
Melton (S) - Bal	20%	57
Metro High and Low		
Melbourne (C) - Inner	2220%	500
Wyndham (C) - West	8%	9

Source: YourPlace database

** See 7.3 for indicator definition*

The results for this section reinforces the recommendations that the new developments in the area maximise future employment growth, especially considering the new influx of residents planned in the 2030 framework.

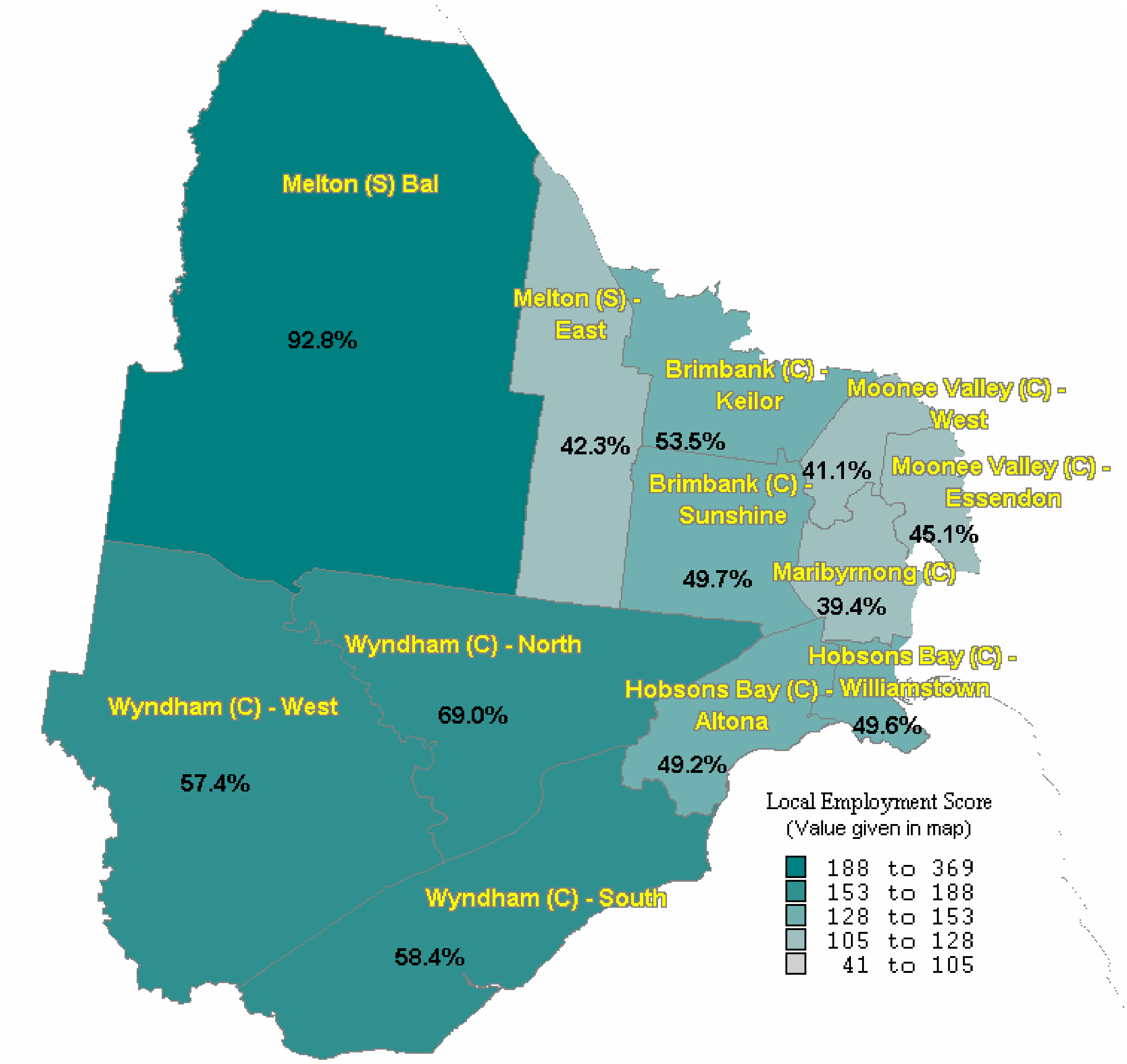
Growth management recommendation: That future vacant land available for industrial purposes is developed within a framework that provides for minimum levels of investment, employment generation and economic development potential within the region as a whole.

8.5.3 Local Employment Capacity

The low scores for local employment are a reflection of the lack of integration of the western economy. The score is constructed by looking at the percentage of locals employed locally and the percentage of local employment that is provided to locals. Considering the average score for Victoria is 200, this measure shows the effective dispersal of the workforce in the western economy, that is, the residents are more likely to travel outside the region to work. This is a result of proximity to other regions including the CBD and the mismatch between the scale of local employment required and the scope of the employment provided.

In Melton - East the score is very low because of the generally low levels of employment in the SLA. Therefore the percentage of locals that work locally will be small. In addition the type of employment in the area is likely to attract people from a range of areas in the west reducing the share of employment that is taken up by locals. In this case the low score shows the inadequacy of local employment and will be responsible for a higher than average journey to work travel time for residents.

For an area such as Maribyrnong the low score will be due to the combined factors of strong employment in the neighbouring Melbourne CBD that will attract many of its residents, and the high levels of employment in the area compared to its resident workforce. For Maribyrnong a lower score is less problematic, however, there is no reason that over time the score shouldn't increase as employment becomes more focused around the skills of residents creating a great urban village atmosphere built on skilled employment.



Therefore this rating provides a benchmark for increasing the level of local containment of employment. As these scores increase over time, travel times will fall and the government will potentially begin to achieve lower levels of car usage.

Table 8.15 Local Employment Capacity		
SLA	**Value***	**Score**
Wyndham (C) – North	69.0%	185
Wyndham (C) – South	58.4%	156
Wyndham (C) – West	57.4%	154
Hobson's Bay (C) – Altona	49.2%	132
Hobson's Bay (C) – Williamstown	49.6%	133
Brimbank (C) – Keilor	53.5%	143
Brimbank (C) – Sunshine	49.7%	133
Moonee Valley (C) – Essendon	45.1%	121
Moonee Valley (C) – West	41.1%	110
Maribyrnong (C)	39.4%	106
Melton (S) – East	42.3%	113
Melton (S) – Bal	92.8%	249
Metro High and Low		
Mornington P’sula (S) – South	137.6%	369
Melton (C) – East	5.7%	113

Source: YourPlace database

** See 7.3 for indicator definition*

The impact on policy in the western region should be to concentrate growing employment throughout the region. New suburban areas should have mandated employment zones built into the core function of the suburbs. In the inner suburbs the pressure to convert employment generating land to housing should be seen as short sighted as the inherent value of housing without employment is significantly reduced if the goal is a more compact liveable city (Melbourne 2030).

The average for the Melbourne metropolitan area is 101.4 and for the western region it is 93.1. In terms of local employment capacity the western region is performing comparatively well with only the south-east Melbourne and Geelong producing higher scores. However this would improve even further if there were more adequate business services locally, thus reducing the flow of workers travelling extensively to find employment elsewhere.

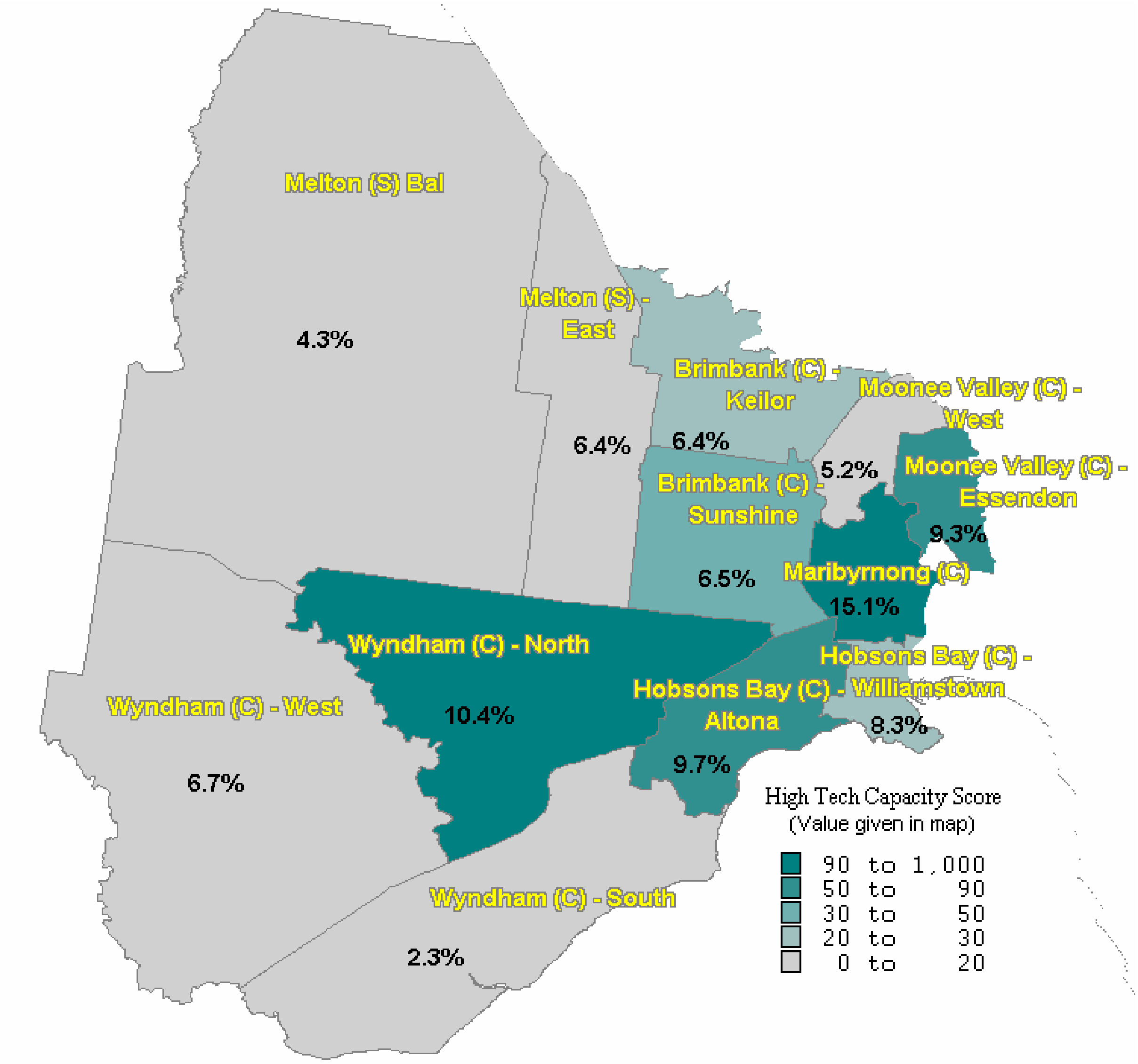
8.5.4 High Tech Capacity

The general paucity of the Australian high-tech sector is clearly demonstrated in the following table. The value shown is the percentage of local employment in high-tech industries. The score is not only a function of the share of high-tech output but also reflects the level of activity as a proportion of Australian total production. Although the share of output for Wyndham - North is similar to Hobsons Bay – Altona the score for Wyndham - North is significantly higher due to its very large scale within the Australia economy.

In the western economy the bulk of high-tech output is produced in the manufacturing sector in places such as Maribyrnong and to a lesser extent Wyndham – North. The very high score for Maribyrnong is sourced from a number of manufacturing industries although electric cable and wire manufacturing, rubber tyre manufacturing, organic industrial chemicals manufacturing and synthetic fibre textiles manufacturing provide the greatest share of the high-tech capacity.

The key to developing a high tech economy is in its diversity. The problem with the western region is that this is predominantly sourced from the manufacturing sector and little from business services and, from this aspect, is limited. High-tech is the utilisation of strong skills, technology and capital and is not necessarily related to raw inputs or large tracts of industrial land. A region capable of high-tech output will respond to a variety of opportunities.

The average score for the Melbourne metropolitan area is 142.2 and for the western region it is 62.3. The only other region that does worse is the inner south with a score of 19.8. As can be seen from the locations of high-tech clusters in the map in Section 5 the eastern axis has developed the high tech sector significantly faster than the western region. This development of high tech businesses clustered in planned centres and in close proximity to tertiary education institutions is reflected by the score of 237.8 for the region.



The importance of increasing the level of high-tech capacity cannot be understated. The sector provides great jobs, employs the already substantial high skilled component of the resident population. It helps increase ‘creativity’ because it becomes easier to attract and retain the well qualified and talented individuals. The sector is also likely to provide employment that has very large spin-offs or multipliers. The spin-offs include opportunities to: further develop our capacity to value-add to resources; enhance our capacity to exploit our world-class education system by increasing the share of overseas graduates; and to attract back and retain our Australian stars to develop commercial outcomes from research. These types of industries also help facilitate transfer of technology within the broader economy.

Table 8.16 High Tech output shares

SLA	Non high tech output ($m)	High tech output ($m)	Total output ($m)	% of high tech to total output	% of high tech output in Australia	% high tech value score
Wyndham (C) - North	24,945	1,730	26,676	6.5	0.10	10.38
Wyndham (C) - South	1,620	24	1,644	1.5	0.00	2.33
Wyndham (C) - West	1,405	62	1,466	4.2	0.00	6.72
Hobson's Bay (C) – Altona	18,206	1,170	19,376	6.0	0.07	9.66
Hobson's Bay (C) - Williamstown	10,489	576	11,065	5.2	0.03	8.33
Brimbank (C) – Keilor	16,357	678	17,035	4.0	0.04	6.37
Brimbank (C) – Sunshine	24,087	1,016	25,104	4.0	0.06	6.48
Moonee Valley (C) - Essendon	20,707	1,274	21,981	5.8	0.07	9.27
Moonee Valley (C) - West	10,629	357	10,987	3.3	0.02	5.21
Maribyrnong (C)	29,715	3,089	32,804	9.4	0.17	15.07
Melton (S) - East	1,326	55	1,381	4.0	0.00	6.39
Melton (S) - Bal	7,297	201	7,498	2.7	0.01	4.29

Source: YourPlace database

Table 8.17 High Tech Capacity

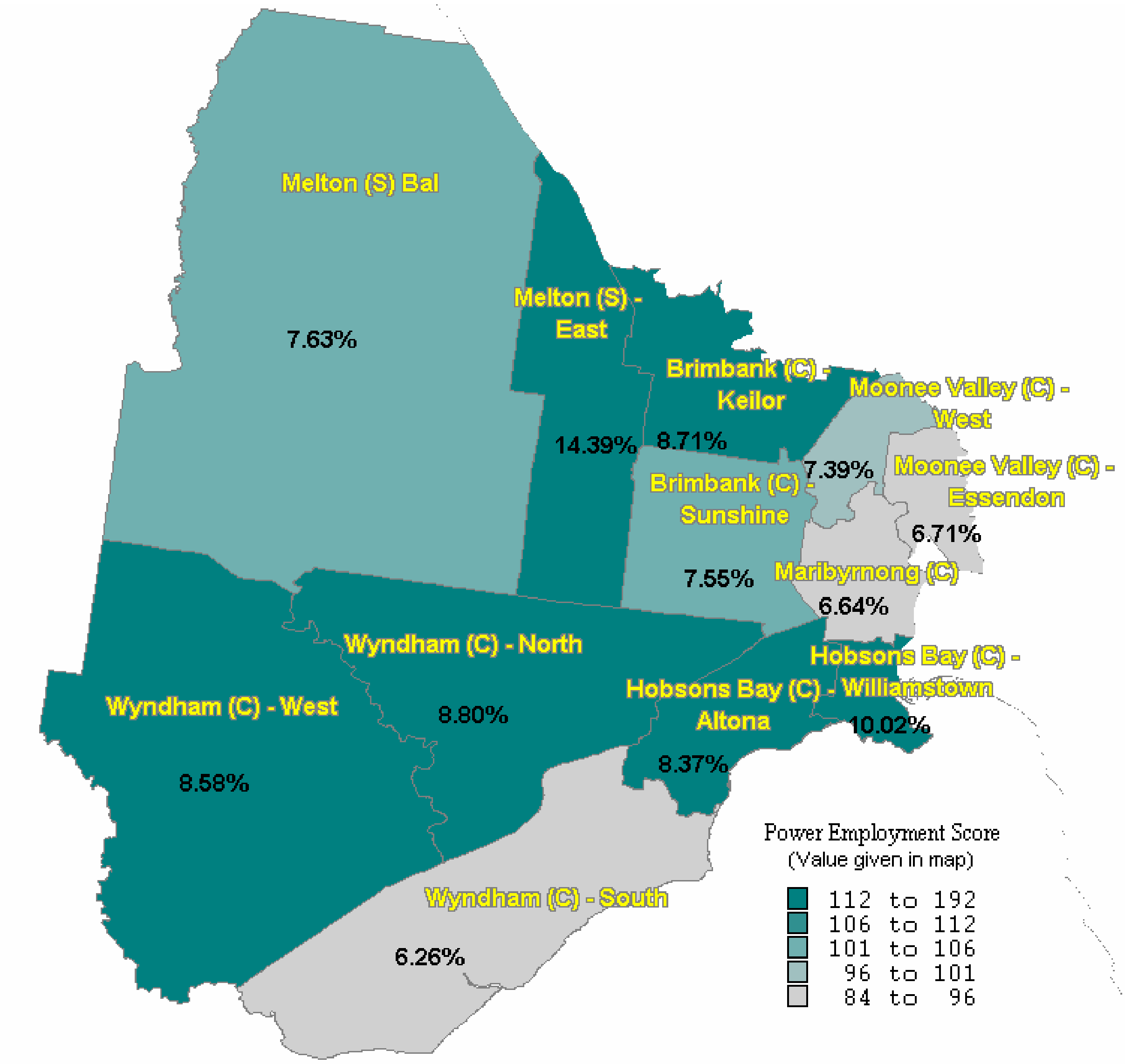
SLA	Value	Score
Wyndham (C) - North	10.4%	96
Wyndham (C) - South	2.3%	0
Wyndham (C) - West	6.7%	2
Hobson's Bay (C) – Altona	9.7%	60
Hobson's Bay (C) - Williamstown	8.3%	26
Brimbank (C) – Keilor	6.4%	23
Brimbank (C) – Sunshine	6.5%	35
Moonee Valley (C) - Essendon	9.3%	63
Moonee Valley (C) - West	5.2%	10
Maribyrnong (C)	15.1%	248
Melton (S) - East	6.4%	2
Melton (S) - Bal	4.3%	5
Metro High and Low		
Melbourne (C) - Inner	24.6%	1000
Cardinia (S) - South	1.7%	0

Source: YourPlace database

** See 7.3 for indicator definition*

8.5.5 Power Employment

It interesting to note that in previous sections a number of indicators have highlighted the low levels of employment generated in places such as Melton – East. The following table shows that while this may be the case the same SLA has a high score for 'power' employment.



The high score for Melton – East eventuates due to the nature of employment available in the region. So while Melton – Bal may have significantly more employment it is the quality of the employment that is important. In this sense the region can be considered to have high levels of 'power' employment potential since if the region is to expand then presumably the same proportion of these types of jobs could be created. As these jobs are full time and well paid by definition it helps to explain why Melton – East has much higher average incomes that its neighbour in Melton – Bal.

This indicator highlights to policy makers the importance of the nature of jobs being generated across the western region. Growing employment that is part-time, casual and/or paid at lower than average rates will not provide the required outcomes necessary to resource a family. This issue is important for the western economy as households with dependents dominate the region's population profile. It is imperative for planning and policy decisions not to focus just on the number of jobs but to consider the employment profile and foster the development of 'power' jobs.

One of the objectives previously mentioned highlighted the role of exporting personal and household services in the future. These industries can potentially lift these power rates in the future as the export of personal and household services is likely to create strong small and medium size business growth, which in turn is likely to create strong self-employment, full time employment, and moderate income levels.

Table 8.18 Power Employment – percentage of workplace employment in power occupations

SLA	Value*	Score
Wyndham (C) - North	8.8%	117
Wyndham (C) - South	6.3%	84
Wyndham (C) - West	8.6%	114
Hobson's Bay (C) – Altona	8.4%	112
Hobson's Bay (C) - Williamstown	10.0%	134
Brimbank (C) – Keilor	8.7%	116
Brimbank (C) – Sunshine	7.5%	101
Moonee Valley (C) - Essendon	6.7%	90
Moonee Valley (C) - West	7.4%	99
Maribyrnong (C)	6.6%	88
Melton (S) - East	14.4%	192
Melton (S) - Bal	7.6%	102
Metro High and Low		
Melbourne (C) - Inner	10.4%	139
Wyndham (C) - South	6.3%	84

Source: YourPlace database

** See 7.3 for indicator definition*

The most pleasing aspect of this indicator is that the western economy outperforms all other regions with a score of 108 against an average metropolitan score of 103.6. The challenge will be for this region to continue creating these jobs at similar or larger rates in the future.

8.6 Outcomes

8.6.1 Productivity

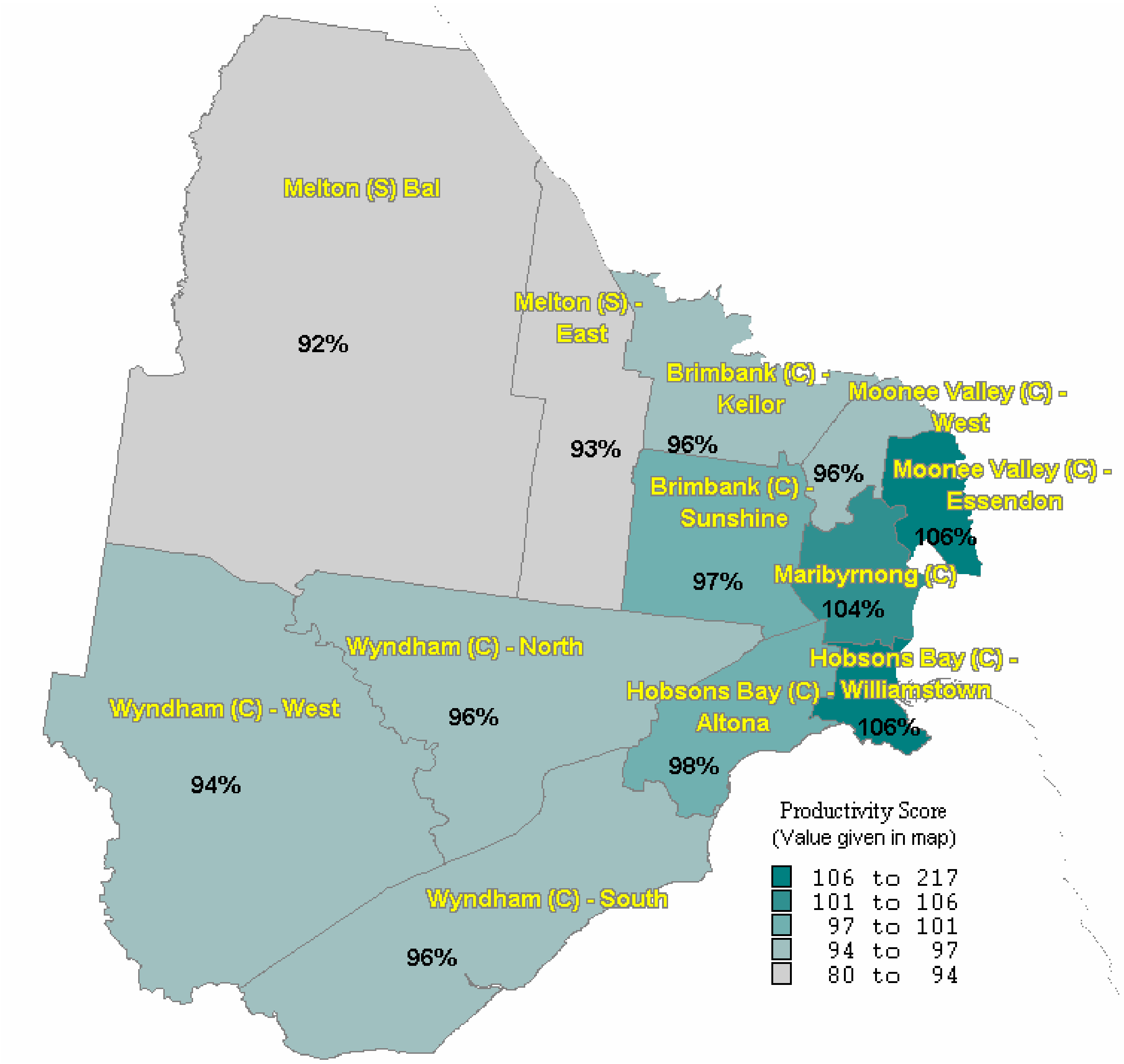
The most interesting aspect of the productivity values for the majority of the SLAs in the western economy is the consistency of the outcomes. For the majority, the productivity of the residents is within 5 per cent of unity[7]. The only regions to differ are the lower values of productivity for the Shire of Melton and the higher values for Williamstown and Essendon. In general the productivity values are lower in areas that are further away from Melbourne, highlighting the importance of providing quality public transport opportunities to these households whose incomes are increasingly squeezed.

[7] Actual income between 95 per cent and 105 per cent of expected income

The relationship between distance and productivity is confirmed with the highest productivity attributed to Melbourne - Inner and the lowest to the outer suburbs of Cardinia – South. The extreme returns to some in the economy is evident in the value for Melbourne Inner of 217% which implies that the residents in the region earn 217 per cent of the expected income that was attributable to occupations and hours worked.

The average for the entire Melbourne metropolitan region was 102.5% and the western economy was 3 per cent lower at 99.5%.

In the future the changes in these values will be very important to watch. In a labour market that is becoming increasingly fractured through the loss of middle level jobs, it is likely that the difference between regions will grow. Even small changes to the productivity measure results in noticeable changes in the income of residents.



The productivity score is the value of the ratio times one hundred.

Table 8.19 Productivity		
SLA	**Value***	**Score**
Wyndham (C) - North	96%	96
Wyndham (C) - South	96%	96
Wyndham (C) - West	94%	94
Hobson's Bay (C) – Altona	98%	98
Hobson's Bay (C) - Williamstown	106%	106
Brimbank (C) – Keilor	96%	96
Brimbank (C) – Sunshine	97%	97
Moonee Valley (C) - Essendon	106%	106
Moonee Valley (C) - West	96%	96
Maribyrnong (C)	104%	104
Melton (S) - East	93%	93
Melton (S) - Bal	92%	92
Metro High and Low		
Melbourne (C) - Inner	217%	217
Cardinia (C) - South	80%	80

Source: YourPlace database

** See 7.3 for indicator definition*

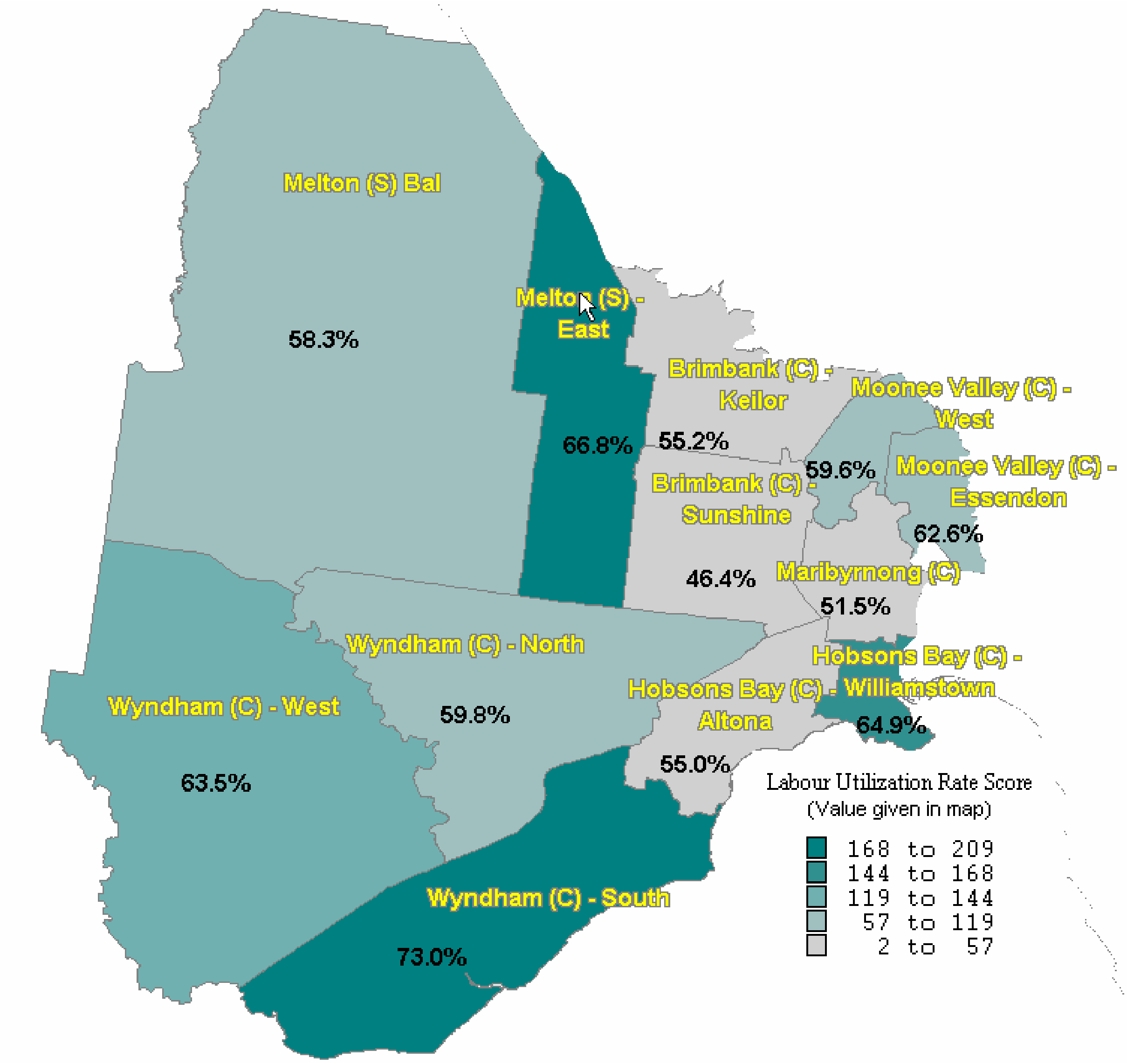
8.6.2 Labour Utilisation

The labour utilisation rate is a very important indicator of the capacity of residents to engage in the workforce. Typically in Australia the regions with the best connections to the workforce and working life have the highest level of labour utilisation. Very rarely are there regions where economic success has allowed lower levels of hours employed and more for leisure pursuits.

In previous measures we have seen regions such as Maribyrnong with moderate scores for productivity, 21st Century skills and the employment generation ratio. At the same time we have noted weaknesses in exposure to low skills, and high non-job ready rates. The labour utilisation indicator provides additional information so we can observe that the issue for Maribyrnong is a lack of work in the aggregate. The residents work 51 per cent of the total available hours, which is amongst the lowest labour utilisation rate in Melbourne, that is, residents are not able to access all the hours available in the region because of their low skills or because they are not job ready.

In comparison the labour utilisation rate of many of the sub-regions is in the low to high 60% range. In fact Wyndham – South has the highest labour utilisation rate in Melbourne at 73.0%. Along with Williamstown and Essendon the residents can be characterised as being able to access more hours of work due to moderately higher skill levels. For Wyndham – West and Melton – East the higher utilisation rates are due in part to the infancy of the region. Where new regions emerge the majority of residents are new families often taking out their first mortgage. Therefore, the very nature of them buying a home means the inhabitants are working and require a secure, full time and steady income. This feature is reinforced in Melton – East in particular by its high power employment score.

Identifying a region with low levels of labour utilisation is a key indicator to identifying areas that would benefit from active intervention, for example, labour market type programs designed to increase education and training. Historically, we are aware that such programs will be required in places such as Brimbank. The table also shows that Maribyrnong and Altona are likely to need considerable support to increase the levels of labour market activity.



The score for the labour utilisation measure is a standardised value based on the average level of utilisation, with an average of 100 for Victoria as a whole.

The average for the Melbourne metropolitan area is 107.3 and for the western region it is 60, with the very low levels for Brimbank and Maribyrnong impacting on the average. The only other region that has lower work rates is in Geelong which scores 57.

The differences however between these regions and the areas of inner Melbourne and the eastern axis are considerable. The eastern axis has a score of 118 which indicates that the region is better able to access employment opportunities.

Table 8.20 Labour Utilisation		
SLA	**Value***	**Score**
Wyndham (C) - North	59.8%	86
Wyndham (C) - South	73.0%	209
Wyndham (C) - West	63.5%	132
Hobson's Bay (C) – Altona	55.0%	39
Hobson's Bay (C) - Williamstown	64.9%	148
Brimbank (C) – Keilor	55.2%	41
Brimbank (C) – Sunshine	46.4%	3
Moonee Valley (C) - Essendon	62.6%	118
Moonee Valley (C) - West	59.6%	82
Maribyrnong (C)	51.5%	20
Melton (S) - East	66.8%	168
Melton (S) - Bal	58.3%	66
Metro High and Low		
Wyndham (C) - South	73.0%	209
Hume (C) - Broadmeadows	45.7%	2

Source: YourPlace database

** See 7.3 for indicator definition*

Table 8.21 Labour Utilisation Ratio Score	
Region Name	**Score***
Western region	60
Northern region	81
Eastern Axis	118
South East	72
Geelong	57
Inner Core	148
Inner East	136
Inner South	152
Melbourne	107

Source: YourPlace database

** See 7.3 for indicator definition*

8.7 Occupational Balance

This indicator measures the ratio of the skills of the residents, described as the originating skills, to the skills of the workers in the region or the destination skills. The first table shows the skills intensity of each region’s workforce and residents.

The following trends are evident;

- Brimbank, Melton and Wyndham – North and Wyndham – West residents have a lower skills intensity than the industries that exist in the area. As such the region is a net importer of skills, the best jobs in these areas are more likely to be taken by people living outside the region.

- Moonee Valley, Hobsons Bay, Maribyrnong and Wyndham - South are all net exporters of skills. These regions have the capacity to grow the required business services and the government and education sectors from the skill sets of the local community as previously identified.

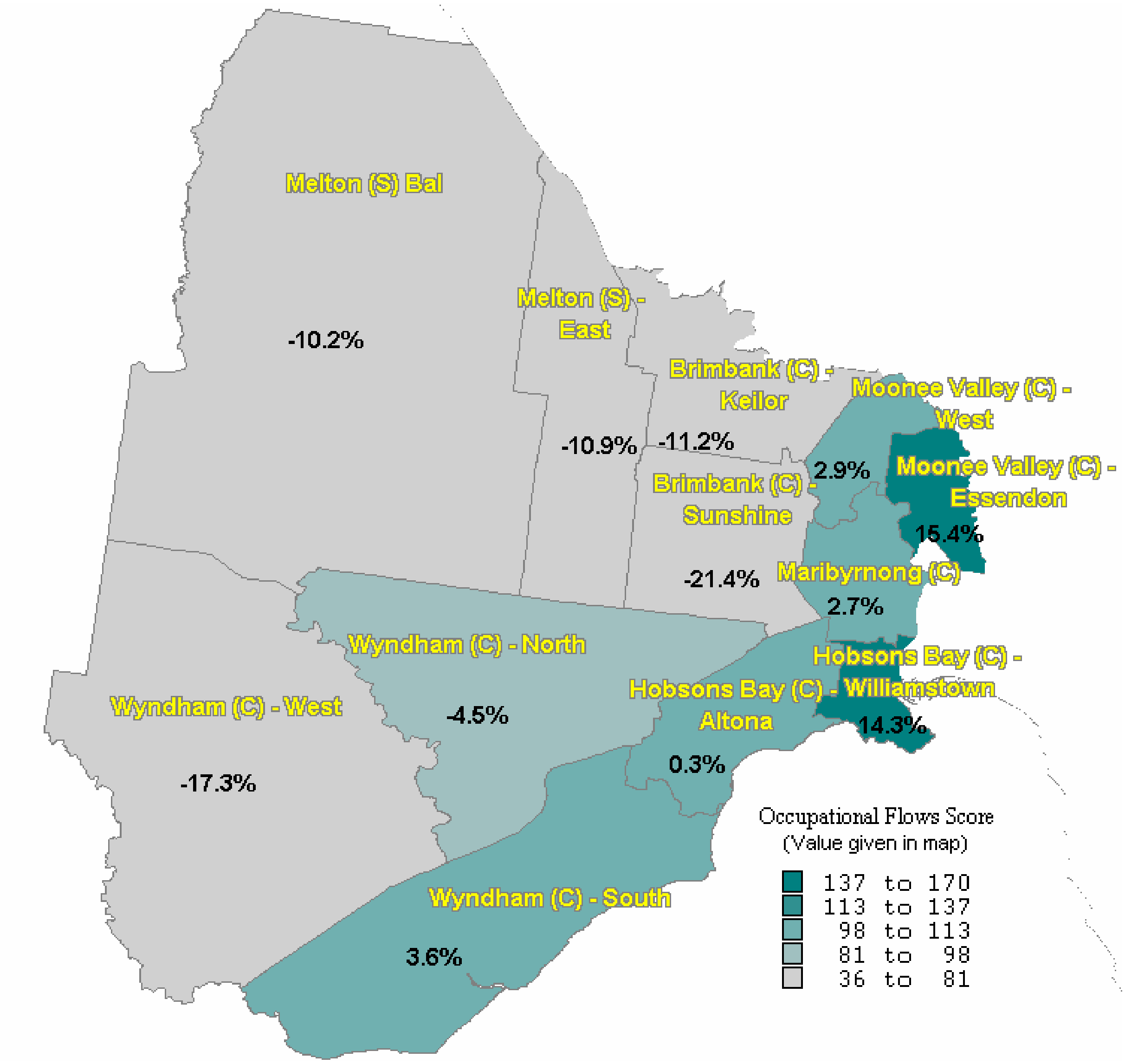
Table 8.22 Occupational Balance

	Determining Occupational Flows*		
	Skills Origin	Skills Destination	Ratio
Wyndham (C) - North	0.429	0.449	-4.5%
Wyndham (C) - South	0.539	0.520	3.6%
Wyndham (C) - West	0.435	0.526	-17.3%
Hobsons Bay (C) - Altona	0.416	0.415	0.3%
Hobsons Bay (C) - Williamstown	0.577	0.505	14.3%
Brimbank (C) - Keilor	0.413	0.465	-11.2%
Brimbank (C) - Sunshine	0.360	0.458	-21.4%
Moonee Valley (C) - Essendon	0.578	0.501	15.4%
Moonee Valley (C) - West	0.472	0.459	2.9%
Maribyrnong (C)	0.485	0.472	2.7%
Melton (S) - East	0.434	0.487	-10.9%
Melton (S) - Bal	0.408	0.454	-10.2%

Source: YourPlace database

** See 7.3 for indicator definition*

When converted to ratio and scores (100 times the ratio) the following table is generated.



The level of variation across the region is to be expected. At the small area level it is not uncommon for a region to have a different level of skills in its workforce as compared to its residents. The importance of the measure however is the way in which the differences provide impetus for change. Those areas with high scores, that is a higher level of skills in the residents living in the area than in the workforce working in the area, are likely to press for changing land uses. They may also produce the impetus locally for an increase in the skill levels of the types of businesses operating in the area.

The focus for Moonee Valley - Essendon is highlighted. When the residents disapprove of the type of employment located in the region or when there is pressure for conversion of employment areas to residential areas, it will be related to the contrast between the types of work done in the area and the residents source of employment. The transition from an economy that may not currently provide local employment to one that does, has the potential to transform that inner region.

In the case of Brimbank – Sunshine the shortfall between the skills of residents and the workforce provides insight into the need for increased training and education options and pathways. When considered in conjunction with the other measures that have highlighted the disadvantage of the area and the lack of local employment it is clear that accessible and relevant training is critical to allow local residents to access these local opportunities.

The average for the Melbourne metropolitan area is 106.4 with the Western region scoring 89.2. The western economy only performs better than the south east of Melbourne with a score of 71.7.

The strength of the eastern axis is evident with a score of 113.7 for the region.

8.8 Opportunity Cost of Travel

In general excess time in transport to and from work is a waste of resources and reduces the quality of life for all. For a regional economy its ability to link residents and their work in a timely fashion is important.

The following table details two of the measures that are used to calculate the score for the opportunity cost of travel. The first column provides the average 2 way travel time for each SLA and the second is the total travel time per week expressed as a percentage of the average hours worked per week. The third column lists the score calculated to reflect the percentage of average weekly income that the weekly travel time cost represents.

The correlation between percentage hours worked and score is generally negative but not necessarily directly proportional as those regions with a higher percentage hours worked may have a higher score when one would expect a lower score. This is due to difference in the average income of the regions. For instance although the percentage for Melton - East is higher than Melton - Bal, the lower average income for Melton - Bal means that the score for Melton - Bal is lower than the score for Melton - East which has a higher average income.

Table 8.23 Opportunity Cost of Travel

	Determining Cost of Travel*		
	Mins per Day	% hours worked	Score
Wyndham (C) – North	56.76	13.55%	77
Wyndham (C) – South	88.09	19.88%	45
Wyndham (C) – West	59.42	14.16%	76
Hobson's Bay (C) – Altona	49.71	11.91%	81
Hobson's Bay (C) - Williamstown	44.41	10.30%	120
Brimbank (C) - Keilor	51.96	12.54%	76
Brimbank (C) - Sunshine	47.09	11.51%	64
Moonee Valley (C) - Essendon	42.23	9.95%	121
Moonee Valley (C) - West	47.76	11.43%	91
Maribyrnong (C)	39.38	9.37%	105
Melton (S) - East	79.91	18.67%	44
Melton (S) - Bal	67.64	16.21%	42

Source: YourPlace database

** See 7.3 for indicator definition*

The relatively high travel times for many of the SLA's are apparent in the table. This is especially the case in the City of Wyndham and the Shire of Melton.

The social costs of average travel times in excess of 60 minutes are the reduction of the possibility of community involvement and in the future reduction of the likelihood of households to move towards more environmentally friendly transport options. Future population growth and the lack of significant new road infrastructure in large tracts of the region do not augur well for the travel times expected in the medium term.

The average for the Melbourne metropolitan area is 98.7 and for the western region it is 83.6. Despite the relatively high opportunity costs the western economy is performing significantly better than the south east with a score of 62.8. Once again with a score of 102.4 the advantage of the eastern axis is clearly demonstrated.

Reasons for the growth of commuting from the Western suburbs include the following.

- The failure of job generation in the region's established manufacturing/transport employment base.
- State investment in major roads connecting the region with areas of employment growth in inner Melbourne, notably the Westgate bridge and CityLink.
- The availability of large tracts of land to residential developers at low cost. This land is attractive for development mainly because of its proximity to inner Melbourne, compared with equivalent sites in the outer southern and eastern suburbs.

As a result, the production economies of the Western suburbs, which are still heavily reliant on manufacturing and transport, have decoupled from the household economies, which are increasingly reliant on commuter earnings. The advantage of this trend is that the Western suburbs have not suffered as severely from the poor rate of job generation in manufacturing as other manufacturing areas less convenient to the inner suburbs. The disadvantage is that commuting costs have risen. This is of particular concern, since the increase in car commuting from the Western to the inner suburbs is expected to result in strong demands for public investment, eg to duplicate the Westgate bridge. The concern is heightened by the importance of the roads for freight movements, particularly to and from the Port of Melbourne.

8.9 Overall strength of the region

Combining the results of the indicators provides us with a 'metric' for regional evaluation. A score is calculated for each SLA and is ranked against the performance of the other 74 SLAs within the Melbourne metropolitan region.

When the western economy is compared to others in Melbourne the trends identified in the single indicators are further highlighted in the aggregate. The western region is performing the worst out of all the regions analysed and comparable only to south east Melbourne. The emerging eastern axis has a considerable advantage in nearly all respects. At the sub regional level the highlights are Maribyrnong and Hobson's Bay – Williamstown which are ranked 20 and 25 respectively out of the 75 SLA's within the Melbourne metropolitan region.

Table 8.24 Combined Strength of the region by SLA

	SEIFA Disadvantage Score 1996	Combined Strength Value*	Rank in Victoria, out of 200
Wyndham (C) - North	≈1,025	1,805	45
Wyndham (C) – South	≈1,025	1,839	42
Wyndham (C) - West	≈1,025	1,071	73
Hobson's Bay (C) - Altona	958	1,566	55
Hobson's Bay (C) - Williamstown	1,020	2,160	24
Brimbank (C) - Keilor	993	1,227	69
Brimbank (C) - Sunshine	902	1,238	66
Moonee Valley (C) - Essendon	1,008	2,112	28
Moonee Valley (C) - West	1,016	1,466	60
Maribyrnong (C)	887	2,218	20
Melton (S) - East	1,055	1,106	72
Melton (S) - Bal	1,022	1,229	68

Source: YourPlace database and SEIFA

** See 7.3 for indicator definition*

The difference between the SEIFA and the NIEIR regional score highlight the fact that simple measures of an economy which only look at the outcomes for households without considering the capacity of the economy to grow, its connection to broader economic regions and the way in which agents within a local area operate in the broader economy can overstate certain elements of economic performance. Such is the case with Maribyrnong. Returning again to the four quadrant framework, the large differences between the emerging households and the incumbent unemployed does tend to highlight social issues on one hand and the strength of the new households on the other.

What the regional analysis presented shows however is that the economies of Maribyrnong and other areas in the West have strong local employment, good provision of jobs in general, and these jobs can tend to produce moderate incomes and skill requirements.

At the opposite end of the spectrum a newly established community can tend to have quite strong employment and income, as they are a function of the people who can afford the mortgage to move there. But at the same time such suburbs may provide low levels of employment, poor connectivity, low creativity and a general lack of economic development potential beyond expansion of the housing base.

These differences are very important however in assessing the growth path of a region. Few would argue that the future growth path and capacity to transform the economy of Maribyrnong is not high, this is the strength of the regional analysis presented in the report.

It highlights that the major issues in the West are about growth management and making the most of the resources and momentum at hand. As outlined in the beginning of this report economic development can be driven by inertia and momentum. Areas in the West have significant inertia in key social measures but the momentum will be the catalyst to drive the West to be a great place to live and work.

Table 8.25 Combined Local Strength by Region

	Score
Western region	1,684
Northern region	1,917
Eastern Axis	2,568
South East	1,735
Geelong	1,980
Inner Core	3,469
Inner East	2,385
Inner South	2,192

Source: YourPlace database

The challenge facing the West is that other regions of Melbourne have a decent head start.

9 Recommendations

9.1 Strategy and priority identification

What are the four or five areas of priority to be addressed to facilitate regional growth and development over the next three to four years?

- Intensify the advantage the western economy has in high tech industry where scale already exists
- Take advantage of the population growth in the region by ensuring the appropriate infrastructure, amenity and public transport that allow workers to access jobs.
- Take advantage of the opportunity in services which are expected to grow in the future by providing the educational courses that help facilitate access to these jobs and allow the export of these skills to other regions.
- Make sure the services are there to help retrain those workers that are displaced.

Real relative income growth should be the aspiration of such priorities, and this coupled with a strong commitment to urban renewal and amenity enhancement, will lay the framework for endogenous growth, that is, growth driven from within rather growth which relies on purely external forces.

What should Melbourne's western region's positioning strategy be?

- To be a region that takes advantage of its younger population
- To be seen as a region which is looking to gain skills in the areas of services of the aged, community, recreation and personal services, and that is exporting these skills to other regions
- A region committed to enhancing the current scale in high tech businesses
- To be a region whose quality of infrastructure and linkages within can help transfer wealth and opportunities from its inner regions outwards, to enhance opportunities for those in Brimbank, and to capitalise on the growing populations to its West.
- To be a place to work with unparalleled access, working with strong supply chains which deliver high skilled work.
- To be a region who values the enormous potential provided by new supply of otherwise limited land, and one committed to maximising benefits from its development.
- To be a region extracting every last drop of advantage and innovation the transport sector can provide, and to leverage its success to the broader economy

9.2 Recommendations

- **Innovation**: In the light of the low levels of innovation demonstrated in the Western economy the region should lobby government to one, increase the general provision of tertiary opportunities in the West, and two, support the focus of the regional tertiary institutions into reflecting the economic development aspirations and particular employment based objectives of the West in terms of research and community engagement.

- **Change management**: Approach the issue of F in the Western region through the use of population cohort specific pathway policies. Rather than only concentrating on geographic areas and their outcomes, the policies need to be directed at people living in each area now. This cohort approach is preferable to encouraging local areas to define land use and development pathways for a resident population which could be changing quite rapidly.

- **Growth management**: That future vacant land available for industrial purposes is developed within a framework which provides for minimum levels of investment, employment generation and economic development potential within the region as a whole.

- **Outcome measurement:** The region should resolve to continually measure in an honest fashion the actual levels of unemployment, and employment growth.

- **Structural unemployment**: The non-job ready by definition require additional support, training and structural adjustment compensation to enable their transition back to work, and therefore require targeted and integrated solutions that broad industry policy doesn’t provide.

- **Local employment**: Recognising the importance of local employment the Western region should be seeking in the next 20 years to increase the rate of local job creation so as to provide 40 local jobs per 100 residents.

- **Transport**: The Western region lobby the State and Federal government where appropriate to continue to increase the road transport infrastructure in line with current rates of traffic growth. This would necessarily include the widening of the Western Ring Rd and a capacity solution for the Westgate Bridge.

10 Appendices

10.1 Glossary and Sources for Flow of Funds

Wages and salaries

The calculation of the 2003 flow of funds data was restricted this year due to the inexplicably late release of the Taxation Statistics for 2000/01. As such the 2003 figures must be calculated in a similar manner to the 2002 values without the addition of new relative income growth information to help estimate wage and salaries income. The following dot points outline the calculation of the non-farm components of wages and salaries income;

- Estimates of income from 1999/00 taxation statistics at a level is used

- Recent growth in income from taxation records provides a trend in the income per person that can be expected in the region. This measure is required due to the very large difference in wage growth at the regional level.

- The growth in employment at the local area level is subsequently combined with the income per employee growth and the base levels of income from Taxation Statistics to produce updates of income at the regional level.

- State and national account control totals are then used to balance wages and income growth.

- As with all information collected from taxation Statistics the data is converted from postcode definitions to ABS regions using the 2001 Postcode to Statistical Local Area concordance provide by the ABS.

This year we do have the benefit of directly estimating farm income using rainfall data as a proxy for the impact of the drought on regional incomes. The change in rainfall from long-term average is used as a basis for allocating farm income on a regional basis. Farm income cannot be derived using the declared taxable income from primary production as a guide. Due to problems of declaration and substantial carried forward of farm losses this is not a completely accurate guide to total income. As such the estimate is based on the most recent measure of gross agricultural output, which is subsequently converted to a realised income measure consistent with national accounts. Most importantly differences between the relative income generating capacity of various agricultural activities are accounted for. By subsequently varying the incomes derived by our estimate of the impact of the drought provide more relevant distribution of incomes for 2003.

Due to the lack of data availability for such a key series the 2001 and 2003 estimates are presented at the regional level without including the 2002 values as reported last year.

Income Tax: This total income tax paid is the net tax paid after deductions and rebates. It includes the Medicare levy as well as the additional Medicare levy for high-income taxpayers. The 1999 and 2001 figure is based on reported taxation statistics. The 2003 figure has been adjusted by state control totals, and using estimates of income created earlier.

Benefits: This figure is an estimate of the total amount of benefits received at the local level. The mount includes all benefits and allowances received from Centrelink and an indicative assessment of the contribution of Community Development Employment Program income in remote areas. Figures for all years are based on recipient data. This measure does not include the income derived from Department of Veterans Affairs (DVA) benefits. This amount is not included in the accounts.

Business income: The business income for a region is effectively based on the value of the businesses that operate in the region and the relative performance of the economy as a whole. Unfortunately the net business income as reported in Taxation Statistics does not adequately capture the total impact of business income. National Economics utilises small area microsimulation of the value of unincorporated businesses based on realised cash flows. Using state control totals and the estimated value of business assets the destination of business income can be adequately measured. The changes in business income reflect both the evolution of business values through time as well as the macro-economic trends captured in economy wide reported values of business income.

Interest and dividends: The value of interest and dividends received are derived from Taxation Statistics. Once again due to the lack such material this year, the changes in this value from 2001 to 2003 can only be derived from State Accounts control totals and previous trends in the distribution of dividends within each state.

Interest paid: The amount of interest paid by the household sector is a function of the stock of debt, the nature of the debt and interest rates applied. In order to keep abreast of the impacts that the rising level of household debt in the late 1990's National Economics developed a Household Debt Model which estimates the impact of debt at the local level. One of the measures derived from such modelling is the amount of interest that is paid by the household sector on debt. The debts incurred in running unincorporated businesses are not included, but rather used in the net business income estimates presented in the table. The debt included covers housing, personal finance and credit card debt. These model estimates are balanced to state and national control totals automatically. The relatively large increase in the amount of interest paid across the period 1998 to 2003 reflects the continued strong growth in household debt throughout the same period.

Net property income: Net property income is derived from Taxation Statistics, and balance to state control totals. This small measure cannot be updated at the local levels and hence National Economics relies on state trends to derive the 2003 estimates.

GST: In order to determine the amount of GST paid by a particular community an estimate of the amount of expenditure undertaken is required. National Economics uses our recently released 2001 estimate of household spending called SpendInfo. SpendInfo provides detailed expenditure estimates for over 400 items at the local area level. Using growth in households and recent trends in retail sales and national accounts consumption at the state level, 2003 estimates are derived. Using these expenditure estimates and details of GST excluded goods estimates of the total GST paid are derived. These amounts are balanced to state control totals.

Net flow of funds: Adding up all of the inflows and subtracting the outflows determines the net flow of funds to a region. Specifically,

Net Flow = Wages + Benefits + Business Income + Interest & Dividends + Property Income – Income
Tax – Interest Paid – GST

10.2 Population movements by local government area in the Western region

The tables in this section analyse the migration patterns of current residents in the western region relative to where they were in 1996. These tables aid understanding of the issues of stagnant population within a region as well as the number of new immigrants that come from other regions in Australia and from overseas. All tables provide a metropolitan Melbourne average to aid comparisons.

Table 10.1 Location in 1996, of 2001 Census UR, proportion: Brimbank

Age in 2001	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
Brimbank						
0 to 24 years	18.6%	48.3%	16.8%	8.8%	3.9%	3.5%
25 to 54 years	0	57.5%	20.4%	13.2%	4.4%	4.5%
55 + years	0	76.4%	9.4%	6.5%	1.7%	6.0%
Total	7.0%	57.4%	17.1%	10.4%	3.7%	4.4%
Metro Average						
0 to 24 years	18.9%	42.6%	14.9%	14.8%	5.0%	3.8%
25 to 54 years	0	48.6%	20.1%	21.2%	5.4%	4.7%
55 + years	0	74.3%	9.7%	8.9%	1.3%	5.8%
Total	6.4%	52.1%	16.1%	16.4%	4.4%	4.6%

Source: ABS Census

The overall population of Brimbank has been relatively stable with about three-quarters of the population remaining in the LGA since 1996. Compared to the Metro average, those aged 0 to 54 have remained more stable and the region has attracted less of this age category from other parts of Australia and overseas than Metropolitan Melbourne.

Table 10.2 Location in 1996, of 2001 Census UR, proportion: Hobson's Bay

Age in 2001	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
Hobson's Bay						
0 to 24 years	21.4%	44.3%	13.7%	13.4%	3.4%	3.9%
25 to 54 years	0	50.3%	16.8%	23.9%	4.4%	4.6%
55 + years	0	77.0%	8.1%	8.1%	0.9%	5.8%
Total	6.9%	54.2%	13.9%	17.0%	3.3%	4.6%
Metro Average						
0 to 24 years	18.9%	42.6%	14.9%	14.8%	5.0%	3.8%
25 to 54 years	0	48.6%	20.1%	21.2%	5.4%	4.7%
55 + years	0	74.3%	9.7%	8.9%	1.3%	5.8%
Total	6.4%	52.1%	16.1%	16.4%	4.4%	4.6%

Source: ABS Census

Hobson's Bay has attracted more people from other parts of Australia than the metro average for those aged 25 to 54. The other categories shown in the table are similar to those of the metro average.

Table 10.3 Location in 1996, of 2001 Census UR, proportion: Maribyrnong

Age in 2001	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
Maribyrnong						
0 to 24 years	21.2%	34.5%	14.6%	13.9%	8.1%	7.7%
25 to 54 years	0	42.2%	20.5%	21.6%	7.5%	8.1%
55 + years	0	74.8%	10.0%	4.5%	1.7%	9.0%
Total	6.4%	47.1%	16.4%	15.5%	6.4%	8.2%
Metro Average						
0 to 24 years	18.9%	42.6%	14.9%	14.8%	5.0%	3.8%
25 to 54 years	0	48.6%	20.1%	21.2%	5.4%	4.7%
55 + years	0	74.3%	9.7%	8.9%	1.3%	5.8%
Total	6.4%	52.1%	16.1%	16.4%	4.4%	4.6%

Source: ABS Census

Surprisingly only one-third of those aged 0 to 24 were at the same address in 1996 as they were in 2001. This is 8 percent less than the metro average. The region has also attracted a relatively high proportion of people from overseas, particularly in the younger categories.

Table 10.4 Location in 1996, of 2001 Census UR, proportion: Melton

Age in 2001	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
Melton						
0 to 24 years	19.7%	40.9%	12.8%	22.5%	1.3%	2.9%
25 to 54 years	0	47.0%	13.1%	33.9%	2.0%	4.0%
55 + years	0	62.9%	7.1%	22.1%	1.2%	6.6%
Total	8.1%	46.2%	12.3%	27.9%	1.6%	3.9%
Metro Average						
0 to 24 years	18.9%	42.6%	14.9%	14.8%	5.0%	3.8%
25 to 54 years	0	48.6%	20.1%	21.2%	5.4%	4.7%
55 + years	0	74.3%	9.7%	8.9%	1.3%	5.8%
Total	6.4%	52.1%	16.1%	16.4%	4.4%	4.6%

Source: ABS Census

Melton has seen a large influx of people from other parts of Australia in all age categories. Over a quarter of the population in 2001 lived in other parts of Australia in 1996, 11.5 percent higher than the metro average. It is interesting to note the relatively low retention of those in the 55+ category that have remained at the same address, 11.5 percent less than the metro average. Despite the huge influx from other parts of Australia, Melton has seen very few immigrants from overseas.

Table 10.5 Location in 1996, of 2001 Census UR, proportion: Moonee Valley

Age in 2001	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
Moonee Valley						
0 to 24 years	19.1%	46.6%	13.0%	13.7%	3.5%	4.2%
25 to 54 years	0	51.9%	20.0%	18.8%	4.3%	5.0%
55 + years	0	81.5%	7.7%	4.0%	0.8%	6.0%
Total	5.8%	57.4%	14.9%	13.7%	3.2%	5.0%
Metro Average						
0 to 24 years	18.9%	42.6%	14.9%	14.8%	5.0%	3.8%
25 to 54 years	0	48.6%	20.1%	21.2%	5.4%	4.7%
55 + years	0	74.3%	9.7%	8.9%	1.3%	5.8%
Total	6.4%	52.1%	16.1%	16.4%	4.4%	4.6%

Source: ABS Census

It seems that those who live in Moonee Valley are happy to stay there, particularly if they are aged over 55. Over 80 percent of those aged 55+ stayed in the same address between 1996 and 2001, 7.2 percent higher than the metro average. Those in the lower age categories also remained in the region at a higher retention level than the metro average. Due to the lower exit rates from the region, lower than metro averages for migrants from other Australia and overseas was experienced.

Table 10.6 Location in 1996, of 2001 Census UR, proportion: Wyndham

Age in 2001	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
Wyndham						
0 to 24 years	19.8%	44.1%	16.4%	14.2%	2.1%	3.4%
25 to 54 years	0	51.8%	19.1%	21.5%	2.7%	4.8%
55 + years	0	69.4%	8.3%	15.0%	1.1%	6.3%
Total	7.9%	51.1%	16.6%	17.7%	2.2%	4.4%
Metro Average						
0 to 24 years	18.9%	42.6%	14.9%	14.8%	5.0%	3.8%
25 to 54 years	0	48.6%	20.1%	21.2%	5.4%	4.7%
55 + years	0	74.3%	9.7%	8.9%	1.3%	5.8%
Total	6.4%	52.1%	16.1%	16.4%	4.4%	4.6%

Source: ABS Census

Wyndham attracted a particularly high proportion of those aged 55+ from other parts of Australia, with 15 percent coming since 1996, 6.1 percent higher than the metro average. The region remained relatively close to the metro averages except in the ability to attract overseas residents, which was below half the metro average.

10.3 Regional investment patterns

The following table show the levels of investment in residential and non-residential building by local government in the Western economy.

Table 10.7 Regional investment patterns by type: Brimbank

Brimbank	Value of residential buildings total ($m)	Value of non residential buildings ($m)	Value total building total ($m)
1995-96	89.9	181.3	271.1
1996-97	130.1	219.1	349.2
1997-98	125.0	277.0	402.1
1998-99	343.9	133.4	477.2
Growth	39.9	-7.4	15.2
Share of Vic Total			
1995-96	3.1	4.3	3.8
1996-97	3.6	4.7	4.2
1997-98	3.7	6.7	5.3
1998-99	3.4	2.5	3.1

Source: ABS Building Approvals data

Table 10.8 Regional investment patterns by type: Hobson's Bay

Hobson's Bay	Value of residential buildings total ($m)	Value of non residential buildings ($m)	Value total building total ($m)
1995-96	64.8	122.3	187.1
1996-97	71.5	80.2	151.6
1997-98	80.6	56.7	137.3
1998-99	184.5	139.1	323.6
Growth	29.9	3.3	14.7
Share of Vic Total			
1995-96	2.3	2.9	2.7
1996-97	2.0	1.7	1.8
1997-98	2.4	1.4	1.8
1998-99	1.8	2.6	2.1

Source: ABS Building Approvals data

Table 10.9 Regional investment patterns by type: Maribyrnong

Maribyrnong	Value of residential buildings total ($m)	Value of non residential buildings ($m)	Value total building total ($m)
1995-96	24.8	55.1	79.9
1996-97	23.1	45.3	68.4
1997-98	31.7	40.9	72.6
1998-99	132.3	44.6	176.9
Growth	52.0	-5.1	22.0
Share of Vic Total			
1995-96	0.9	1.3	1.1
1996-97	0.6	1.0	0.8
1997-98	0.9	1.0	1.0
1998-99	1.3	0.8	1.1

Source: ABS Building Approvals data

Table 10.10 Regional investment patterns by type: Melton

Melton	Value of residential buildings total ($m)	Value of non residential buildings ($m)	Value total building total ($m)
1995-96	34.3	12.4	46.8
1996-97	39.4	15.0	54.4
1997-98	45.1	42.0	87.1
1998-99	259.3	46.3	305.6
Growth	65.8	38.9	59.9
Share of Vic Total			
1995-96	1.2	0.3	0.7
1996-97	1.1	0.3	0.7
1997-98	1.3	1.0	1.1
1998-99	2.6	0.9	2.0

Source: ABS Building Approvals data

Table 10.11 Regional investment patterns by type: Moonee Valley

Moonee Valley	Value of residential buildings total ($m)	Value of non residential buildings ($m)	Value total building total ($m)
1995-96	83.2	57.8	141.0
1996-97	83.3	56.4	139.7
1997-98	76.7	31.8	108.4
1998-99	171.0	60.4	231.4
Growth	19.7	1.1	13.2
Share of Vic Total			
1995-96	2.9	1.4	2.0
1996-97	2.3	1.2	1.7
1997-98	2.2	0.8	1.4
1998-99	1.7	1.1	1.5

Source: ABS Building Approvals data

Table 10.12 Regional investment patterns by type: Wyndham

Wyndham	Value of residential buildings total ($m)	Value of non residential buildings ($m)	Value total building total ($m)
1995-96	66.4	164.2	230.6
1996-97	77.1	256.8	333.9
1997-98	74.9	79.9	154.8
1998-99	250.1	161.0	411.1
Growth	39.3	-0.5	15.6
Share of Vic Total			
1995-96	2.3	3.9	3.3
1996-97	2.2	5.5	4.0
1997-98	2.2	1.9	2.0
1998-99	2.5	3.0	2.7

Source: ABS Building Approvals data

10.4 Infrastructure[8]

The following example illustrates some of the benefits infrastructure can have in developing regional economies.

In a world that was less connected, and where markets were smaller, the advantages that could be derived from better infrastructure were marginal.

For example, a bakery in a suburb with great local roads operated similarly to one operating in a suburb with poorer infrastructure. At most, the delivery van could complete deliveries more quickly, or provide free delivery.

However, assume these suburbs were 40 kilometres apart and that a new road was constructed, along with advances in high capacity transport equipment. As transport improves, distance becomes less of an obstacle. Whilst the new road offers the potential of new markets, providing goods in the alternative market presents pricing problems. This is because we can assume that the transport costs associated with the 40 kilometres needs to be added to the price of goods. Assuming the two firms are otherwise operating with similar product costs, the bakery that wishes to export will have to charge a higher price in the export market than the domestic supplier.

The tension between new opportunities and pricing however does not last for long, in a competitive economy. This is where great infrastructure begins to pay off for a region. For example, the firm operating in the suburb with good domestic market infrastructure could use the savings associated with the local delivery to competitively price exports to other towns. This is the cost savings advantage of infrastructure.

A second advantage lies in another opportunity that the new road provides. The export market is within reach, and the potential for increased sales and profits is clear. The firm seeking to export has one sure way of succeeding in the other market. It needs to work out a way to make a better product for a cheaper price; in other words: ‘innovation is catalysed by infrastructure’.

One of the best ways to ensure the chances of succeeding in innovation is to have the better skilled and productive bakers (particularly better bakers), removed from the competitor. The new road may allow commuting between the two suburbs and therefore facilitate this transfer of skills. For both firms, the new road increases the effective size of their labour market. For workers, there are potentially better rewards for skilled workers. For the economy, there is a tendency to concentrate skills in the most innovative firms.

It is important to understand the role that public funding would play in this example. If the sum total of activity in the two areas were bakeries, or other firms sectors that operated similarly to the bakeries, it is clear that funding the road development would have been difficult via direct investment or user-pays principles. The cost advantages that the road provides would be removed by the cost of using or building the road. Therefore the competitive pricing advantage would be removed and exports would struggle to develop.

Additionally, the innovations in transport that accompany the development of the road may have needed to be imported. Over time, the cost of the imported technology can be recouped directly by the transport industry and its users. When a piece of infrastructure is privately

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[8] The following section is first printed in “Growing Melbourne’s North – Developing an Integrated Economy”, a report prepared by NIEIR for the NACC and NIETL/North Link in August 2003. It has been included as requested by the MWACC with the full acknowledgement and permission of the NACC.

financed, it is likely to be due to a substantial, latent market with significant unlocked potential. In Australia, where the role of publicly funded, future-demand oriented infrastructure has suffered from lack of attention, we have traditionally seen infrastructure removing barriers to growth. In the west however, there is a mix of infrastructure that has undoubtedly unlocked latent demand.

The final component of the infrastructure dividend relates to the opportunities various types of infrastructure can provide to the domestic population. There are at least two types of such infrastructure:

- Infrastructure that provides opportunities to further expand individual opportunities with society, such as health, education, public transport and connectivity.

- Infrastructure that provides competitive advantages in terms of amenity, lifestyle and built environment, and which are likely to enhance the average wealth generation capacity of individuals living within the area. In a post-modern context, this would include all environmental assets not related to the costs of production.

The second point will often have the first as a necessary condition, and is inherently related to the issue of 'creativity' highlighted in this report.

We now have seven distinct outcomes of infrastructure:

- reducing the cost of operating in a domestic market
- unlocking new markets
- being the catalyst for innovation
- expanding the effective labour market
- expanding opportunities for individuals
- enhancing broad social outcomes
- increasing the attractiveness of a region through amenity and lifestyle characteristics.

Of course, some infrastructure has more than one outcome and some will increase at the expense of others. This is where the task of attracting public spending faces significant obstacles. Not only must infrastructure now compete for scarce resources, its rewards are not universally applicable.

As such, infrastructure planning must first identify the most critical motivating forces. The determination of these motivations in the western economy should be highly skewed towards innovation and market expansion in places that already have good infrastructure. It should also focus on toward amenity development and labour market access to other areas of Melbourne.

Other areas of this report highlight reasons for these important motivations.

10.5 Sub-regional changes in manufacturing employment

Table 10.13 Manufacturing employment: City of Wyndham

ANZIC Code	Industry	1991	2001	Change
21	Food	371	811	440
22	Textile, clothing & footwear	436	385	-51
23	Wood	45	376	331
24	Printing & publishing	25	145	120
25	Petroleum & chemicals	509	1,110	601
26	Non-ferrous	145	331	186
27	Ferrous	714	1,130	417
28	Machinery	129	438	309
29	Building	110	162	52
Total manufacturing		2,484	4,888	2,404

Source: ABS JTW

Table 10.14 Manufacturing employment: City of Hobsons Bay

ANZIC Code	Industry	1991	2001	Change
21	Food	1,359	1,082	-277
22	Textile, clothing & footwear	591	306	-286
23	Wood	86	181	95
24	Printing & publishing	79	200	120
25	Petroleum & chemicals	2,519	2,374	-145
26	Non-ferrous	638	604	-34
27	Ferrous	864	762	-103
28	Machinery	2,485	4,073	1,588
29	Building	204	239	35
Total manufacturing		8,825	9,820	995

Source: ABS JTW

Table 10.15 Manufacturing employment: City of Brimbank

ANZIC Code	Industry	1991	2001	Change
21	Food	855	919	63
22	Textile, clothing & footwear	1,776	1,500	-275
23	Wood	452	339	-113
24	Printing & publishing	308	550	242
25	Petroleum & chemicals	1,586	1,570	-16
26	Non-ferrous	323	283	-41
27	Ferrous	2,348	1,816	-532
28	Machinery	3,716	1,870	-1,846
29	Building	968	1,279	311
Total manufacturing		12,331	10,125	-2,207

Source: ABS JTW

Table 10.16 Manufacturing employment: City of Moonee Valley

ANZIC Code	Industry	1991	2001	Change
21	Food	451	400	-51
22	Textile, clothing & footwear	547	353	-195
23	Wood	118	131	13
24	Printing & publishing	175	297	122
25	Petroleum & chemicals	311	518	208
26	Non-ferrous	90	40	-51
27	Ferrous	269	212	-57
28	Machinery	1,224	863	-361
29	Building	416	447	32
Total manufacturing		3,600	3,261	-340

Source: ABS JTW

Table 10.17 Manufacturing employment: City of Maribyrnong

ANZIC Code	Industry	1991	2001	Change
21	Food	739	969	230
22	Textile, clothing & footwear	1,751	2,239	488
23	Wood	219	323	103
24	Printing & publishing	177	429	252
25	Petroleum & chemicals	2,907	1,787	-1,120
26	Non-ferrous	424	233	-191
27	Ferrous	1,112	745	-366
28	Machinery	889	1,400	511
29	Building	173	306	133
Total manufacturing		8,392	8,431	39

Source: ABS JTW

Table 10.18 Manufacturing employment: Shire of Melton

ANZIC Code	Industry	1991	2001	Change
21	Food	14	63	49
22	Textile, clothing & footwear	18	158	140
23	Wood	13	47	35
24	Printing & publishing	23	35	12
25	Petroleum & chemicals	1	119	118
26	Non-ferrous	45	66	22
27	Ferrous	129	168	39
28	Machinery	161	171	10
29	Building	45	60	15
Total manufacturing		447	887	439

Source: ABS JTW

10.6 Social Security

Table 10.19 Social Security Profile, City of Wyndham

	1991	1996	1998	2000	2001	2002
Unemployment benefit (UB)	1,594	2,820	0	0	0	0
NewStart, non-youth	0	0	1,652	1,716	1,673	1,419
NewStart, youth	0	0	1,110	0	0	0
NewStart, Mature Age Allowance	41	72	70	147	153	159
Youth Allowance, unemployed	0	0	70	1,153	1,165	1,044
Total recipients, unemployed	1,635	2,892	2,902	2,869	2,991	2,622
Excess growth in DSP	0	451	665	1,056	1,041	1,247
NIEIR Effective unemployment total	1,635	3,343	3,567	3,925	4,032	3,869
NIEIR Effective, NESB	409	836	682	751	771	562
NIEIR Effective, Female	496	1,014	1,121	1,233	1,267	1,215
NIEIR Effective, Youth	657	1,343	1,180	1,153	1,165	1,044
Invalid Pension	514	0	0	0	0	0
Sickness Benefit	200	106	138	0	0	0
Disability Support Pension (DSP)	0	1,175	1,409	1,993	2,006	2,212
Total recipients (Disability)	714	1,281	1,547	1,993	2,006	2,212
Conservative natural increase	0	116	168	223	251	251
Total recipients (Disability), NESB	292	523	471	607	611	674
Total recipients (Disability), Female	238	427	582	750	755	832
Single Parent Payment	833	1,614	1,679	1,959	2,155	2,252
Single Parent Payment, Female	797	1,544	1,588	1,853	2,039	2,130
Single Parent Payment, NESB	193	374	209	244	269	281
NJ Wife Pension	143	85	56	0	0	0
NJ Youth Unemployed	263	465	472	461	466	418
NJ LT Unemployed	327	734	1,141	1,185	1,261	1,076
NJ Mature Age Unemployed	41	72	70	147	153	159
NJ Migrant Unemployed	163	289	222	219	229	152
NJ Disability Total	714	1,281	1,547	1,993	2,006	2,212
NJ Single Parent	416	807	839	979	1,077	1,126
NJ Total Non Job Ready	2,068	3,734	4,347	4,985	5,192	5,143
NJ Effective Population	39,637	48,998	51,766	55,350	56,642	60,774
NJ Non Job Ready Rate	5.2	7.6	8.4	9.0	9.2	8.5

Source: Yourplace database

Table 10.20 Social Security Profile, City of Hobsons Bay

	1991	1996	1998	2000	2001	2002
Unemployment benefit (UB)	3,004	3,811	0	0	0	0
NewStart, non-youth	0	0	2,516	2,311	2,337	1,968
NewStart, youth	0	0	1,221	0	0	0
NewStart, Mature Age Allowance	94	120	139	179	193	187
Youth Allowance, unemployed	0	0	63	1,122	1,167	1,022
Total recipients, unemployed	3,098	3,931	3,940	3,433	3,697	3,176
Excess growth in DSP	0	424	713	997	785	827
NIEIR Effective unemployment total	3,098	4,354	4,653	4,430	4,482	4,003
NIEIR Effective, NESB	994	1,398	1,271	1,210	1,225	835
NIEIR Effective, Female	927	1,303	1,427	1,359	1,375	1,228
NIEIR Effective, Youth	1,012	1,423	1,284	1,122	1,167	1,022
Invalid Pension	1,562	0	0	0	0	0
Sickness Benefit	295	149	188	0	0	0
Disability Support Pension (DSP)	0	2,277	2,588	3,122	2,943	2,985
Total recipients (Disability)	1,857	2,426	2,776	3,122	2,943	2,985
Conservative natural increase	0	145	205	268	300	300
Total recipients (Disability), NESB	940	1,228	1,139	1,281	1,207	1,224
Total recipients (Disability), Female	600	784	973	1,094	1,031	1,046
Single Parent Payment	1,068	1,642	1,567	1,693	1,752	1,768
Single Parent Payment, Female	1,035	1,590	1,501	1,622	1,678	1,694
Single Parent Payment, NESB	326	501	367	396	410	414
NJ Wife Pension	148	160	90	0	0	0
NJ Youth Unemployed	405	514	514	449	467	409
NJ LT Unemployed	620	1,195	1,771	1,627	1,781	1,542
NJ Mature Age Unemployed	94	120	139	179	193	187
NJ Migrant Unemployed	398	505	431	375	404	265
NJ Disability Total	1,857	2,426	2,776	3,122	2,943	2,985
NJ Single Parent	534	821	783	847	876	884
NJ Total Non Job Ready	4,056	5,740	6,504	6,599	6,664	6,271
NJ Effective Population	45,425	49,741	51,736	53,460	53,968	54,229
NJ Non Job Ready Rate	8.9	11.5	12.6	12.3	12.3	11.6

Source: Yourplace database

Table 10.21 Social Security Profile, City of Brimbank

	1991	1996	1998	2000	2001	2002
Unemployment benefit (UB)	6,563	9,434	0	0	0	0
NewStart, non-youth	0	0	6,313	6,606	6,759	6,148
NewStart, youth	0	0	3,436	0	0	0
NewStart, Mature Age Allowance	161	232	240	385	410	390
Youth Allowance, unemployed	0	0	158	3,595	3,707	3,406
Total recipients, unemployed	6,725	9,666	10,146	10,201	10,876	9,944
Excess growth in DSP	0	1,228	1,760	2,358	2,272	2,673
NIEIR Effective unemployment total	6,725	10,894	11,906	12,559	13,148	12,617
NIEIR Effective, NESB	3,246	5,258	5,472	5,772	6,042	4,731
NIEIR Effective, Female	1,953	3,164	3,517	3,710	3,883	3,726
NIEIR Effective, Youth	2,370	3,840	3,594	3,595	3,707	3,406
Invalid Pension	3,370	0	0	0	0	0
Sickness Benefit	760	490	386	0	0	0
Disability Support Pension (DSP)	0	5,110	5,848	6,936	6,902	7,303
Total recipients (Disability)	4,130	5,601	6,234	6,936	6,902	7,303
Conservative natural increase	0	243	344	448	500	500
Total recipients (Disability), NESB	2,866	3,887	3,997	4,447	4,425	4,682
Total recipients (Disability), Female	1,188	1,611	1,978	2,200	2,190	2,317
Single Parent Payment	1,887	3,297	3,210	3,928	4,458	4,744
Single Parent Payment, Female	1,798	3,142	3,041	3,721	4,223	4,494
Single Parent Payment, NESB	876	1,532	1,233	1,509	1,713	1,823
NJ Wife Pension	652	437	302	0	0	0
NJ Youth Unemployed	948	1,363	1,437	1,438	1,483	1,363
NJ LT Unemployed	1,345	2,951	4,557	4,768	5,175	4,712
NJ Mature Age Unemployed	161	232	240	385	410	390
NJ Migrant Unemployed	1,298	1,866	1,865	1,875	1,999	1,491
NJ Disability Total	4,130	5,601	6,234	6,936	6,902	7,303
NJ Single Parent	943	1,649	1,605	1,964	2,229	2,372
NJ Total Non Job Ready	9,478	14,098	16,241	17,366	18,199	17,631
NJ Effective Population	88,802	100,624	104,078	106,414	107,879	109,726
NJ Non Job Ready Rate	10.7	14.0	15.6	16.3	16.9	16.1

Source: Yourplace database

Table 10.22 Social Security Profile, City of Moonee Valley

	1991	1996	1998	2000	2001	2002
Unemployment benefit (UB)	4,079	5,106	0	0	0	0
NewStart, non-youth	0	0	3,428	2,808	2,686	2,357
NewStart, youth	0	0	1,605	0	0	0
NewStart, Mature Age Allowance	120	150	144	205	208	198
Youth Allowance, unemployed	0	0	43	1,315	1,287	1,163
Total recipients, unemployed	4,199	5,256	5,220	4,123	4,181	3,718
Excess growth in DSP	0	226	419	634	332	446
NIEIR Effective unemployment total	4,199	5,482	5,639	4,757	4,513	4,164
NIEIR Effective, NESB	1,588	2,074	2,015	1,700	1,612	1,076
NIEIR Effective, Female	1,462	1,909	1,891	1,595	1,513	1,396
NIEIR Effective, Youth	1,339	1,748	1,648	1,315	1,287	1,163
Invalid Pension	2,246	0	0	0	0	0
Sickness Benefit	513	231	257	0	0	0
Disability Support Pension (DSP)	0	2,853	3,061	3,574	3,293	3,407
Total recipients (Disability)	2,759	3,084	3,318	3,574	3,293	3,407
Conservative natural increase	0	99	140	181	202	202
Total recipients (Disability), NESB	1,392	1,556	1,450	1,561	1,438	1,489
Total recipients (Disability), Female	872	974	1,158	1,248	1,150	1,190
Single Parent Payment	1,178	1,869	1,589	1,603	1,638	1,685
Single Parent Payment, Female	1,129	1,792	1,509	1,523	1,555	1,600
Single Parent Payment, NESB	500	793	564	569	581	598
NJ Wife Pension	246	197	95	0	0	0
NJ Youth Unemployed	536	670	659	526	515	465
NJ LT Unemployed	840	1,658	2,477	2,029	2,091	1,772
NJ Mature Age Unemployed	120	150	144	205	208	198
NJ Migrant Unemployed	635	795	746	589	598	384
NJ Disability Total	2,759	3,084	3,318	3,574	3,293	3,407
NJ Single Parent	589	935	795	801	819	842
NJ Total Non Job Ready	5,724	7,489	8,233	7,725	7,523	7,070
NJ Effective Population	69,042	71,949	72,818	73,470	73,891	73,663
NJ Non Job Ready Rate	8.3	10.4	11.3	10.5	10.2	9.6

Source: Yourplace database

Table 10.23 Social Security Profile, City of Maribyrnong						
	1991	**1996**	**1998**	**2000**	**2001**	**2002**
Unemployment benefit (UB)	4,411	5,482	0	0	0	0
NewStart, non-youth	0	0	3,727	3,440	3,253	2,818
NewStart, youth	0	0	1,531	0	0	0
NewStart, Mature Age Allowance	94	117	96	169	165	175
Youth Allowance, unemployed	0	0	60	1,413	1,333	1,165
Total recipients, unemployed	4,506	5,600	5,413	4,852	4,751	4,158
Excess growth in DSP	0	202	298	394	314	441
NIEIR Effective unemployment total	4,506	5,802	5,711	5,246	5,065	4,599
NIEIR Effective, NESB	2,546	3,279	2,918	2,681	2,588	1,940
NIEIR Effective, Female	1,382	1,780	1,837	1,687	1,629	1,479
NIEIR Effective, Youth	1,312	1,689	1,590	1,413	1,333	1,165
Invalid Pension	1,974	0	0	0	0	0
Sickness Benefit	590	243	155	0	0	0
Disability Support Pension (DSP)	0	2,500	2,675	2,916	2,832	2,959
Total recipients (Disability)	2,564	2,743	2,830	2,916	2,832	2,959
Conservative natural increase	0	-23	-32	-41	-46	-46
Total recipients (Disability), NESB	1,326	1,418	1,305	1,345	1,306	1,364
Total recipients (Disability), Female	837	896	973	1,002	973	1,017
Single Parent Payment	1,151	1,829	1,536	1,630	1,692	1,726
Single Parent Payment, Female	1,100	1,747	1,441	1,530	1,588	1,620
Single Parent Payment, NESB	570	906	747	793	823	839
NJ Wife Pension	323	130	72	0	0	0
NJ Youth Unemployed	525	652	636	565	533	466
NJ LT Unemployed	901	1,838	2,775	2,561	2,545	2,190
NJ Mature Age Unemployed	94	117	96	169	165	175
NJ Migrant Unemployed	1,019	1,266	1,106	992	971	701
NJ Disability Total	2,564	2,743	2,830	2,916	2,832	2,959
NJ Single Parent	576	914	768	815	846	863
NJ Total Non Job Ready	6,002	7,661	8,283	8,017	7,892	7,354
NJ Effective Population	38,887	38,861	38,694	38,848	38,861	39,129
NJ Non Job Ready Rate	15.4	19.7	21.4	20.6	20.3	18.8

Source: Yourplace database

Table 10.24 Social Security Profile, City of Melton

	1991	1996	1998	2000	2001	2002
Unemployment benefit (UB)	1,023	1,896	0	0	0	0
NewStart, non-youth	0	0	1,226	1,285	1,281	1,134
NewStart, youth	0	0	894	0	0	0
NewStart, Mature Age Allowance	19	35	36	88	92	92
Youth Allowance, unemployed	0	0	70	937	951	865
Total recipients, unemployed	1,042	1,931	2,227	2,223	2,325	2,091
Excess growth in DSP	0	222	379	755	788	932
NIEIR Effective unemployment total	1,042	2,153	2,606	2,978	3,113	3,023
NIEIR Effective, NESB	180	371	331	378	396	398
NIEIR Effective, Female	330	681	773	883	923	896
NIEIR Effective, Youth	439	908	964	937	951	865
Invalid Pension	402	0	0	0	0	0
Sickness Benefit	121	85	103	0	0	0
Disability Support Pension (DSP)	0	778	971	1,510	1,574	1,717
Total recipients (Disability)	523	863	1,075	1,510	1,574	1,717
Conservative natural increase	0	118	172	231	262	262
Total recipients (Disability), NESB	172	284	275	386	402	439
Total recipients (Disability), Female	183	303	370	519	541	591
Single Parent Payment	630	1,043	1,137	1,403	1,508	1,608
Single Parent Payment, Female	604	1,001	1,088	1,343	1,443	1,539
Single Parent Payment, NESB	106	176	83	102	110	117
NJ Wife Pension	60	52	39	0	0	0
NJ Youth Unemployed	176	326	386	375	381	346
NJ LT Unemployed	208	541	873	915	978	854
NJ Mature Age Unemployed	19	35	36	88	92	92
NJ Migrant Unemployed	72	133	113	113	118	110
NJ Disability Total	523	863	1,075	1,510	1,574	1,717
NJ Single Parent	315	522	569	702	754	804
NJ Total Non Job Ready	1,374	2,472	3,091	3,703	3,897	3,924
NJ Effective Population	21,481	25,114	27,297	31,207	33,983	37,988
NJ Non Job Ready Rate	6.4	9.8	11.3	11.9	11.5	10.3

Source: Yourplace database

10.7 Classifications of occupations

National Institute of Economic and Industry Research (NIEIR) uses a classification scheme for occupations that is designed to show how the competitive pressures in a modern economy will impact on job creation. At a regional level, there is a large amount of variation in the average skill levels of those who live and work within a particular region. The differences in the skill levels will contribute to the long-term success of the region, both in terms of the provision of adequate incomes at the household level and also the successful development of the technological base of industries in the area.

The classification scheme is based on the work of Robert Reich, and uses the Reichian scale of occupations as a base. Under this classification scheme, all occupations are broken down into three broad groups – the routine workers, the in-person service workers and the symbolic analysts. The three levels are designed to reflect the core process that is used in each of the occupations. The underlying process for an occupation that is classified as in-person service worker can be thought of as fundamentally relating to interaction between people. Therefore this classification will include occupations such as doctors and lawyers at the highest skill level and sales assistants at the lower levels of skill within the classification.

The symbolic analyst classification is based on the core activity relating to the processing of diverse sources of information and subsequently applying the results of analysis of that information. Occupations included in the symbolic analysts classification range from industrial chemists to farm managers. Each occupation is reliant on the flow of information to the process and each uses local knowledge and experience to analyse the data or information.

The routine worker is classified as an occupation in which there is a reasonably strict process that the worker implements without significant modification. While the complexity of the process may be intense and involve application of many decision rules, the process itself remains outside the control of the worker.

The final sub-classification that NIEIR uses is the global knowledge flow worker. These workers span both the symbolic analysts and in-person service workers. These occupations are fundamentally involved with the transfer of information within the economy. Whether they are the technical expertise behind this transfer, such as computer technicians or programmers, or whether they design the information content itself, each plays a pivotal role in the dissemination of knowledge.

10.8 Resident employment for remainder of metropolitan Melbourne

Table 10.24 Resident employment by industry and hours worked

Industry	<35hrs	35-50hrs	Over 50 hrs	Total
Agriculture	0.18%	0.30%	0.11%	0.58%
Mining	0.02%	0.08%	0.04%	0.14%
Manufacturing	2.88%	14.27%	1.85%	19.00%
Utilities	0.05%	0.33%	0.05%	0.43%
Construction	1.31%	4.30%	0.89%	6.50%
Wholesale trade	1.17%	3.99%	0.64%	5.79%
Retail Trade	9.06%	7.94%	1.77%	18.76%
Transport and storage	1.28%	4.14%	1.09%	6.51%
Communications	0.54%	1.74%	0.25%	2.53%
Finance and insurance	1.04%	3.01%	0.31%	4.36%
Business Services	3.37%	6.86%	1.23%	11.47%
Government Admin and Education	3.10%	5.62%	0.70%	9.42%
Health and Community Services	3.75%	3.77%	0.44%	7.96%
Cultural and Recreational Services	1.27%	1.25%	0.26%	2.78%
Personal Services	0.96%	1.92%	0.32%	3.20%
Non-classifiable economic units	0.19%	0.34%	0.06%	0.58%
Total	30.16%	59.86%	9.98%	100.00%

Source: ABS Census