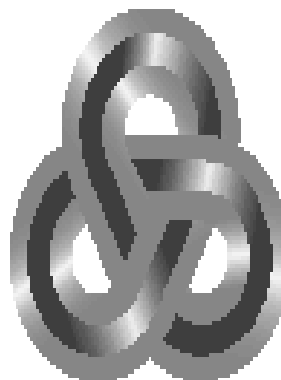




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# State of the Regions 2005-06

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## **Preface: The accumulated insights of *State of the Regions* reports**

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### **Core objectives**

The core objectives of the *State of the Regions* reports (of which this is the eighth) are to:-

1. present the latest statistical indicators (for this report to 2004-05) describing how Australian regions are performing;
2. analyse the indicator trends in terms of growing equality and inequality between Australian regions;
3. make suggestions for the policy implications of current Australian regional performance (this 2005-06 report focuses on the role of infrastructure and, in particular, transport and related infrastructure);
4. steadily expand the indicators used to measure regional performance (in this report the new indicators focus on access indicators for the employment and retail infrastructure);
5. describe the reality of regional economics; and
6. to assist local government to understand their region and to provide useful planning tools.

This and previous *State of the Regions* reports together provide a coherent framework for analysis and understanding of regional development and also provide the foundations for planning and policy direction. The reports reveal regional economic development issues and assess the effectiveness of policies in removing road blocks to regional economic development. The benchmarks used are derived from the concept of convergence and divergence.

In order to understand the forces of divergence/convergence in economic performance successive reports have developed a list of Stylised Facts. Stylised Facts are “facts” which in relation to a specific driver or influence for regional development describes the most probable influence. The “facts” will not apply to all regions.

Each successive *State of the Regions* report either adds to the list of Stylised Facts and/or adds additional validation to the operation of the “facts”. This 2005-06 report largely produces added evidence to reinforce previous conclusions as to the nature of the facts.

Accordingly, the Stylised Facts of previous *State of the Regions* reports will be redefined and the supporting evidence generated in the 2005-06 *State of the Regions* stated. This report adds three more Stylised Facts.

## The Stylised Facts

There are 12 Stylised Facts in all. Stylised Fact 12 is the “fact” developed in the 2005-06 *State of the Regions* report.

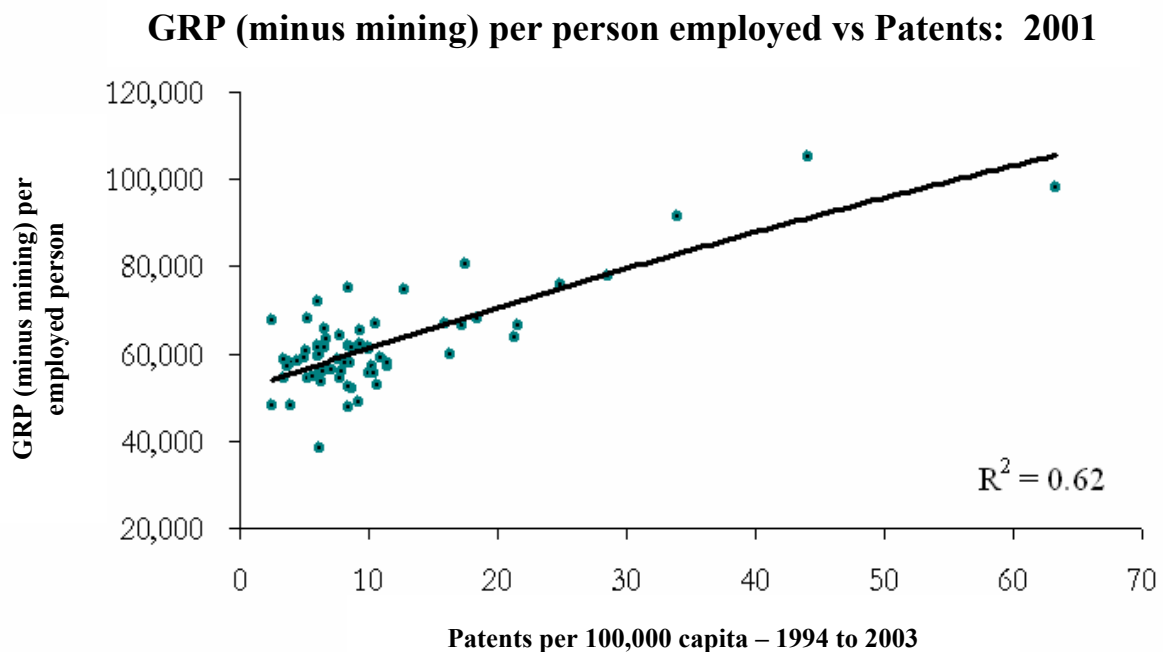
### Stylised Fact One

**The capacity for realised sustained innovation is for most high-income economies without a unique and extensive natural resource base is now the core longer term driver of economic growth.**

### Stylised Fact Two

**The innovation/knowledge capacity of an economy is now largely determined at the regional level. That is, given Stylised Fact One, those high income economies which maintain sustained growth will tend to be economies which establish a number of successful knowledge-based regions.**

For Australia the figure below demonstrates the empirical relevance of this Stylised Fact in the Australian context. One indicator of capacity to create knowledge and innovation is patent activity. The figure below shows that there is a good correlation between the economic success of a region measured in terms of non-mining gross regional product per person employed and patent activity. The data in the figure is for the 64 regions of this report.



### **Stylised Fact Three**

**For much of the 19<sup>th</sup> and 20<sup>th</sup> centuries nations and regions tended to converge in terms of economic performance. The rise of the importance of the knowledge-based regional economy has made divergence in economic performance between regions a possibility for long periods a reality.**

Those regions in the above figure which have high patent and GRP (non-mining) per person employed in the main are in the regional grouping which is standard to the *State of the Regions* reports and which are designated the core metro region. These regions have the highest net per capita flow of funds into the household sector and the absolute economic superiority is increasing. In 2004, for this report, the core metro regional grouping had a level of net household income from business that was 46 per cent above the level of the poorest regional grouping, namely the production zone. In 1999 the superiority of the core metro region was 42 per cent above the poorest region.

This economic performance is after taxes and benefits. In terms of market incomes (wages, profits, etc.), the core metro region had a real increase in per capita of \$3,680 between 1999 and 2004. This was 46 per cent above the increase for the regional grouping with the next largest increase in market income. It was 60 times the increase for the regional grouping (that is, the production zone), with the lowest increase in market incomes per capita.

In short the analysis of this report reinforces empirical relevance of Stylised Fact Three.

### **Stylised Fact Four**

**The rise of the knowledge-based regional economy has meant that the classical mechanism for regional convergence in economic performance, namely real wage adjustment, has become a weak force.**

Under the neoclassical model, if a region's economic performance was poor unemployment would increase and real wages would fall. Investment and production would be transferred from a region with high real wages until convergence in living standards is achieved by real wage declines in previously high wage regions.

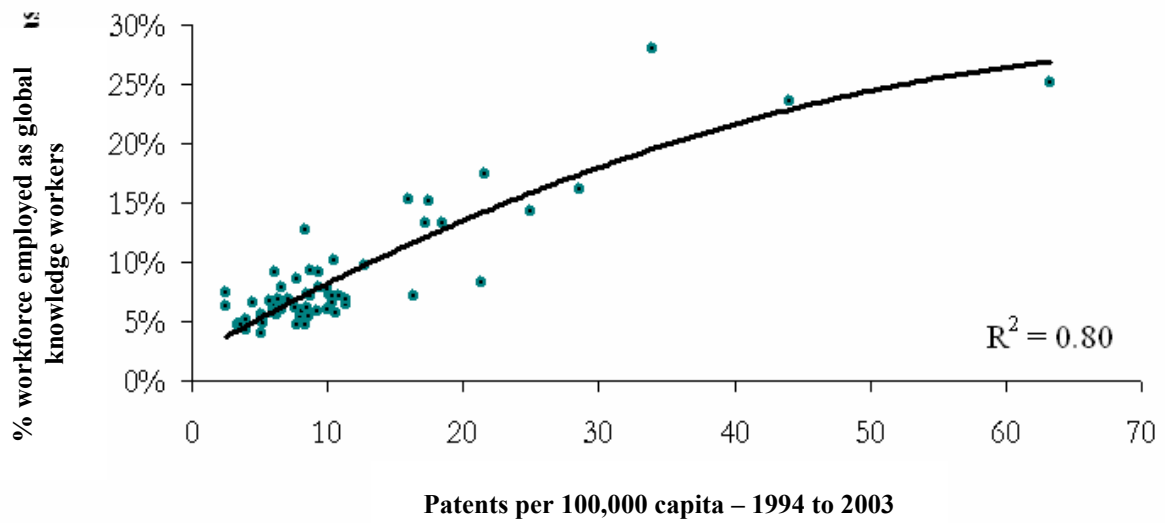
The Australian SOR Global Sydney region has the strongest knowledge foundations and also the highest hourly wage rate. This report quantifies that between 1996 and 2001 the remainder of Australia generated only an additional \$1 billion of household income growth as a result of the transfer of production out of Global Sydney, because of Global Sydney's high real wage rate. Global Sydney easily offset this loss on household income by the increase in the skills intensity and lifestyle choices of the region.

### **Stylised Fact Five**

**To be a successful knowledge-based region, regions need to have a high concentration of high skilled (scientists, engineers, etc.) designer global knowledge workers. These workers tend to migrate to regions with scale and diversity of social and community infrastructure and cultural and lifestyle choices.**

The figure below shows the strong relationship between global knowledge worker concentrations and knowledge creation (that is, patent activity). The 2002 *State of the Regions* also showed a high correlation coefficient between community infrastructure/lifestyle choice and concentrations of global knowledge workers across Australian regions.

## Global Knowledge Workers (GNW) vs Patents

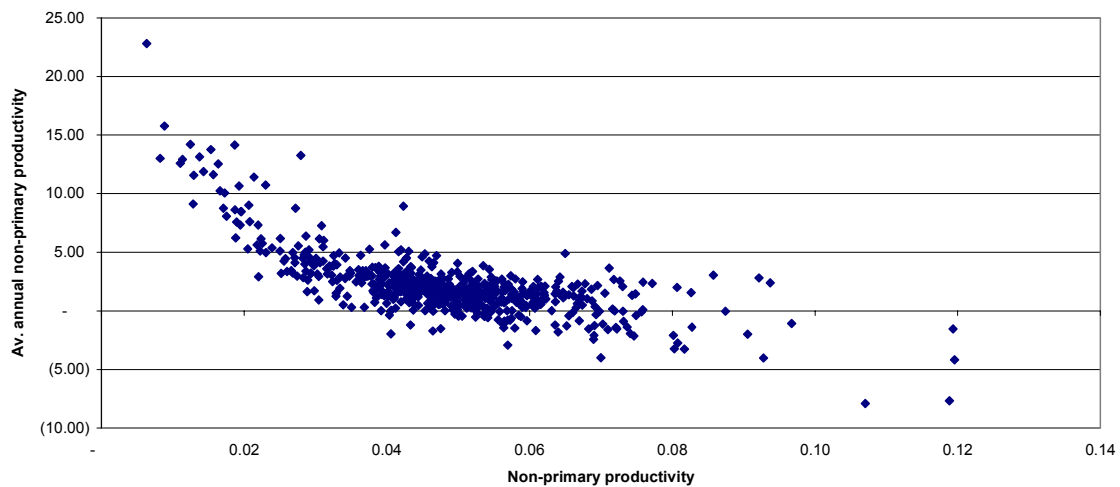


### Stylised Fact Six

**For similar industries productivity differentials between regions tend to be eliminated relatively quickly.**

The figure below shows the lower the productivity levels in 1991 (that is, GRP per employed person across Australian LGAs), the higher the productivity growth rate for 1991 to 2001. The following figure was presented in the 2003 *State of the Regions* report.

## Growth in non-primary GRP productivity 1991-2001 versus 1991 non-primary productivity – Australian Local Government Areas



## Stylised Fact Seven

**The market forces for convergence in living standards between regions tend to take the form of the elimination of productivity differentials and the outflow of population. That is, the incomes in per capita terms are increased towards the levels of the high income regions.**

The 2005-06 *State of the Regions* report documents the improved economic performance of the rural regional group over the last few years. That is, per capita real incomes have improved significantly relative to some other regions. This has been driven by:-

- (i) productivity growth rates increasing the real incomes of those who remain in employment;
- (ii) high gross out-migration of the unemployed and younger workers; and
- (iii) concentration of population and industry clusters around major provincial centres.

The improved economic performance of the rural group is now producing increased net migration flows into the region as a whole.

## Stylised Fact Eight

**Those regional centres which have successfully helped improve the economic performance of the rural region have been ones with high employment growth relative to population growth which, in turn, has occurred in provincial cities that:-**

- maintain a population growth rate in excess of 0.3 per cent per annum;
- develop diversified lifestyle and cultural choices for residents;
- develop scale in a small number of non-mining and non-agricultural industries; and
- develop inter-regional export capacity in business and/or education services.

## Stylised Fact Nine

**By itself a too high a concentration of population 55 and over will reduce regional productivity and increase unemployment while a high share of the working age range of 25 to 54 will increase regional productivity and will reduce unemployment. Migration inflows in the younger age ranges tend to reduce unemployment. Migration inflows in the older age ranges tend to increase unemployment.**

The evidence for this Stylised Fact was outlined in the 2003 *State of the Regions* report. The 2005-06 *State of the Regions* report finds that the general ageing of the population as reflected by the increase in the share of the population over 54, between 1996 and 2001, across Australian regions reduced industry productivity and reduced total household income by \$847 million.

Most of this income loss occurred in the lifestyle regions, along the New South Wales and Queensland coastlines, with a total household income loss of \$717 million.

The inference of this Stylised Fact is that a balance in the net migration impacts across all age groups is desirable to maximise regional productivity.

## **Stylised Fact Ten**

**Because of the weakening of the market forces in driving convergence in economic performance, a high level of government intervention in driving regional economic development is now justified, at least to the same extent as was the case in the past.**

## **Stylised Fact Eleven**

**Regions are successful because enterprises in these regions are successful. To assist enterprises to grow, policy must explicitly focus on developing and strengthening the emerging flexible entrepreneurial supply lines of industry clusters on which knowledge based economies are founded.**

Policies to establish a successful regional economy require complex policy strategies involving a whole of government approach. Important components are policies designed to strengthen the networks that link the institutions, organisations, enterprises and key personnel within regions and to strengthen regional supply chains.

## **Stylised Fact Twelve**

**Infrastructure in general, and transport infrastructure in particular, together with urban design are key instruments to implement the policy implications of Stylised Facts Ten and Eleven. Infrastructure makes social networks more efficient, minimises production costs, increases the scale and efficiency of labour markets and promotes sustainable growth. For maximum efficiency in infrastructure implementation there should be a degree of local government involvement in the funding and implementations of infrastructure projects.**

Stylised Fact Twelve is the core finding of the 2005-06 *State of the Regions* report. This report finds that:-

- ❑ as a result of other Australian regions not having the same social and human capital standards per capita as Global Sydney, the loss of household income was \$43 billion nation-wide;
- ❑ as a result of the rest of Australia not having the same scale in labour market catchment, industry concentrations of activity and balance in terms of the demand and supply of skills, the cost to the nation was \$16 billion in 2001;
- ❑ as a result of the rest of Australia not having the same quality transport, communication and other links to the rest of the world as Global Sydney, the cost to the nation in terms of household income was \$37 billion.

The report finds that there is considerable cost to the nation from Global Sydney not being supported by the level of research, development and education institutions required for the region to be competitive with the rest of the world.

Of course, it is one thing to establish the costs in terms of foregoing income of differential standards of infrastructure provision between regions. It cannot be inferred that these costs should necessarily be removed. This depends on the costs of the infrastructure that would have to be installed and the benefits generated in terms of the convergence of economic performance. These investment requirements will be explored in the 2005-06 *State of the Regions* report.



### **Stylised Fact Thirteen**

**Given Stylised Facts One and Two, internet-based communications infrastructure is becoming an increasingly important driver of economic growth. This is because sustained export success in non-resource based industries relies on reaching a high level of sophistication in using the internet to integrate production, marketing and innovation efforts into domestic and world supply chains. This in turn requires access to quality internet communications infrastructure.**

If Australian firms are to be integrated and remain in world supply chains, which is essential for sustained export success, they must have access to world best practice internet-based communications infrastructure. If this cannot be achieved, then the place of Australian firms in world supply chains, and hence exports, will be reduced with the goods and services given to firms in countries that are better provided with communications infrastructure.

### **Stylised Fact Fourteen**

**The provision of quality communications infrastructure is a particularly important driver for rural and provincial regions, to offset the implications of Stylised Fact Three. These are the regions that are often most neglected in the provision of quality communications infrastructure.**

One of the reasons for the current realised disadvantage of rural and provincial areas, in terms of real incomes per capita and employment generation, is past under-provision of quality communications infrastructure. If this differential is removed, these regions have the most to gain in relative terms from additional economic development. They have potential to reach a higher level of internet use that unlocks export potential, which is particularly important for these regions since they are relatively highly trade exposed. Access to quality internet-based services is just as important to the farmer as it is for advanced research and development organisations.

### **Stylised Fact Fifteen**

**The provision of quality infrastructure is one thing. Equally important is to ensure that the regulatory regime, and/or the market conduct of service providers, results in it being used effectively and efficiently.**

This Stylised Fact is clearly demonstrated in this *State of the Regions* report by the analysis of the current broadband cap placed on the current provision of broadband services. Stylised Fact Fifteen is in fact a tautology.

There is a corollary to this Stylised Fact. The survey of local government personnel revealed an interest in communications infrastructure, which is probably less than ideal if political pressure is brought to bear to ensure best practice outcomes. It is important for optimum outcomes that local government interest themselves in matters that may extend beyond their narrow focus. That is, unless there is awareness and political pressure, either optimal infrastructure will not be provided, or provided at inefficient operating standards.



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# Contents

---

	<b>Page no.</b>
<b>Preface: The accumulated insights of <i>State of the Regions</i> reports</b>	
<b>1. Summary of the 2005-06 <i>State of the Regions</i> report</b>	<b>1</b>
1.1 The role of telecommunications infrastructure in the development of economic growth	1
1.2 Recent economic and demographic outcomes	13
1.3 Other issues in the report	17
<b>2. Infrastructure survey</b>	<b>20</b>
2.1 Introduction and summary of results	20
2.2 Industry development	21
2.3 Responses to statements concerning current issues	26
2.3.1 Road pricing and toll roads	27
2.3.2 General issues and perceptions	29
2.3.3 Health	32
2.3.4 Recreation, parks and gardens	34
2.3.5 Festivals and the arts	39
2.3.6 Broadband infrastructure	41
2.4 Allocating budgets and council priorities	42
2.4.1 Responses to allocation priority question	45
2.4.2 A further hypothetical scenario	47
2.5 Policy feedback	51
2.6 Jurisdiction of responsibility	55
2.7 Debt funding, public-private partnerships and the 2004 <i>State of the Regions</i> report	56
<b>3. Understanding demand for telecommunications</b>	<b>58</b>
3.1 Introduction	58
3.2 About the survey	58
3.2.1 Survey questions	61
3.3 The e-journey	62
3.3.1 Stages on the e-journey	62
3.4 Regional micro-simulation	65
3.4.1 Export elasticity	66
3.5 Results	66
3.5.1 E-journey staging	66
3.5.2 Staging leaders	67
3.5.3 Broadband expected use	68
3.5.4 Export propensity	70

---

## Contents (cont.)

---

	<b>Page no.</b>
<b>4. Understanding opportunities for telecommunications infrastructure expansion</b>	<b>72</b>
4.1 Introduction	72
4.2 Technology – but only the parts you need to understand	72
4.2.1 How does ADSL work in Australia	73
4.2.2 So if it is as simple as that, why don't we all have ADSL or any of the other DSL services? Is it the cost?	74
4.2.3 Are there other reasons why DSL services could not be delivered?	75
4.2.4 Other technical issues	76
4.3 Faster DSL and Australia's future	77
4.3.1 Service standards and the rest of the world	79
4.3.2 VDSL, very high bit-rate DSL	81
4.3.3 VDSL versus fibre-to-the-home	83
4.3.4 Understanding FTTN as a way of delivering the 'variable exchange' high capacity future	83
4.3.5 Wireless Local Loop and Wireless Broadband	85
4.4 The current Australian broadband market	87
4.5 Bendigo Community Telco – a case study	89
4.5.1 The background to the Bendigo Community Telco's development	89
4.5.2 The regional benefits of developing the Bendigo Community Telco	90
4.5.3 Forming a community telco	91
4.5.4 Future development issues	92
4.5.5 Demand aggregation	92
4.5.6 Demand side issues	93
4.6 Opportunities for regional companies and the demand aggregation model	94
4.6.1 Social impact of high speed connectivity	95
<b>5. ADSL broadband coverage and the economic benefits of extending the coverage</b>	<b>96</b>
5.1 Introduction	96
5.2 Population coverage	98
5.3 Area coverage	100
5.4 ADSL enabled exchanges	102
5.5 Lost business use of ICT	104
5.6 The economic benefits of additional ADSL coverage	105
5.6.1 Telecommunications and the economy – overseas findings	105
5.6.2 Innovation and exporting	107
5.6.3 Exporting and productivity	107
5.6.4 Quantifying the regional benefit of higher ADSL coverage	114
5.6.5 Additional ADSL coverage: Toward a cost-benefit evaluation framework	114

---

## Contents (cont.)

---

	<b>Page no.</b>
<b>6. Market conduct, regulation and broadband access in regional Australia</b>	<b>119</b>
6.1 Public sector leadership, competition and regulation	119
6.2 Market conduct: service capping and efficiency loss	120
6.2.1 Capped broadband services are acting as a strong disincentive to upgrade broadband quality	123
6.2.2 Capped services options limit the benefits from investment to increase exchange coverage	126
6.3 Local area institutions for improving telecommunication infrastructure – a case study	128
6.4 The cost of extending ADSL coverage	132
<b>7. Baby bounce and fertility in Australia over the last decade</b>	<b>136</b>
7.1 Introduction	136
7.2 The baby boom, 1935 – 1961	137
7.3 The baby bust, 1961 onwards	137
7.4 The international experience	138
7.5 Baby bounce: What has happened over the last 10 years?	138
7.5.1 National experience	138
7.5.2 The Northern Territory experience – skewed results	139
7.5.3 We may have bottomed out!	140
7.5.4 Regional experience: The last decade	141
7.6 The upturn: Are there distinct regions that have bounced in the last 12 months?	145
<b>8. Population sustainability</b>	<b>149</b>
8.1 Introduction	149
8.2 An indicator of sustainability	149
8.2.1 The impact of migration patterns, <i>State of the Regions 2003</i>	150
8.3 Components of the measure	151
8.3.1 Indicator explanation	151
8.4 Indicator results – SOR regions	155
8.5 Indicator results – Local Government Areas (LGAs)	170
8.6 Case study – Buloke	173
8.7 Conclusions	176
<b>9. Net migration, population and ageing trends: 1996-2008</b>	<b>177</b>
9.1 State-by-state population trends: 1996-2008	177
9.2 International migration	177
9.3 State population growth rates	178
9.4 SOR major regional grouping: net migration flows	178
9.5 SOR major regional group: population growth rates	179
9.6 SOR major regions: age structure of population	179
9.7 Conclusion	179

---

## Contents (cont.)

---

	<b>Page no.</b>
<b>10. Unemployment statistics and social change</b>	<b>201</b>
10.1 NIEIR and other measures of unemployment	201
10.2 Measuring unemployment in the 1950s and 1960s	202
10.3 Unemployment and full employment	203
10.4 Social security and the end of full employment	205
10.5 Social security and the dependant spouse	207
10.6 The relationship between social security receipt and official unemployment	207
10.7 Overlap between survey and NIEIR unemployment	211
10.8 Movement between social security and not-on-benefit	214
10.9 Labour force under-utilisation	216
10.10 The NIEIR measures	217
10.11 Impact of regional specific impacts on the relative merits of the NIEIR measures	219
<b>11. Labour market, employment and unemployment</b>	<b>220</b>
11.1 Introduction	220
11.2 Synopsis of results	220
11.3 NIEIR corrected unemployment	220
11.3.1 Derivation	220
11.3.2 Growth in disability support	221
11.3.3 Corrected unemployment rates	224
11.3.4 NIEIR unemployment rates by region type	230
11.3.5 Structural unemployment	230
11.3.6 Long-term unemployment	234
11.4 Highlights	235
<b>12. The role of local government in regional development</b>	<b>236</b>
12.1 The old Australia and government enterprise	236
12.2 Competition and market-based policy	237
12.3 Competition and regional development	237
12.4 Competition and cost-shifting	238
12.5 Cost and responsibility shifting between governments	239
12.6 Competition and advocacy for local public investment	241
12.7 Investment beyond the standard array	242
12.8 Expenditure review	243
12.8.1 Governance	243
12.8.2 Family and community services	243
12.8.3 Aged services	244
12.8.4 Recreation and culture	244
12.8.5 Waste management	244
12.8.6 Business and economic services	244
12.8.7 Traffic and street management	245
12.8.8 Local roads and bridges	245
12.8.9 Other infrastructure services provided by local government	245
12.9 Summary	246

---

## Contents (cont.)

---

	<b>Page no.</b>
<b>13. Sources of revenue for local government</b>	<b>247</b>
13.1 Specific purpose grants and revenue from contracts	247
13.2 As-of-right grants	248
13.3 Fees	249
13.4 Fines	249
13.5 User charges	250
13.6 Profits of council-owned businesses	251
13.7 Road and congestion pricing: Vehicle registration fees	252
13.8 Developer charges	252
13.9 Rates	253
13.10 The unpopularity of rates	254
13.11 Inability to pay rates	254
13.11.1 Low-income owner-occupiers	254
13.11.2 Unprofitable businesses	255
13.11.3 Properties providing public services	255
13.11.4 Land speculators	255
13.12 The virtues of rates	256
13.12.1 Rates and ability to pay	256
13.12.2 Rates and efficiency	256
13.12.3 Rates and benefit	256
13.12.4 Administrative advantages of rates	257
13.13 An assessment of rates	257
13.14 Rates and values	258
13.14.1 Exemptions	258
13.14.2 Valuation methodology	258
13.14.3 Minimum rates	259
13.14.4 Changes in the pattern of values	259
13.15 Water rights and land values	260
13.16 Conclusion	260
<b>Glossary</b>	<b>261</b>
<b>Appendix 1 Regional indicators</b>	<b>A.1</b>
Global Sydney	A.2
Sydney Inner West	A.4
Sydney Mid West	A.6
Sydney Outer North	A.8
Sydney Outer South West	A.10
Sydney Outer West	A.12
Sydney South	A.14
NSW Central Coast	A.16
NSW Central West	A.18
NSW Far and North West	A.20
NSW Hunter	A.22
NSW Illawarra	A.24
NSW Mid North Coast	A.26
NSW Murray	A.28

---

## Contents (cont.)

---

	<b>Page no.</b>
<b>Appendix 1: Continued</b>	
NSW Murrumbidgee	A.30
NSW North	A.32
NSW Richmond-Tweed	A.34
NSW South-East	A.36
Melbourne Inner	A.38
Melbourne East	A.40
Melbourne North	A.42
Melbourne South	A.44
Melbourne West	A.46
Melbourne Westernport	A.48
VIC Goulburn	A.50
VIC Barwon	A.52
VIC Central Highlands	A.54
VIC Gippsland	A.56
VIC Loddon	A.58
VIC Mallee-Wimmera	A.60
VIC Ovens-Hume	A.62
VIC West	A.64
Brisbane City	A.66
Brisbane North	A.68
QLD Agricultural SW	A.70
QLD Far North	A.72
QLD Fitzroy	A.74
QLD Gold Coast	A.76
QLD Mackay	A.78
QLD North	A.80
QLD North West	A.82
QLD Pastoral	A.84
QLD Sunshine Coast	A.86
QLD West Moreton	A.88
QLD Wide Bay-Burnett	A.90
Adelaide Central	A.92
Adelaide Outer	A.94
Adelaide Plains	A.96
SA Eyre and Yorke	A.98
SA Murraylands	A.100
SA South East	A.102
Perth Central	A.104
Perth Outer North	A.106
Perth Outer South	A.108
WA Gascoyne-Goldfields	A.110
WA Peel-South West	A.112
WA Pilbara-Kimberly	A.114
WA Wheatbelt-Great Southern	A.116



---

## Contents (cont.)

---

	<b>Page no.</b>
<b>Appendix 1: Continued</b>	
TAS Hobart-South	A.118
TAS North	A.120
TAS North West	A.122
Darwin	A.124
NT Lingiari	A.126
ACT	A.128
<b>Appendix 2: Index of localities and region membership</b>	<b>A.131</b>
A2.1 Index of localities	A.132
A2.2 Index of region membership	A.140
A2.3 Regional classification	A.147
<b>Appendix 3: Indicator explanations</b>	<b>A.149</b>
A3.1 Regional indicators	A.150
A3.2 Population sustainability	A.153
A3.3 Building and construction	A.154
A3.4 Internet and ICT	A.154
A3.5 Baby bounce	A.155

---

## List of tables

---

	<b>Page no.</b>	
1.1	Stages in commitment to a networked economy	2
1.2	SOR regions: ADSL broadband coverage – per cent of exchanges enabled – ten highest and ten lowest regions	4
1.3	The relationships between different broadband technologies	9
1.4(a)	Export potential – top 10	12
1.4(b)	Export potential – bottom 10	12
1.5	SOR major regional groups – total annual average population change	15
1.6	Employment by major SOR region (1999 = 100)	15
1.7	Employment per capita by major SOR region (ratio)	15
1.8	Employment per capita by major SOR region (1999 = 100)	16
1.9	NIEIR unemployment rates by region	16
1.10	Real net flow of funds per capita (1999 \$ million)	16
1.11	Real net flow of funds per capita (1999 = 100)	16
1.12	Real net flow of funds per capita – relative to Core Metro	17
1.13	Real wages per capita (1999 \$ million)	17
1.14	Benefits as a per cent of net flow of funds	17
2.1	Number of responses by industry and region type	21
2.2	Percentage of responses by industry and region type	22
2.3	Environmental assets	23
2.4	Physical community assets	23
2.5	Local and institution networks	23
2.6	Extended social networks	24
2.7	Local passenger transport	24
2.8	Long-distance passenger transport	25
2.9	Bulk freight facilities	25
2.10	Small consignment freight services	26
2.11	Energy supply	26
2.12	Average responses to statements, all respondents	27
2.13	Scope of road pricing by type of pricing by respondent region	28
2.14	Recreation adequacy by age cohort by region	36
2.15	Recreation and its benefits, by region	37
2.16	Perceptions of ADSL, by region	41
2.17	ADSL perceptions varying with size of population in LGA	42
2.18	Average score, out of ten: Budget allocation statements by region	45
2.19	Average respondent allocation priority by region	46
2.20	Allocation responses varying with size of population	46
2.21	Difference in average ranks between the priority of the options considered and the potential the option would have for economic development	47
2.22	Respondent average priority level for hypothetical scenario by region	51
3.1	Understanding the e-journey staging theory	59
3.2	Location of business	60
3.3	Business representation by industry sector	60
3.4	Business representation by location	61
3.5	Export elasticity, sample calculation	66
3.6	Top 10: E-journey staging	67

---

## List of tables (cont.)

---

	<b>Page no.</b>	
3.7	Bottom 10: E-journey staging	67
3.8	Top 10: Staging leaders	68
3.9	Bottom 10: Staging leaders	68
3.10	Top 10: Expected broadband use	69
3.11	Bottom 10: Expected broadband use	69
3.12	Top 10: Export propensity	70
3.13	Bottom 10: Export propensity	71
4.1	Example of communities with wireless broadband, (ClearTowns)	86
5.1	ADSL broadband coverage – per cent of population	98
5.2	ADSL broadband coverage – per cent of population versus per cent of children	100
5.3	ADSL broadband coverage – per cent of area	100
5.4	ADSL broadband coverage – per cent of exchanges enabled	102
5.5	ADSL broadband coverage – HiBIS exchanges	102
5.6	Lost export potential – export elasticity * lack of coverage	104
5.7	ICT leaders lost – expected staging leaders as percentage of firms adjusted for lack of coverage	105
5.8	Direct and indirect SOR regional benefit of increased ADSL coverage	116
5.9	Cost of increased ADSL coverage and the national benefit – indicative schedule	117
5.10	The cost of ADSL coverage and the internal rate of return	118
6.1(a)	Market conduct and performance – ADSL technology	121
6.1(b)	Market conduct and customer utility – ADSL technology	122
6.2(a)	Market conduct and performance – ADSL2/2+ technologies	123
6.2(b)	Market conduct and customer utility – ADSL2/2+ technologies	124
6.3	A comparison of customer utility and coverage loss by ADSL technologies	125
6.4	Customer utility VDSL technologies	125
6.5	A comparison of customer utility and coverage loss by ADSL and VDSL technologies	126
6.6(a)	Bandwidth availability options and increased coverage investments	127
6.6(b)	Changed utility by capped and uncapped service options – increased coverage investments	127
6.7	The benefits of expansion – capped versus uncapped services	128
6.8	Current ADSL enabled exchanges by state	132
6.9	The cost structure of extending ADSL coverage	133
6.10	Cost of installing broadband technologies on remaining exchanges	134
6.11	Future proofing costs by state	134
7.1	Number of children aged less than one year old	139
7.2	Proportion of children aged less than one year old	139
7.3	Indigenous Australian as proportion of total population	140
7.4	SOR regions, growth in 0 year olds 1996-2004	142
7.5	SOR regions, growth in 0 year olds 2003-2004	147

---

## List of tables (cont.)

---

	<b>Page no.</b>	
8.1	Regression of NIEIR unemployment on various age and migration variables	150
8.2	Top 10: Growth of population aged over 55	155
8.3	Bottom 10: Growth of population aged over 55	156
8.4	Top 10: Share of population aged below 55 in 2001	157
8.5	Bottom 10: Share of population aged below 55 in 2001	157
8.6	Top 10: % years since 1995 that population has increased	158
8.7	Bottom 10: % years since 1995 that population has increased	159
8.8	Top 10: Proportion of population aged <1 year old	159
8.9	Bottom 10: Proportion of population aged <1 year old	160
8.10	Top 10: Change in effective fertility	160
8.11	Bottom 10: Change in effective fertility	161
8.12	Top 10: Share of LGA contained in largest locality	161
8.13	Bottom 10: Share of LGA contained in largest locality	162
8.14	Top 10: Migration 1996 to 2001, 0 to 14 year olds	162
8.15	Bottom 10: Migration 1996 to 2001, 0 to 14 year olds	163
8.16	Top 10: In-migration 55+ proportion of population	165
8.17	Bottom 10: In-migration 55+ proportion of population	165
8.18	Top 10: Share of over 55 year olds employed, 2001	166
8.19	Bottom 10: Share of over 55 year olds employed, 2001	166
8.20	Top 10: Demographic stress	167
8.21	Bottom 10: Demographic stress	167
8.22	Top 10: Overall score	168
8.23	Bottom 12: Overall score less than 50	168
8.24	Top 10: Family attraction	170
8.25	Bottom 10: Family attraction	171
8.26	Top 15: Demographic stress	171
8.27	Bottom 15: Demographic stress	172
8.28	Top 15: Combination of all indicators	172
8.29	Bottom 15: Combination of all indicators	173
8.30	Buloke – Indicator performance	174
9.1	State net interstate migration – average annual levels between benchmark years	180
9.2	State net international migration – average annual levels between benchmark years	180
9.3	State average annual population growth rates – average annual levels between benchmark years	180
9.4	SOR major regional groups – net annual migration flows	181
9.5	SOR major regional groups – average age	181
9.6	SOR major regional groups – total annual average population change	182
9.7	SOR major regional groups – share of population aged 0 to 24	182
9.8	SOR major regional groups – share of population aged 25 to 54	182
9.9	SOR major regional groups – share of population aged 55 and over	182
9.10	SOR regional groups – net annual migration flows aged 0 to 24	183
9.11	SOR regional groups – net annual migration flows aged 25 to 54	185
9.12	SOR regional groups – net annual migration flows aged 55 and over	187
9.13	SOR regional groups – average annual population growth	189
9.14	SOR regional groups – average annual population growth	191
9.15	SOR regional groups – average age	193
9.16	SOR regional groups – population share aged 0 to 24	195
9.17	SOR regional groups – population share aged 25 to 54	197
9.18	SOR regional groups – population share aged 25 to 45	199

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## List of tables (cont.)

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		<b>Page no.</b>
10.1	Social security recipients aged 15-60 by employment status, 2003	208
10.2	Persons aged 15-60, employment status and social security receipt, 2003	210
10.3	Overlap between survey and NIEIR unemployment definitions: persons of workforce age, 2003	211
10.4	Overlap between survey unemployment and NIEIR structural unemployment, persons of workforce age	212
10.5	Overlap between NIEIR unemployment and NIEIR structural unemployment, persons of workforce age	212
10.6	Social Security recipients in 2003 by Social Security payment received in 2002	213
10.7	Persons aged 15-60 by benefit received in 2002 and 2003	213
10.8	Gross flows between on and off benefit, 2002-03	215
10.9	Flows from one benefit to another, 2002-03	216
11.1	Disability Support Pensions (DSP)	221
11.2	Percentage of population receiving DSP	221
11.3	Excess DSP in effective labour force, top 10 regions	223
11.4	Excess DSP in effective labour force, bottom ten regions	223
11.5	Comparison of official unemployment and “unemployed” recipients	224
11.6	NIEIR unemployment rate, top 10 regions	225
11.7	NIEIR unemployment rate, bottom ten regions	226
11.8	NIEIR unemployment rates by region	230
11.9	NIEIR structural unemployment rate, bottom ten regions 2005	231
11.10	NIEIR structural unemployment rate, top ten regions 2005	232
11.11	Long-term unemployment, top ten regions from 2005	234
11.12	Long-term unemployment, bottom ten regions	234
13.1	Land value by land use, Victoria, 2000 and 2001	259



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# **1. Summary of the 2005-06 *State of the Regions* report**

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## **1.1 The role of telecommunications infrastructure in the development of economic growth**

**It is often stated that, as a driver of economic development in the 21<sup>st</sup> century, communications infrastructure is as important as roads and railways were in the 19<sup>th</sup> century.**

The proponents of the importance of increasing the knowledge intensity of production for sustained competitiveness of almost any industry often claim that communications infrastructure, as a modern driver of economic growth, can be compared to the role of roads and railways in the 19<sup>th</sup> century. The investment in ports and railways over the second half of the 19<sup>th</sup> century allowed the opening up of much of fertile Australia. This is because agricultural and mining-based products of these areas could economically be transported to markets anywhere else in the world. The construction of new railways drove economic growth because it enabled profitable private sector investment in farms, mines and towns.

Perhaps with hindsight it is transparently clear why ports and railways drove economic and regional development in the 19<sup>th</sup> century. It is less clear why communications infrastructure should have the same role in the 21<sup>st</sup> century. However, to those who have insight into the modern drivers of economic growth, there is no mystery at all.

**Communications infrastructure is a key driver of economic growth because it enables the intensification of the networked economy.**

The importance of networks in driving economic development stems from Stylised Facts One, Two and Eleven. Flexible entrepreneurial supply chains are built by speeding the commercial development of research and development, and by adopting new production technologies, which is a just-in-time philosophy of meeting customer requirements. Inventory control requires firms to be networked, not only with other firms in the supply chain, but also with supporting institutions such as universities.

Communications infrastructure is the pathway for linking customers and firms in the supply chain and supporting institutions. It enables the network economy to develop.

Communications infrastructure is particularly important for Australia. The so-called “most successful knowledge-based regions”, or global cities, have diverse industry structures and supporting institutions. Many aspects of networking can take place face-to-face. Australia, with its long distances and small regional industrial bases, has to rely much more on communications infrastructure to achieve the standard of network productivity that is available in the more successful knowledge driven regions overseas.

**At the enterprise level it is well understood that sustained competitiveness requires using the internet at best practice intensity to minimise costs and maximise the rate of innovation.**

The internet has accelerated the rate of integration of modern supply chains. It allows enterprises to exchange a wide range of information to maximise the efficiency of the chain, including production scheduling, inventory control, product shipment schedules, and so on. It enables real time monitoring of changing demands and market trends and minimises lead times by speeding supply chain responses to these trends.

It provides a platform where whole supply chains can become involved in identifying and prioritising areas for product and process improvements and developing the research and development responses to ensure that successful innovation is carried out and implemented.

Those supply chains that are integrated around the internet can have a 10 per cent or more cost advantage over supply chains that are not so integrated. More importantly, internet-based supply chains have a much shorter innovation time compared to supply chains that are not internet-based.

Those enterprises which cannot obtain best practice internet services will fall behind in their ability to remain in supply chains, whether the supply chain be Australian focussed, or an Australian enterprise in an international supply chain.

**To remain competitive enterprises must aim to use the internet at the highest level of intensity.**

There are clear stages in the use of the communications infrastructure that represent an increasing degree of involvement in the modern networked economy. As Table 1.1 indicates, six e-stages can be identified.

Stage	Technology use	Stage description	Use
0	Phone - No use of computer	None	Make and receive calls from customers and suppliers
1	Computer	Processing stage	Word processing, image and data processing
2	Internet	Communication stage	Research, e-mail, order product or services
3	Web site	Information stage	Online brochure, promotion, e-newsletter, simple Web metrics, receive orders etc
4	Intranet or Interactive site	Transaction stage	Sell products/services, online bookings, share resources within business etc
5	Extranet or integrated process	Integration stage	Supply chain management, share resources with customers or suppliers etc
6	Best practice involvement in networked economy	Transformation stage	Technology enabled customer and content focus to all business relationships

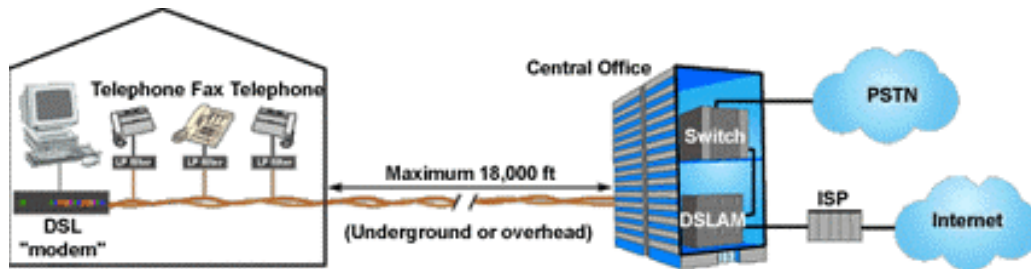
A firm generally needs to have the objective of reaching Stage 5 or 6 to be competitive in the modern networked economy. However, if internet access is not available, or is of poor quality, this objective can not be achieved.

Access to, and the quality of, internet communications infrastructure and services has, therefore, become a strategic issue for economic development.

**The communications infrastructure that is particularly important as a driver of growth is that part which enables the delivery of high speed internet access.**

Copper wire communications infrastructure has been around for telephones. Much of this inherited infrastructure will still be of use in the networked economy, that is the parts which can be used to deliver high speed internet access.

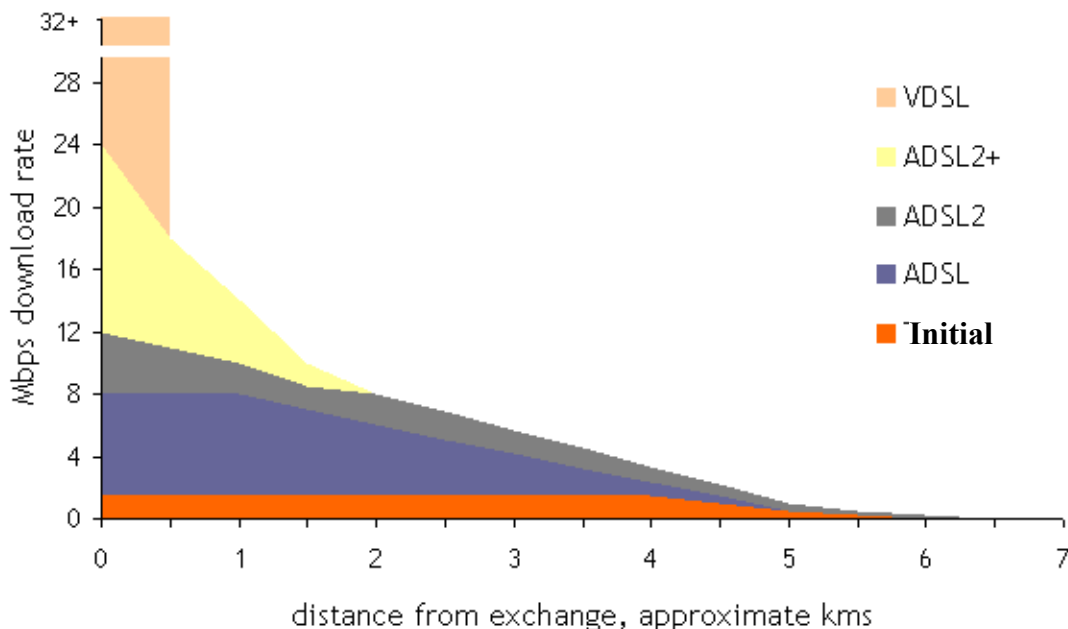




The speed of internet access depends on the bandwidth of the technology installed, which connects the user to the internet. Fibre optic is the ideal long-term solution. Fibre optic offers extremely high bandwidth. Fibre-to-the-home (FTTH) will, perhaps, be the long run goal. Its costs, however, have meant that the focus has been on less costly, albeit more restrictive, bandwidth technologies using parts of the inherited copper network.

Access to the internet is obtained via an internet service provider connected to the telecommunications network. The ideal would be to connect the home to the nearest exchange, and so to the high-speed network, with optic fibre. In the short-term the focus has been on using the existing copper wire that connects the home or business to the exchange. This technology is called xDSL. The 'x' is changed to reflect variants of the technology. The entry level technology, which has been made available to most Australians, is designated ADSL.

As the figure below indicates, xDSL technology works by placing a DSL modem in the home or office and a DSLAM (DSL Access Multiplexer) in the exchange. The DSLAM aggregates the connections from the customers connected to the exchange to provide a high capacity connection to the internet.



There are two features of xDSL technology that dominate decisions in the expansion of the communications infrastructure. One feature is that bandwidth performance, as measured by download times expressed in megabytes per second (Mbps), declines the greater the distance of the customer from the exchange. The second is that xDSL technologies differ in performance standard and cost.

The situation is described in the above figure. The initial internet connection technology, relying on the existing infrastructure, allowed a constant 0.5 Mbps connection to the exchange over distances up to 5 kilometres. ADSL can provide increased download speeds of up to 8 Mbps, but only to customers within 1 kilometre of the exchange. Beyond 1 kilometre, speed declines until the 5 kilometre mark, when the download speed becomes the same as the initial service. ADSL2 technology, currently becoming available in Australia, allows an improvement to 12 Mbps for customers close to the exchange with a similar decline in performance until the 5 to 5.5 kilometre mark, when it again becomes the same as the initial basic service.

VDSL technology, now being rolled out elsewhere in the world, considerably benefits customers close to the exchange.

Other xDSL technologies not shown in the figure include: HDSL, IDSL, RADSL and SDSL.

**The access of Australians to ADSL depends on having enough households within 5 kilometres of an exchange that are willing to take up the technology to justify the cost.**

The cost of equipping an exchange area servicing 3,000 households (assuming 20 per cent take-up) with DSLAM equipment for ADSL (equipment, spares, interface cards, etc.) is a little over \$400,000. This assumes that the households are within 5 kilometres of the exchange. Those living outside the 5 kilometre limit will miss out. Those exchanges which do not have enough households within the 5 kilometre limit to justify the ADSL investment are unlikely to become ADSL-enabled.

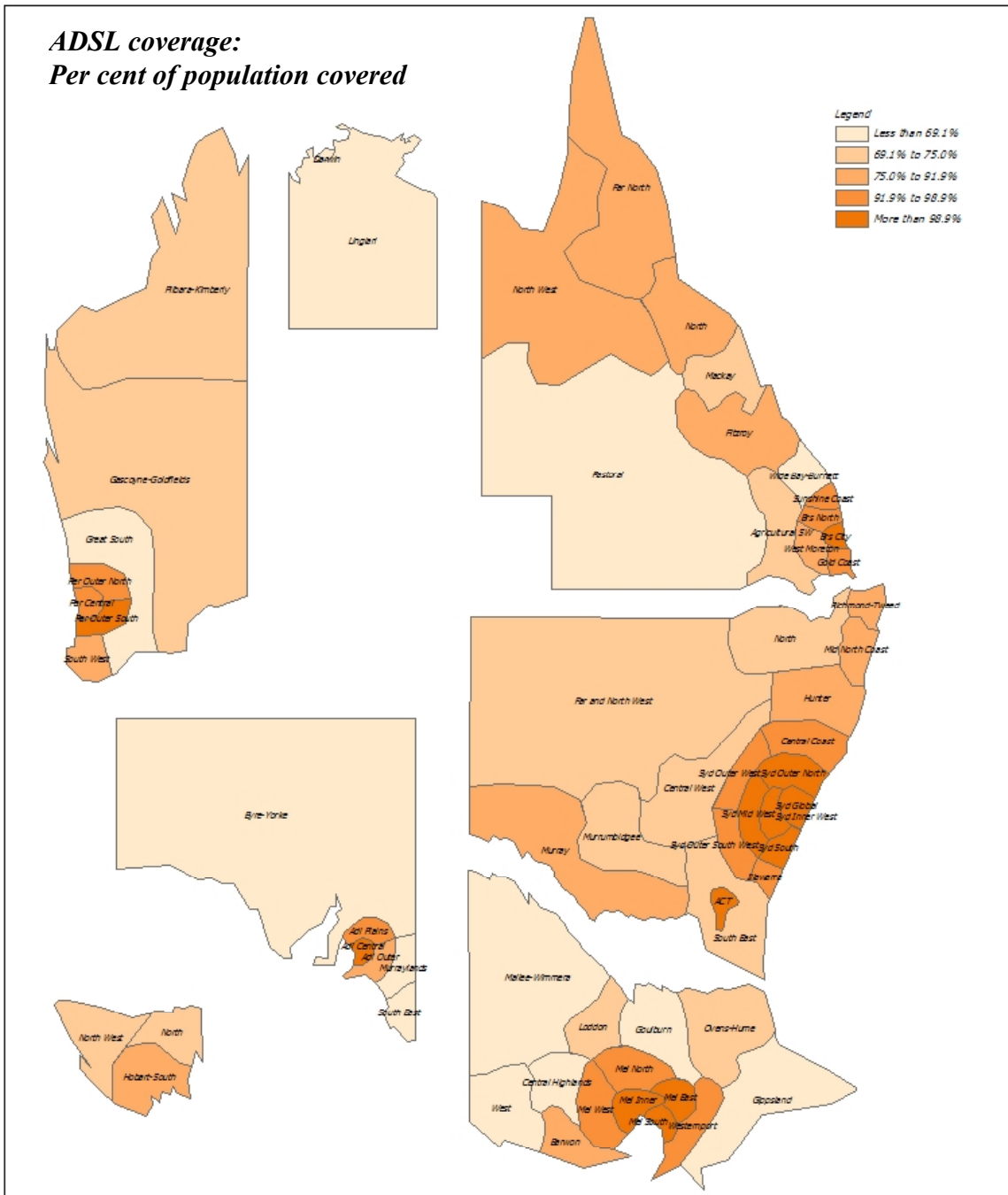
For the 2005-06 *State of the Regions* report National Economics estimated, as at mid 2005, the number of ADSL-enabled exchanges and the percentage of population likely to have access to an ADSL enabled exchange.

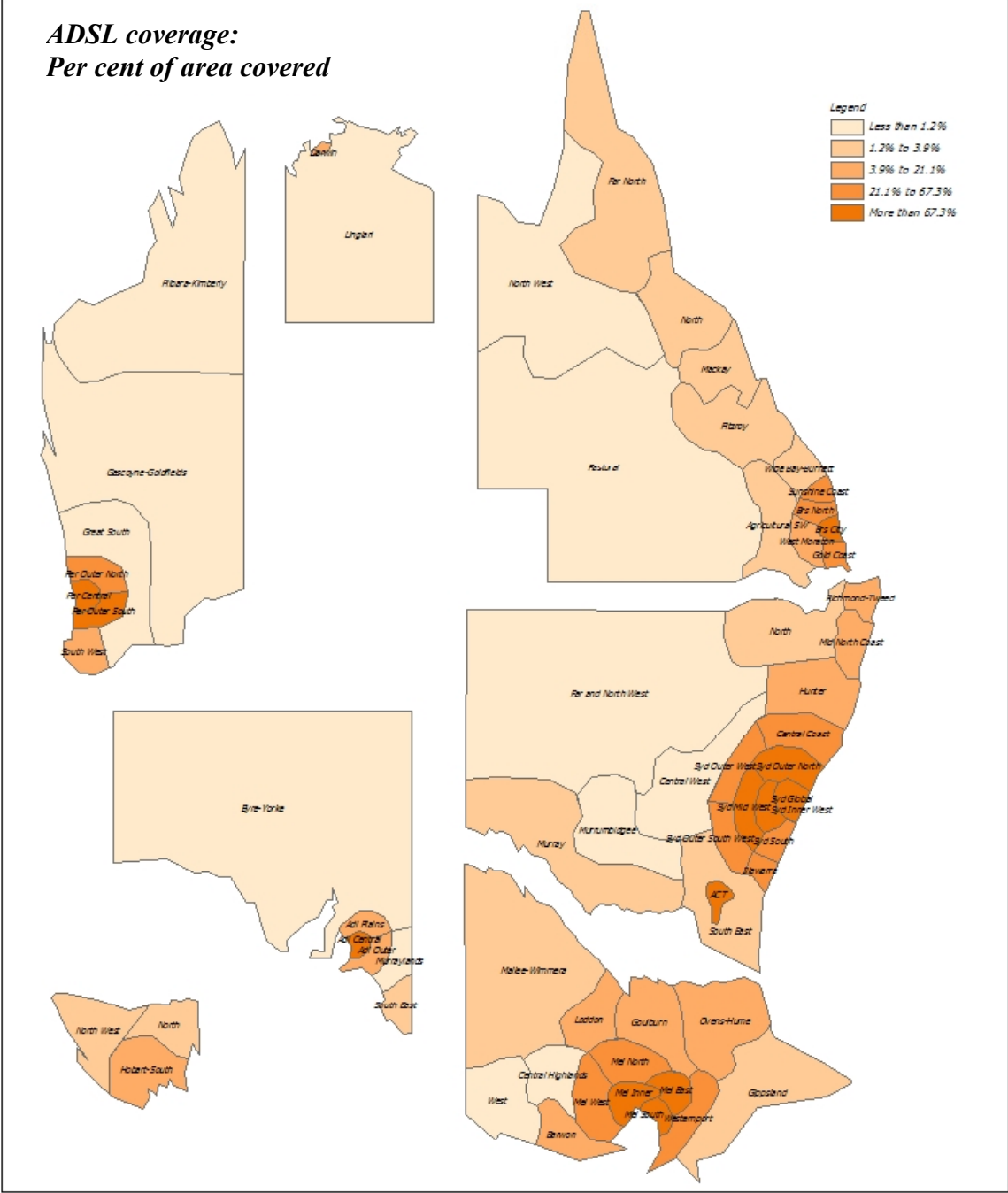
The results for each SOR region are given in the Appendix 1 of this report. The ten highest and the ten lowest SOR regions by percentage of exchanges enabled are given in Table 1.2. Not surprisingly, the inner city regions have 100 per cent, or near 100 per cent, of exchanges enabled, while the lowest percentages of exchanges ADSL-enabled are in rural areas. The following two figures show the implications for Australia in terms of per cent of population with ADSL coverage and the land mass covered.

Highest coverage		Lowest coverage	
Region	Coverage %	Region	Coverage %
Adelaide Central	100.0	SA Murraylands	6.4
Global Sydney	100.0	WA Wheatbelt-Great Southern	8.3
Melbourne East	100.0	SA Eyre and Yorke	10.0
Melbourne Inner	100.0	VIC West	10.4
Melbourne South	100.0	WA Gascoyne-Goldfields	11.3
Sydney Inner West	100.0	NSW Central West	12.1
Sydney South	100.0	SA South East	16.0
Melbourne North	94.9	VIC Central Highlands	17.2
Sydney Mid West	91.9	QLD Agricultural SW	17.4
Sydney Outer North	91.9	NSW Far and North West	17.6

Source: NIEIR analysis.

**ADSL coverage:  
Per cent of population covered**





The bottom line national outcomes for ADSL coverage are:-

- 90 per cent of the population has been covered;
- by enabling of 35 per cent of all exchanges and covering;
- 1.9 per cent of the nation's area.

**There are strategies available to improve xDSL coverage and performance. Compared to countries such as Japan, Korea and some Western European countries, Australia appears to give such strategies low priority.**

Overseas governments are aggressively implementing strategies to ensure that as great a percentage of the population as possible has access to internet services at best practice performance levels. They are aggressively implementing:-

- high level xDSL technologies;
- infrastructure to improve the xDSL performance within the 5 kilometre catchment; and
- infrastructure to increase the exchange coverage beyond the 5 kilometre limit.

Some countries are leap-frogging the xDSL technologies by installing fibre-to-the-home technology. Australia appears to be steadily falling behind in the ranking of countries with a significant proportion of the population having access to best practice internet services.

If Australia continues to fall down the internet service quality rankings, this will eventually undermine the competitiveness of many Australian exporting enterprises. These enterprises are part of international supply chains. As supply chain management technology advances, it assumes increasing standards of internet service quality, especially increasing download and upload speeds. If Australia falls behind, an increasing number of exporters may well feel that they cannot operate as efficiently in the supply chains as other firms elsewhere in the world who do have access to best practice infrastructure. This will result in the enterprise being dropped from the supply chain at the cost to the nation's export performance.

A core strategy to both extend the coverage area and improve the performance levels is optic fibre deepening. This uses existing copper wires as copper out nodes, which are connected to a junction linking groups of customers to the exchange. Fibre-to-the-nodes (FTTN) runs fibre optic cable from the nodes and then uses the copper link to the household/business. This has the effect of bringing the customer closer to the exchange with overall improvements in coverage and performance. This can be done at a relatively small cost, compared to FTTH strategies.

For solutions where the number of customers for a node is small, or for long distances to the node, there are wireless options for coverage enhancement.

**Local communities can take action to improve the quality and coverage of their internet services.**

If local communities do not have ADSL, or are unsatisfied by the quality of coverage, they can take action to improve the quality and quantity of local communications infrastructure and associated services. Role models exist for doing this in Australia, and the case study of the Bendigo Community Telco is given in the report.

The community telco model is straight forward. A community telco can be formed to either:-

- be a community reseller; by aggregating community demand through the community telco entity and buying the wholesale access, services and products that are required by the community and then resell these to the community who are now community telco customers; and/or
- supplying infrastructure development. This model combines the community reselling model with the need to invest and build local infrastructure that was not provided by the major carriers.

The process for establishing a community telco could be:-

- form a company to represent community interests with a group of local strategic partners, council, bank, major regional businesses who are interested in building the regional economy, and so on;
- build committed customer base;
- the company acquires rights to use the intellectual property and know-how to set up a regional telco;
- raise capital;
- undertake a competitive tender to select a telecommunications provider to provide access, services and ongoing support;
- continue to build a customer base in the broader community; and
- manage standards of governance in terms of financial issues, meeting statutory reporting requirements and high standards of service, managing dividend payments and new investments and ongoing strategy.

Of interest here is the fact that the French government has empowered local government with the role of driving the expansion of quality internet communications infrastructure. Loans are provided to enable local government to initiate the process.

**In telecommunications, appropriate market conduct by infrastructure providers, as ensured by the design of the regulatory regime, will be just as important as the actual provision of infrastructure in determining the realised economic benefits. An important step to increase the efficiency of the existing communications infrastructure, and encourage investment in upgrading the infrastructure, would be to remove the current capacity ceiling on internet service products.**

In Australia the regulatory response to the decline in service performance, with distance from the exchange, has been the imposition of a cap on download speeds at 1.5 Mbps. This has led to two broadband products being available in the market, a Basic product at 0.5 Mbps and a Premium product at 1.5 Mbps, provided ADSL is available.

The major reason why this cap approach has been adopted is the equality of services argument. The cap means that there is a standard service available to all premises within 5 kilometres of an enabled exchange. Those 5 kilometres away are given the same service as those within 1 kilometre of the exchange, and therefore have no cause to complain about the distance – which, after all, is not their fault. If uncapped services were provided, those closer to the exchange would receive a superior service compared to those further away. However, this equity advantage is bought at severe cost in lost economic opportunity.

**Table 1.3 The relationships between different broadband technologies**

Distance from exchange (km)	Population	Customer utility outcomes <sup>(a)</sup>							
		ADSL		ADSL2/2+		VDSL + ADSL2/2+		Catchment expansion	
		Capped	Uncapped	Capped	Uncapped	Capped	Uncapped	Capped	Uncapped
0 – 5	6,413	7,124	11,044	7,709	14,303	7,709	15,424	7,851	17,262
5 – 5.5	776	0	0	555	555	555	555	947	1,770
5.5 – 10	2,811	0	0	0	0	0	0	2,689	3,427
<b>Total</b>	<b>10,000</b>	<b>7,124</b>	<b>11,044</b>	<b>8,264</b>	<b>14,858</b>	<b>8,264</b>	<b>15,979</b>	<b>11,487</b>	<b>22,459</b>
Average utility per capita		1.1	1.7	1.2	2.1	1.2	2.2	1.2	2.3

Notes: All capped services based on 1.5 Mbps contract.

(a) Customer utility is the square root of the download speed available to each customer and summed.

This report argues that the current capped service regime will:-

- significantly reduce the efficiency of the telecommunications infrastructure installed;
- discourage expansion in the quality of the service offered (that is, discourage the adoption of ADSL+ technologies); and
- reduce the benefits of extending broadband coverage to greater than 5 kilometres from the exchange.

In this report, a hypothetical, but realistic, example is developed for a provincial city of 10,000 population with 64 per cent of households being within 5 kilometres of the exchange. The study uses the concept of customer utility, which increases with download speed not only because internet interaction is quicker, but because more sophisticated websites can be accessed. Under ADSL technology the cap limits total customer utility to 64 per cent of that available from current infrastructure, were full uncapped services available. That is, there is potential for a 55 per cent increase in the efficiency of the infrastructure installed.

It can also be seen from the table that under the current cap there is little incentive to install higher performance broadband services. With capped speeds, the benefits of ADSL2 and ADSL2+ would be to extend the broadband coverage of the exchange by 0.5 kilometres at 0.5 Mbps; and also to increase the number of customers closer to the exchange able to access the full 1.5 Mbps. The overall increase in the output of the system would be (8,264/7,124), or 16 per cent. Without the cap the actual performance improvement from an ADSL2/2+ system would be 56 per cent. Unless the full improvement can be gained there is little incentive to invest in the additional services, since few customers would gain real service improvements; and therefore few of them would have any incentive to pay for the new service.

If uncapped services were available, the potential increase in performance would be 35 per cent for ADSL2/2+ compared to the full potential of ADSL, or 100 per cent compared to the current capped benefits of ADSL. These improvements would provide a strong incentive to adopt higher performing broadband technologies.

From the table, under the current system there is even less incentive to provide VDSL technologies, despite their considerable benefit to customers located close to enabled exchanges and to those who can arrange for de facto proximity.

The current telecommunications debate is focussed on the geographic expansion of coverage, for example increasing availability from 5 kilometres to 10 kilometres from the exchange. The report outlines how this can be done by a combination of optic fibre deepening from the exchange to closer to the customer and wireless and CMUX solutions. The table shows that this combination has potential to increase total system performance by 40 per cent compared to the uncapped case in which VDSL is available only close to exchanges, and by 100 per cent compared to the uncapped service potential of the ADSL system. Half the increase comes from the utility obtained from connecting new customers and half from increasing the service quality of existing customers.

Under the current capped service regime the level of performance that can be extracted from existing infrastructure is just over 50 per cent of the potential. The report argues that infrastructure investment combined with, and driven by, regulatory change would yield a quantum leap in broadband capacity above that available from the present capped system. Such capacity can only increase in importance as developments in internet technology demand greater bandwidth for effective access.

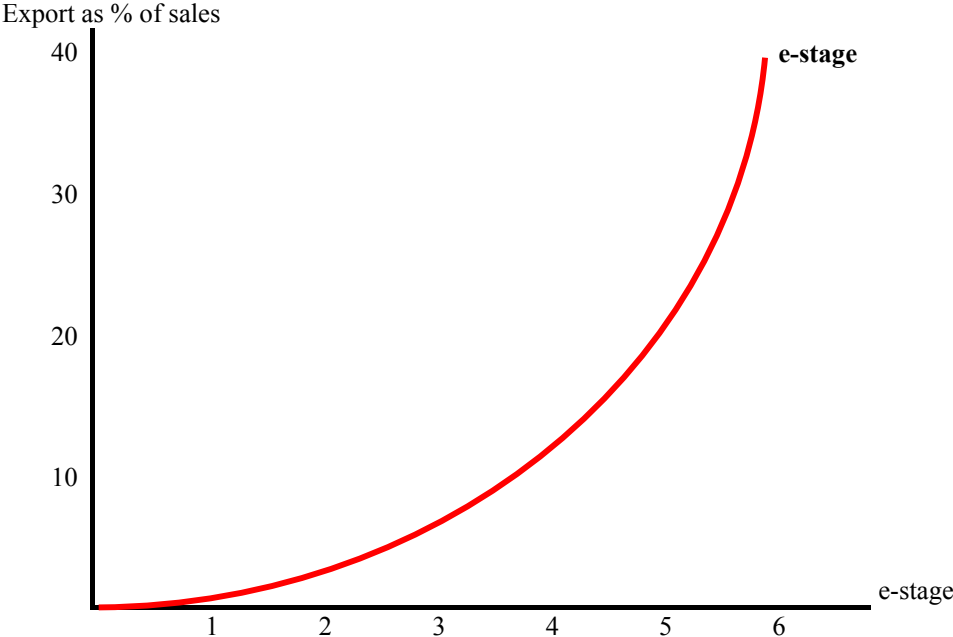
These variations are large and clearly show the very important role market conduct and the regulatory regime will play in determining the benefits realised from telecommunications infrastructure.

**There are clear benefits from extending ADSL coverage and quality in Australia. One benefit will be that it will increase the capacity of enterprises to export.**

The logic of the modern networked economy is that the probability of sustained export success depends on being able to achieve a high level of e-staging. That is, at least Stage 4 and probably Stage 5 or 6.

A survey of enterprises used in this report showed a clear link between export effort and the level of e-staging. The higher the e-stage reached, the higher the level of exports as a per cent of sales. The relationship differed by industry, but the schedule in the following figure is indicative of the outcome for a trade exposed industry.

**Indicative link between e-stage and export effort**





The relationship in the above figure says nothing about causation. Does the causal relationship run from export success to the level of e-staging, or does it run from e-staging to export success? However, the report cites studies that clearly indicate that communications infrastructure is a particularly important enabler of successful innovation. The logic for this finding is straightforward. Communications infrastructure enables a high level of e-staging which, in turn, enables a higher rate of innovation (as outlined above). Sustained export success requires sustained innovation.

In the early days of the internet, export success was driven by the above e-stages. Now that a high levels of e-staging is a necessity for sustained export success, the evidence strongly points to the rule of thumb that: increases in the coverage and quality of internet linked communications infrastructure will drive higher levels of e-staging with one benefit being increased realised exports (after a lag).

**The 2005-06 *State of the Regions* provides clear evidence that regional Australia is under-performing in terms of its e-staging potential, with negative implications for its exports.**

Using a combination of modelling and survey results, the 2005-06 *State of the Regions* report supports the uncontroversial finding that metropolitan areas in general, and central metropolitan areas in particular, have a relatively high number of firms that have high levels of e-staging. Rural areas have relatively few firms that have reached high levels of e-staging.

Of greater interest is the finding that non-metropolitan regions have the greatest potential. The potential is measured in terms of the percentage increase in the number of firms which would become exporters if each firm in the region increased its e-staging by one point. The results for the top 10 and bottom 10 regions, in terms of export potential, is shown in Tables 1.4(a) and (b). The highest ranked region is SA Murraylands where 289 firms would become exporters if firms in the region increased their e-staging by one. It is ranked one because the 289 new exporters, as a percentage of the total number of firms, is the highest increase of all SOR regions.

The ACT is ranked at the bottom because the 447 firms who could become exporters is the lowest as a percentage of total firms when compared to other SOR regions.

Why is the percentage for SA Murraylands high and the percentage for ACT low? First, because its current e-staging performance is the lowest, and it will still rank 64 for e-staging with a one stage increase for all firms. On the other hand, the e-staging of ACT firms is one of the highest ranked. Hence, SA Murraylands has more potential to create exporting firms from increases in e-staging.

Second, SA Murraylands has a greater percentage of firms in trade exposed industries compared to the ACT.

The implication is clear. Those regions where internet access and/or quality is likely to be the lowest, have the highest relative potential to benefit from infrastructure improvements.

**Table 1.4(a) Export potential – top 10**

Region	Rank	Number of firms	E-journey expected stage, Rank
SA Murraylands	1	289	64
QLD Pastoral	2	221	63
NSW North	3	707	53
VIC Mallee-Wimmera	4	649	61
SA South East	5	260	52
WA Wheatbelt-Great Southern	6	608	60
VIC West	7	416	58
NSW Far and North West	8	517	51
QLD Agricultural SW	9	746	57
NSW Central West	10	569	56

**Table 1.4(b) Export potential – bottom 10**

Region	Rank	Number of firms	E-journey expected stage, Rank
Global Sydney	55	2,824	1
Sydney Outer North	56	1,554	9
Sydney South	57	855	14
Sydney Outer West	58	562	24
Sydney Inner West	59	585	10
NSW Illawarra	60	646	31
Adelaide Central	61	947	6
NSW Central Coast	62	472	19
NT Lingiari	63	107	29
ACT	64	447	8

**The economic benefits for increasing ADSL coverage in rural areas are significant in terms of gross regional product and employment.**

Adjusting the number of potential exporting firms for a SOR region for a one step increase in e-staging by the current ADSL coverage ratio, the potential increase in exporting firms by region, as a result of increasing ADSL coverage, was calculated. This in turn was translated into an increase in regional gross product and employment. SA Murraylands was found to have the highest percentage increase in gross regional product. The percentage increase was 1.4 per cent. Regions where the increase in gross regional product was greater than 0.5 pre cent were:-

NSW Central West	0.47
NSW Far and North West	0.51
NSW Murrumbidgee	0.45
NSW North	0.50
VIC Gippsland	0.48
VC Goulburn	0.59

VIC Mallee-Wimmera	0.67
VIC Ovens-Hume	0.41
VIC West	0.59
QLD Pastoral	0.70
QLD Mackay	0.53
SA Eyre and Yorke	0.76
SA Murraylands	1.40
SA South East	0.72
WA Gascoyne-Goldfields	0.57
WA Wheatbelt-Great Southern	1.02
TAS North	0.29
NT Lingiari	0.58

Regions such as Global Sydney and ACT had a negligible increase in gross product and employment because the number of potential exporting firms from an e-stage increase is small and the current ADSL coverage is high.

It should be noted that if a study was done for ADSL2+ export potential compared to world best practice, then Global Sydney would possibly show the largest increase in export potential.

The bottom line outcome is for a direct employment increase of 10,000.

**The cost of increasing ADSL coverage may not be prohibitive and could be justified in terms of the national interest.**

A strategy of fibre optic deepening to extend ADSL coverage to most of the remaining unenabled ADSL exchanges in Australia could cost as little as \$3 billion. Given the benefits from exports estimated in this report, this would unlock an internal rate of return to the nation, in terms of increased gross product, of 20 per cent per annum. This is conservative. The benefits come from only a one step increasing in e-staging. Clearly the potential is for a greater than one step increase in e-staging, especially for those regions that have the lowest e-staging ranking. Secondly, the other benefits from increased ADSL coverage have not been included.

To argue against the increased coverage in the national interest, governments would have to argue that alternative use of the \$3 billion would achieve a higher internal rate of return to the nation. This probably would be very hard to do.

## **1.2 Recent economic and demographic outcomes**

Each *State of the Regions* report includes an update in the series of economic and demographic indicators. These are given in the appendix to the report. In the Summary of the report, these indicators are aggregated into the six major region types that have become standard in *State of the Regions* reports.

Table 1.5 shows population growth rates and the change in population per annum for recent periods, as well as projections into the future, based on current indicators such as dwelling approvals. Perhaps the most interesting aspect of the population projections is the convergence in population growth rates. Regions which have relatively low population growth over the 1990s are now tending to accelerate their growth, while regions which had relatively high growth rates over the 1990s are either unchanged in their growth, or are declining.

There are many reasons for this outcome. Poor housing affordability in Sydney has certainly reduced population growth rates in some of the dispersed metro local government areas. It was also inevitable that population growth in the lifestyle regions would start to decline as population concentration drove down housing affordability. Perhaps the best outcome is for the rural regions, which seem to be recovering significantly in their population growth. This, of course, does not refer to all rural and provincial regions, but it does show how those rural and provincial regions with good lifestyle characteristics close to metropolitan areas are becoming increasingly attractive to migrants.

Table 1.6 shows employment trends by major regions. The stand-out is the 23 per cent growth in employment for lifestyle regions between 1999 and 2005. Table 1.7 expressed employment on a per capita basis and in Table 1.8 this is indexed to 100 in 1999. This shows that the growth in lifestyle region employment has been relatively modest on a per capita basis. The best performer in terms of per capita employment has been the core metro region.

The mirror image of the results in Table 1.7 are the NIEIR estimates of unemployment in Table 1.9. The good news here is that over the last couple of years there has been a steady 0.5 percentage point decline in the Australian unemployment rate, with the lifestyle and rural regions showing an above average decline. The core metro regions are probably at effective full employment. Nevertheless, there still exists a wide gap between the regions in terms of unemployment rates.

The real net flow of funds indicators shown in Tables 1.10 to 1.12 refer to a concept which is closely related to real household disposable income for a region. In terms of the movement in real net flow of funds per capita, the rural region is slightly ahead of the core metro region. The dispersed metro region, in particular, has performed poorly in terms of real net flow of funds per capita, and this is largely explained by the fact that in these regions there will be a high concentration of recent home owners who are paying high debt service costs. In general, from Table 1.12, the core metro region has maintained its superiority.

Table 1.13 shows that the metro region has by far the highest real wages per capita, and from Table 1.14 the lowest reliance on benefits from government as a percentage of net flow of funds. Indeed, the rural, resource based, production zone and lifestyle regions have doubled their reliance on benefits as a percentage of net flow of funds, as compared to the core metro regions.

One aspect of particular note has been the poor performance of the resource-based regions. Given the accelerated growth in resource development one would expect for this to turn around over the coming year or so. However, it may be an indicative of the now poor linkages between resource development and the general economic benefit to the region where the development takes place. This would stem from more and more of the development resources being brought in from outside the region, whether in the form of components, services or actual construction and operating workers.

Recent trends are consistent with the stylised facts. The core metro region, despite having higher real wages, and high net flow of funds per capita, has in general managed to increase its superiority over other regions. The core metro regions are Australia's most knowledge intensive regional economies and this outcome is consistent with Stylised Facts 2, 3 and 4.

The lifestyle major region is an ageing region and its modest per capita employment performance, high unemployment and low real wages per capita is consistent with Stylised Fact 9.

	1996-2001	2001-2004	2004-2008
<b>Average annual growth rates (per cent)</b>			
Rural	0.4	0.8	1.0
Core Metro	1.1	1.3	1.3
Resourced-based	0.9	1.0	1.5
Dispersed Metro	1.3	1.0	1.1
Production Zone	1.2	1.2	1.2
Lifestyle	2.2	2.3	1.8
<b>Average annual change ('000)</b>			
Rural	15.5	27.0	37.0
Core Metro	36.8	49.0	50.6
Resourced-based	6.8	7.7	11.4
Dispersed Metro	58.2	46.1	53.8
Production Zone	60.9	66.3	67.8
Lifestyle	35.4	40.5	34.0

	1999	2001	2003	2004	2005
Rural	100	100	104	107	110
Core Metro	100	102	108	110	112
Resource Based	100	100	104	105	108
Dispersed Metro	100	103	108	108	110
Production Zone	100	103	107	108	111
Lifestyle	100	103	116	121	123

	1999	2001	2003	2004	2005
Rural	0.4359	0.4300	0.4417	0.4492	0.4569
Core Metro	0.4942	0.5006	0.5156	0.5188	0.5243
Resource Based	0.4589	0.4561	0.4654	0.4637	0.4706
Dispersed Metro	0.4871	0.4872	0.4995	0.4979	0.5019
Production Zone	0.4330	0.4329	0.4388	0.4396	0.4425
Lifestyle	0.4101	0.3943	0.4231	0.4295	0.4245

	1999	2001	2003	2004	2005
Rural	100	99	101	103	105
Core Metro	100	101	104	105	106
Resource Based	100	99	101	101	103
Dispersed Metro	100	100	103	102	103
Production Zone	100	100	101	102	102
Lifestyle	100	96	103	105	104

Region	2005	2004	2003	Change 2003 to 2005	2001	1996	Change 1996 to 2005
Rural	10.28	10.81	11.80	-1.52	12.50	11.98	-1.70
Core Metro	5.23	5.68	6.46	-1.23	7.46	9.50	-4.27
Production Zone	9.47	9.86	10.13	-0.66	11.55	12.04	-2.57
Lifestyle	10.77	11.16	12.98	-2.21	15.34	15.37	-4.60
Dispersed Metro	5.25	5.58	5.83	-0.58	6.73	7.50	-2.25
Resource Based	10.20	10.85	11.31	-1.11	11.45	9.91	+0.29
<b>Australia – wide</b>	<b>7.87</b>	<b>8.30</b>	<b>8.89</b>	<b>-1.02</b>	<b>10.02</b>	<b>10.61</b>	<b>-2.74</b>

	1999	2001	2003	2004	2005
Rural	11.4	11.7	12.7	12.7	13.1
Core Metro	15.7	17.3	17.0	17.4	17.8
Resource Based	12.7	12.8	13.7	13.7	13.5
Dispersed Metro	14.2	14.7	14.8	14.6	14.7
Production Zone	12.0	12.3	12.4	12.7	12.8
Lifestyle	11.4	11.5	12.0	12.1	12.2

	1999	2001	2003	2004	2005
Rural	100.0	102.6	111.3	111.2	114.4
Core Metro	100.0	110.2	108.8	111.3	113.5
Resource Based	100.0	100.6	107.6	107.9	106.4
Dispersed Metro	100.0	103.8	104.4	102.9	103.7
Production Zone	100.0	102.9	103.3	106.0	106.4
Lifestyle	100.0	101.2	105.8	106.7	107.1

	1999	2001	2003	2004	2005
Rural	0.73	0.68	0.75	0.73	0.74
Core Metro	1.00	1.00	1.00	1.00	1.00
Resource Based	0.81	0.74	0.80	0.79	0.76
Dispersed Metro	0.91	0.85	0.87	0.84	0.83
Production Zone	0.77	0.72	0.73	0.73	0.72
Lifestyle	0.73	0.67	0.71	0.70	0.69

	1999	2001	2003	2004	2005
Rural	10.8	11.2	12.0	11.8	12.1
Core Metro	16.3	18.4	18.7	18.8	19.2
Resource Based	12.4	12.2	13.1	12.6	12.8
Dispersed Metro	15.1	15.9	16.2	15.8	15.8
Production Zone	12.4	12.7	12.8	13.0	13.0
Lifestyle	10.5	10.8	11.5	11.4	11.4

	1999	2001	2003	2004	2005
Rural	23.4	23.7	23.3	25.6	24.8
Core Metro	12.9	11.5	12.2	12.6	12.4
Resource Based	18.3	21.9	22.8	26.6	23.9
Dispersed Metro	14.1	13.9	14.6	15.9	15.9
Production Zone	22.1	22.0	23.0	23.8	23.9
Lifestyle	26.1	25.6	25.3	26.8	27.1

### 1.3 Other issues in the report

The 2005-06 *State of the Regions* report presents the results of a survey of local government elected members and officers.

The survey results showed that local government:-

- was focussed on local roads;
- was reluctant to divert resources from roads;
- considered recreational infrastructure was an important driver of the local economy; and
- nominated ageing of the population as a major issue for infrastructure and local government resources.

The survey indicated that although local governments were not averse to incurring additional debt, the problem was reaching a consensus on what the additional funds should be allocated to in terms of infrastructure development. Political leadership was discouraged by the fear of community backlash.

In terms of the particular focus of this edition of the *State of the Regions* report, namely telecommunications, the survey results of more than half the respondents stated the quality of the ADSL infrastructure as good to excellent.

The report notes that there has been an increase in total fertility over the last year, constituting a so-called “baby bounce”. This, in part, seems to be the result of convergence in total fertility between regions. The increase in regional fertility has been concentrated in those regions, generally metropolitan regions, which traditionally have been well below the national average. This has, temporarily at least, counter balanced the continued fall in fertility in non-metropolitan areas.

Continuing on the analysis of the impact of the ageing population, this *State of the Regions* report examines the concept of population sustainability. In other words, the ability to maintain or grow the current population, by looking at migration fertility and age distribution. Those regions with the least sustainable populations generally have small rural towns that are a long way from major centres.

Those regions with the best population sustainability potential are places that offer employment opportunity or lifestyle choice.

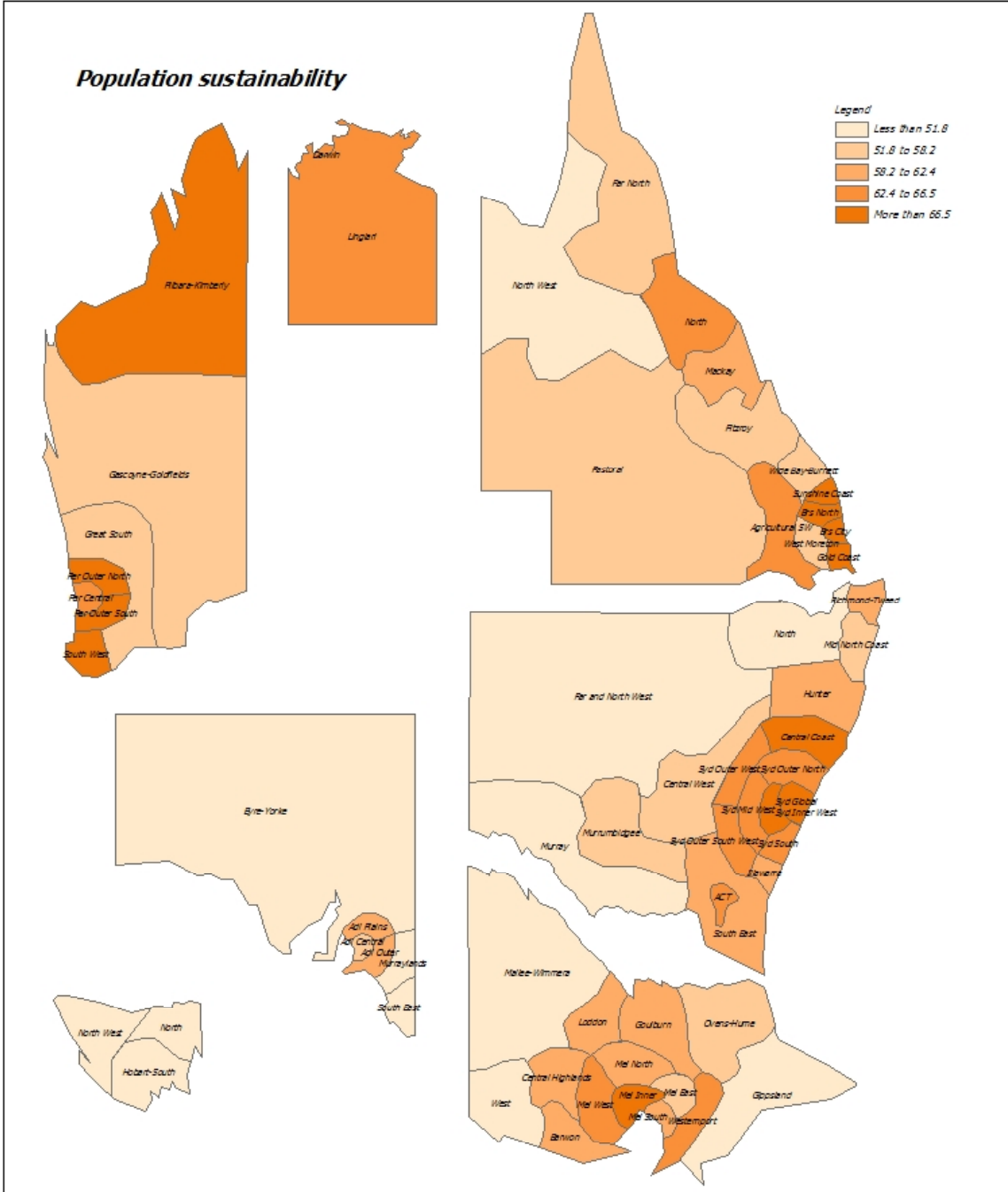
The following figure shows the population sustainability score for Australian regions. The higher the score the more sustainable the population change.

Other chapters in the report examine composition of those included in NIEIR’s estimate of unemployment, as well as the flows in and out of unemployment.

Issues around local governance, including revenue sources, are also discussed in later chapters in the report.



**Population sustainability**



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## 2. Infrastructure survey

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### 2.1 Introduction and summary of results

After many years of the *State of the Regions* reports, National Economics felt that it was timely to review the values, priorities and sentiments of the local government practitioner. To do so an on-line survey was designed and all local government areas were invited in writing to contribute their responses.

Respondents could be identified by their local government area, however no individual reporting of results at that level was permitted. Importantly the views sought did not necessarily have to reflect the official views of the council, and councils were permitted to provide more than one set of responses.

In total, 175 local government areas contributed responses, which represent 28 per cent of all local government areas. Even more significantly however, these local government areas represent 45.5 per cent of the population of Australia.

Highlights of the survey responses include;

- The responses to the survey developed in this report highlight progress made in the local government arena in the understanding of regional development trends.
- A surprisingly high number of responses were inward looking in terms of industry development. Few councils noted desires for investor development activities in area which extended technology or business services sectors.
- Where significant expansion in a variety of industries was identified, infrastructure impediments were identified in energy and power, and passenger transport.
- There are significant gaps between the objectives and intentions of practitioners and their capacity to make hard budget decisions required to deliver change.
- The results of the survey clearly demonstrate that council is well placed to continue its role as a provider of local roads and not so well placed in developing its mandate further.
- The success of the Roads to Recovery program is clear in the survey as is its ongoing support and expansion.
- Many good intentions are expressed with regard to endeavours that should be supported further by local government. However the survey results clearly question the capacity for good intentions to be built upon.
- There appears to an insurmountable impasse between funding “roads, rates and rubbish” and alternative programs.
- Having said that, widespread awareness of the problems of “cost-shifting” are identified, as to is the sense that the required role for local government has expanded without necessarily the capacity to embrace this expansion.

The survey results certainly confirm some key themes of previous reports, that is, there are problems of strategic infrastructure investment with communities which struggle with the political realities of competing priorities.

The structure of the section of the report follows the structure of the survey.

## 2.2 Industry development

The first set of questions sought feedback on how particular industries in each council area could be developed through changes to an array of infrastructure types. Included were a number of hard and soft infrastructure categories.

Councils and regions are engaged in a diverse range of economic development strategies. At any time, a council or region will be seeking to foster employment and income growth of various kinds. Sometimes the strategies will support a broad range of industries and employment; sometimes they will target a particular industry or a particular firm. Sometimes they will seek to retain and strengthen existing activities and sometimes they will seek to attract new industry.

### A. Please identify one or more industries or areas of employment that you are seeking to foster, and answer in terms of that industry or area of employment.

- Industry or area of employment. ....

**Table 2.1 Number of responses by industry and region type**

	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle
Administrative	5	13	24	8	7	3
Agriculture	0	1	18	0	0	0
Business Services	5	0	6	1	3	0
Community	7	1	8	2	1	0
Infrastructure	2	1	4	1	3	2
Manufacturing	4	2	22	6	6	5
Retail	1	2	2	1	4	0
Technology	1	0	3	0	2	0
Tourism	0	4	12	1	4	4

A large number of responses indicated that administrative functions were areas of the economy that the council was interested in strengthening. This was an unexpected result as it was anticipated that a broader analysis of the economy and the flow-on economic development would be a key consideration rather than direct benefits of council activity.

The nature of functions these administrative expansions related to included more resources in areas of current responsibility, as well as extending economic development functions, land use planning, project management and social programs.

Of note, the following trends were evident:-

- High desired levels in rural areas for value-adding in manufacturing;
- Relatively few “technology related” sectors received individual attention;
- Despite being the fastest growing sector of the economy, the business services sector only received significant attention in the Core Metro regions; and
- Rural communities have high expectations about the capacity for tourism to deliver positive economic benefits.

**Table 2.2 Percentage of responses by industry and region type**

	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle
Administrative	20	54	24	40	23	21
Agriculture	–	4	18	–	–	–
Business Services	20	–	6	5	10	–
Community	28	4	8	10	3	–
Infrastructure	8	4	4	5	10	14
Manufacturing	16	8	22	30	20	36
Retail	4	8	2	5	13	–
Technology	4	–	3	–	7	–
Tourism	–	17	12	5	13	29

When the results are converted into percentage terms the dominance of local government administration itself as an area of interest is clear. In dispersed metro regions, 40 per cent of all industries identified in the question, “please identify one or more industries or areas of employment that you are seeking to foster”, was local government employment itself. This is too high.

The role of manufacturing is clearly important in the eyes of our local government community. Interesting examples highlighted in the responses included:-

- food manufacturing and distribution;
- marine; and
- timber processing.

Similarly the low levels of technology related industries and business services are clear from the table above.

**In respect of this nominated industry or area of employment, could you please respond to the following questions?**

Your local environmental inheritance makes each LGA and region unique, but can be more or less well conserved.

**B. In fostering the nominated industry/activity, do you consider your environmental inheritance to be important?**

- No, not particularly important for this industry/activity.
- Yes, it is important and is an advantage. If yes, are there any important investments which should be made to conserve or enhance your advantage?

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	5%	54%	41%
Agriculture	5%	47%	47%
Business Services	27%	60%	13%
Community	26%	42%	32%
Infrastructure	50%	33%	17%
Manufacturing	24%	41%	35%
Retail	20%	60%	20%
Technology	50%	50%	0%
Tourism	0%	60%	40%

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	0%	38%	62%
Agriculture	11%	16%	74%
Business Services	13%	33%	53%
Community	0%	58%	42%
Infrastructure	23%	46%	31%
Manufacturing	2%	40%	58%
Retail	10%	40%	50%
Technology	33%	50%	17%
Tourism	0%	40%	60%

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	6%	44%	50%
Agriculture	11%	39%	50%
Business Services	0%	53%	47%
Community	5%	58%	37%
Infrastructure	23%	54%	23%
Manufacturing	17%	39%	43%
Retail	10%	70%	20%
Technology	0%	50%	50%
Tourism	8%	33%	58%

Business networks extending outside your region, to elsewhere in Australia and overseas, can also be an important advantage. In fostering the nominated industry/activity, do you consider extended networks to be important?

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	11%	50%	39%
Agriculture	11%	33%	56%
Business Services	20%	53%	27%
Community	26%	53%	21%
Infrastructure	54%	23%	23%
Manufacturing	46%	33%	22%
Retail	30%	50%	20%
Technology	33%	17%	50%
Tourism	13%	42%	46%

Local passenger transport involves trips of up to an hour or so, and can be on foot, by car or public transport. In fostering the nominated industry/activity, do you consider local passenger transport to be important? [the obvious case is retail]

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	9%	24%	67%
Agriculture	22%	17%	61%
Business Services	33%	13%	53%
Community	5%	42%	53%
Infrastructure	38%	38%	23%
Manufacturing	16%	18%	67%
Retail	0%	50%	50%
Technology	17%	33%	50%
Tourism	0%	20%	80%

Long-distance passenger transport involves longer trips. It connects regions, and connects Australia to overseas. In fostering the nominated industry/activity, do you consider long-distance passenger transport to be important? [the obvious case is tourism]

**Table 2.8 Long-distance passenger transport**

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	26%	26%	48%
Agriculture	33%	33%	33%
Business Services	47%	33%	20%
Community	37%	42%	21%
Infrastructure	46%	38%	15%
Manufacturing	48%	22%	30%
Retail	60%	20%	20%
Technology	50%	33%	17%
Tourism	13%	13%	74%

Bulk freight involves shiploads, trainloads or multiple truckloads, using either containers or specialised vehicles. In fostering the nominated industry/activity, do you consider the bulk freight facilities of your LGA/region to be important? [an obvious case is wheat farming]

**Table 2.9 Bulk freight facilities**

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	25%	36%	38%
Agriculture	6%	28%	67%
Business Services	60%	7%	33%
Community	63%	21%	16%
Infrastructure	8%	54%	38%
Manufacturing	20%	30%	50%
Retail	70%	20%	10%
Technology	33%	0%	67%
Tourism	30%	22%	48%

Small-consignment freight involves everything from parcels up to single containers. In fostering the nominated industry/activity, do you consider the small-consignment freight services available in your LGA/region to be important?

**Table 2.10 Small consignment freight services**

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	15%	69%	16%
Agriculture	17%	39%	44%
Business Services	27%	40%	33%
Community	28%	50%	22%
Infrastructure	8%	77%	15%
Manufacturing	31%	49%	20%
Retail	30%	60%	10%
Technology	33%	17%	50%
Tourism	30%	30%	39%

Nearly all economic activity depends on energy in various forms, of which petroleum fuels, electricity and natural gas are the most common in Australia today. In fostering the nominated industry/activity, do you consider energy supply (in any of its forms) in your LGA/region to be important?

**Table 2.11 Energy supply**

	No, not particularly important for this industry/activity	Yes, it is important and is an advantage	Yes, it is important but there are skill gaps or other shortcomings
Administrative	5%	38%	56%
Agriculture	6%	22%	72%
Business Services	7%	47%	47%
Community	39%	33%	28%
Infrastructure	23%	46%	31%
Manufacturing	24%	29%	47%
Retail	30%	70%	0%
Technology	0%	67%	33%
Tourism	17%	22%	61%

## 2.3 Responses to statements concerning current issues

This section of the report details the response to a range of statements concerning economic development, infrastructure and council funding priorities.

Respondents were asked to rate their level of agreement with the statement, with a score of 1 indicating strong disagreement and a score of 10 indicating strong agreement.

The statements presented along with a simple arithmetic mean of the responses to this question are presented, the results are presented in order of agreement with the first statement that “opportunities exist for more road pricing (tolls, user pays, etc) in rural areas” receiving the least support. Of course given the large number of rural councils and their level of response, this could be expected. In later sections of the report a breakdown of the responses by region type is detailed.



**Table 2.12 Average responses to statements, all respondents**

Statement	Average Score
Opportunities exist for more road pricing (tolls, user pays, etc) in rural areas	3.59
Moving considerable resources from roads to recreation would improve local economic conditions	3.88
Moving considerable resources from roads to public transport would improve local economic conditions	4.16
Moving considerable resources from roads to community health would improve local economic conditions	4.17
The region's health infrastructure is adequate	4.45
Moving considerable resources from community health and recreation to roads and local business support would improve local economic conditions	4.59
There is adequate recreation infrastructure provided for youth	4.69
It is reasonable to suggest that economic growth in the medium-term will provide the capacity to increase infrastructure provision as required	5.20
Australian governments are as serious about infrastructure as ever before	5.23
There is adequate recreation infrastructure provided for the elderly	5.28
There are opportunities for increased road pricing measures (tolls, user pays, etc) in general	5.35
I would prefer to be within 30 minutes of a large world leading hospital than have more locally focussed smaller hospitals in my town	5.43
The infrastructure of this region adequately supports the arts	5.52
There is adequate recreation infrastructure provided for families with young children	5.71
Opportunities exist for more road pricing (tolls, user pays, etc) for freight vehicles	5.74
On a scale of 1 to 10, with ten being the best, how would you rate your region's supply and quality of ADSL (broadband) internet connections in the towns in your region?	5.85
Opportunities exist for more road pricing (tolls, user pays, etc) in metropolitan areas	6.00
The infrastructure of this region adequately supports festivals and events	6.10
The region's health infrastructure should be more decentralised	6.22
Our parks and gardens need to become family oriented leisure centres	6.41
Our parks and gardens need to better serve the needs of the aged	6.89
This region is a place to which people travel for recreation	7.20
Improving recreational infrastructure would attract more residents	7.35
Population ageing in this local area will significantly increase demands on infrastructure	7.82
Improving recreational infrastructure would improve the region's economy	7.83
Improving recreational infrastructure would attract more visitors	7.91
Ageing of the population presents a challenge for infrastructure	8.15

### 2.3.1 Road pricing and toll roads

The emergence of a range of new toll roads in Australia's cities prompted National Economics to seek information from local practitioners about their views on road pricing in general. The following statements were canvassed.

- There are opportunities for increased road pricing measures (tolls, user pays, etc) in general.
- Opportunities exist for more road pricing (tolls, user pays, etc) in metropolitan areas.
- Opportunities exist for more road pricing (tolls, user pays, etc) in rural areas.
- Opportunities exist for more road pricing (tolls, user pays, etc) for freight vehicles.

As one may have expected the results of the road pricing question demonstrated the classic “not in my backyard” (NIMBY) response. The regions which have had the most experience of tolls interestingly have the highest levels of acceptance of more opportunities for toll roads and road pricing.

In a climate of higher fuel prices, increased congestion and the well-understood environmental costs of transport the potential for alternative road pricing schemes is significant. At this stage the role for local government may appear minimal, however as is often the case with new areas of economic activity and regulation, dismissing opportunities early in their development can sometimes be costly.

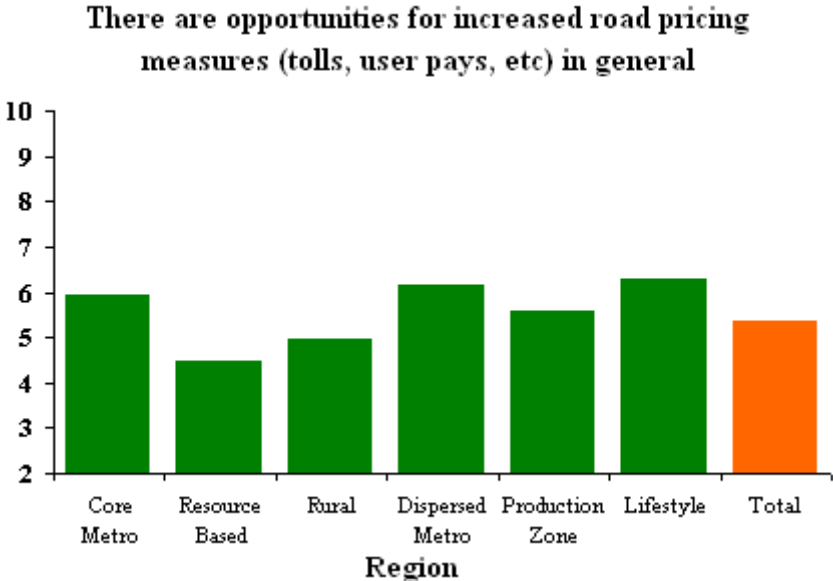
Inferences which can be drawn from the set of road pricing questions include:-

- dispersed metro regions, those with the most experience of toll roads, see further opportunities for road pricing in general, in metro regions and for freight based traffic;
- opportunities for freight based road pricing are seen to exist in all areas other than the resourced based regions.;
- rural areas appreciate more opportunities exist in metro regions; and
- metro regions have a higher perception of opportunities for road pricing in rural areas than their rural counterparts.

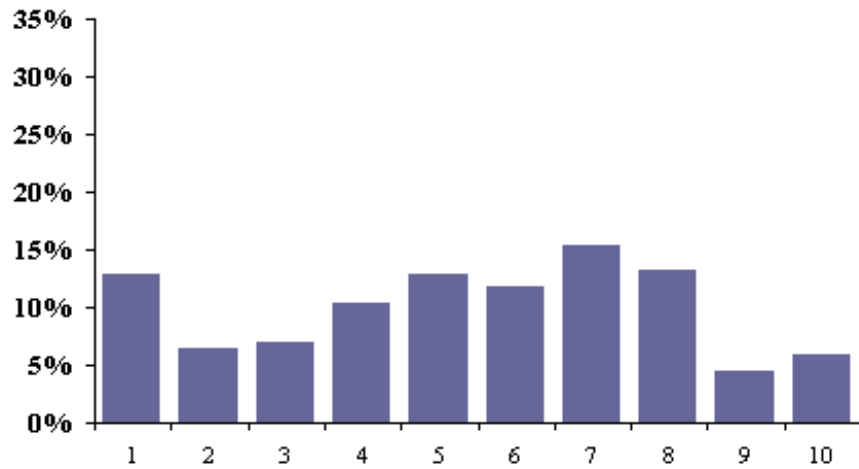
The NIMBY phenomenon could be expected in the policy area of road pricing, however it will be important that it can be overcome in the medium-term if the local government sector is going to build a role in this area. Otherwise the higher levels of government which have the capacity to break through many of the parochial issues, will take a stranglehold on road pricing.

**Table 2.13 Scope of road pricing by type of pricing by respondent region**

	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
General	5.90	4.96	5.16	6.73	5.73	6.44	5.87
Metropolitan	5.31	5.50	6.25	6.52	5.46	6.13	5.88
Rural	4.22	2.73	3.31	4.88	4.66	3.96	4.19
Freight	6.39	4.77	5.84	7.56	6.35	6.32	6.41



**There are opportunities for increased road pricing measures (tolls, user pays, etc) in general**



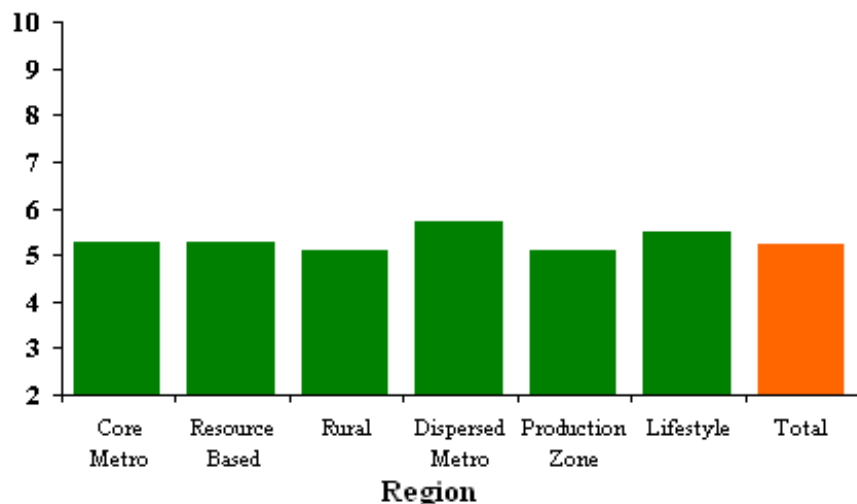
The range of responses is clear from the histogram above. The extremes of opinion are clear with more than 10 per cent rating the statement as zero (strongly disagree) with more than 30 per cent indicating a positive to strongly positive score of greater than 6 out of 10.

**2.3.2 General issues and perceptions**

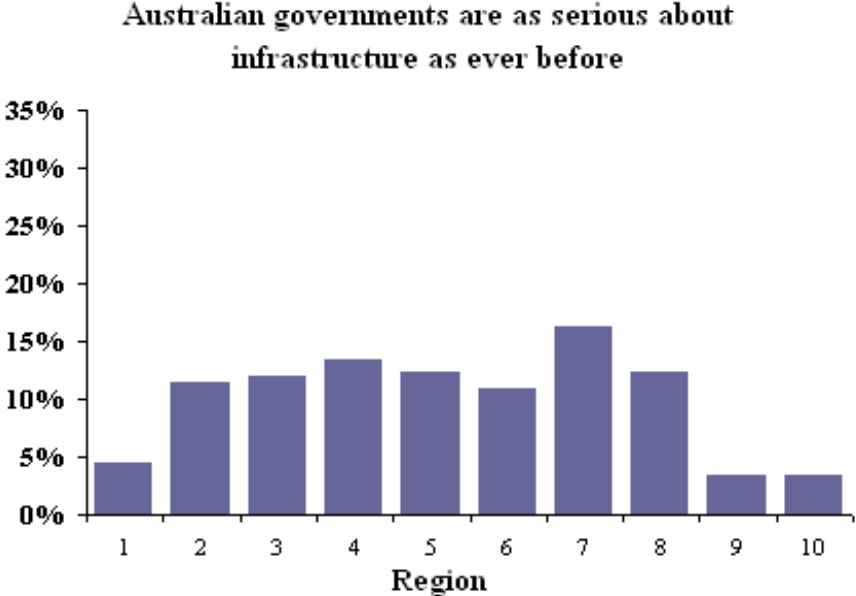
A range of general issues were canvassed concerning the impacts of ageing and government policy including:-

- Australian governments are as serious about infrastructure as ever before;
- ageing of the population presents a challenge for infrastructure; and
- it is reasonable to suggest that economic growth in the medium-term will provide the capacity to increase infrastructure provision as required.

**Australian governments are as serious about infrastructure as ever before**

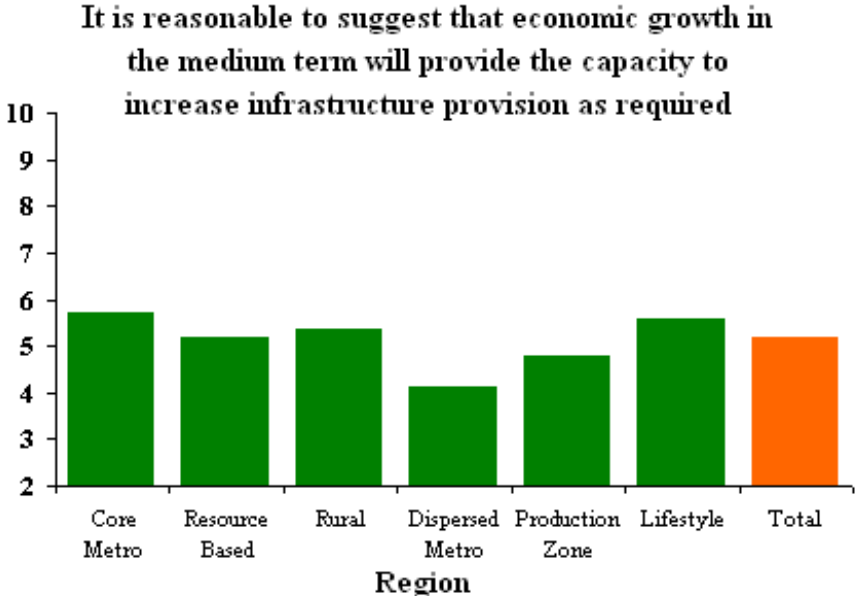


Little variation between the regions existed in terms of response to the “serious as ever before” question. The average response indicated that they are simply not sure. Average scores around the middle values of 5 and 6 are common, however this belies the significant variation which exists in the individual responses, as seen in the histogram below.

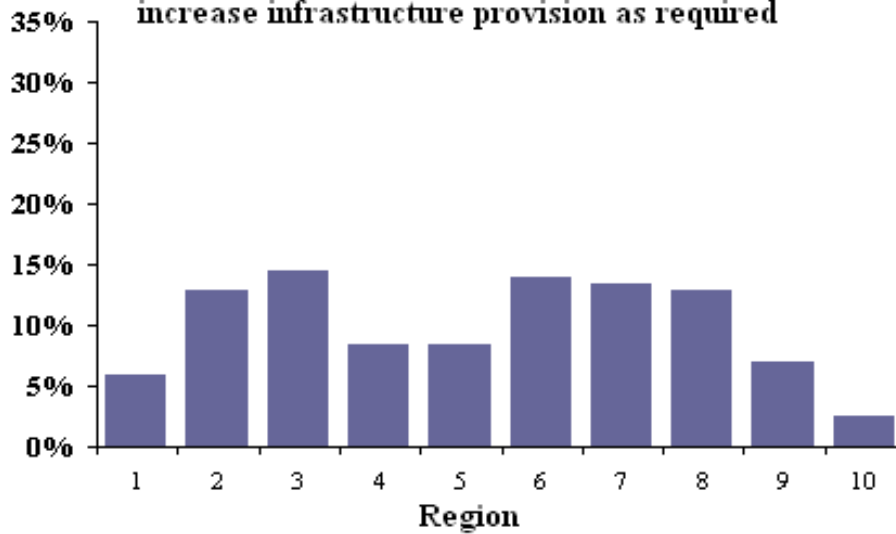


Similar variation exists for the statement, “it is reasonable to suggest that economic growth in the medium-term will provide the capacity to increase infrastructure provision as required”. This statement is as much a question of economic ideology as it is a test of the capacity of government to provide adequate funds.

Metro regions and the lifestyle zones display the highest levels of optimism. The dispersed metro regions, who understand how hard it is for general metropolitan conditions to lead to strong local investment, have the least optimism.

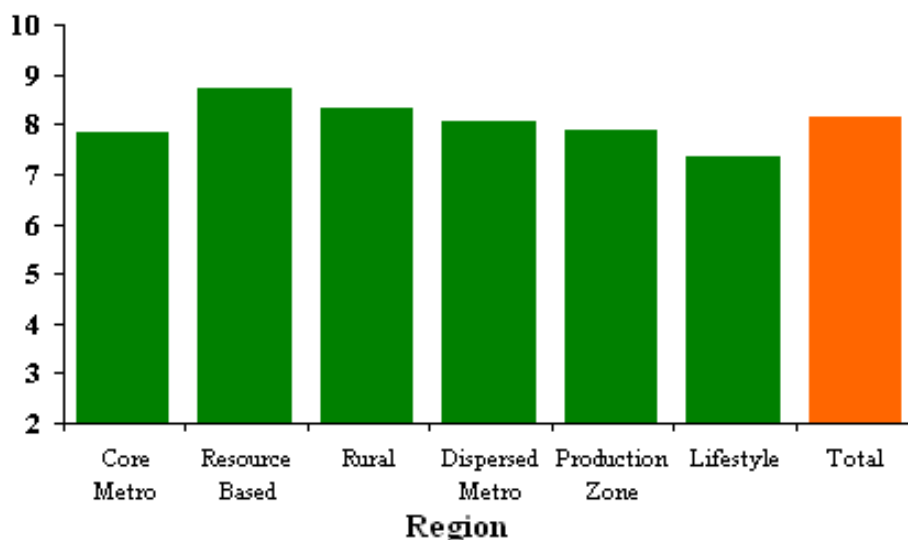


**It is reasonable to suggest that economic growth in the medium term will provide the capacity to increase infrastructure provision as required**



The simplest statement which was canvassed related to ageing. The 2002 *State of the Regions* report demonstrated the impact of ageing, and it is pleasing to see very high scores for all region types. This is also indicative of the excellent work that the Australian Local Government Association (ALGA) is undertaking in partnership with the Office for an Ageing Australia, Department of Health and Ageing. ALGA and the Commonwealth government have developed the *Australian Local Government Population Ageing Action Plan 2004-2008* to engage local government in a planned and coordinated national approach to population ageing issues. The *Planning for an ageing community* website ([www.alga.asn.au/policy/healthAgeing/ageing](http://www.alga.asn.au/policy/healthAgeing/ageing)) provides a range of tools and information such as: the results of a local government ageing awareness and action survey; the *Ageingforum* network, an online discussion forum; and a “resource centre” – all developed to assist local government plan for an ageing community.

**Ageing of the population presents a challenge for infrastructure**



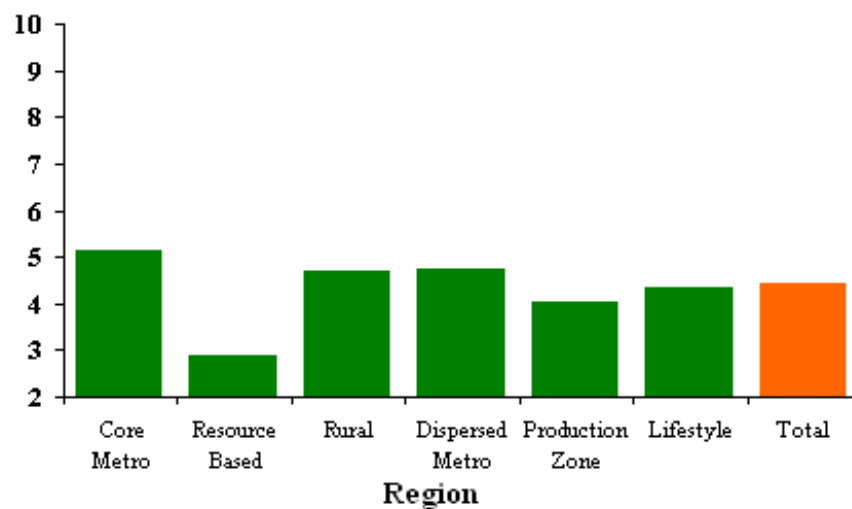
### 2.3.3 Health

Three questions concerning health and the provision of health services we canvassed.

- The region's health infrastructure is adequate.
- I would prefer to be within 30 minutes of a large world leading hospital than have more locally focussed smaller hospitals in my town.
- The region's health infrastructure should be more decentralised.

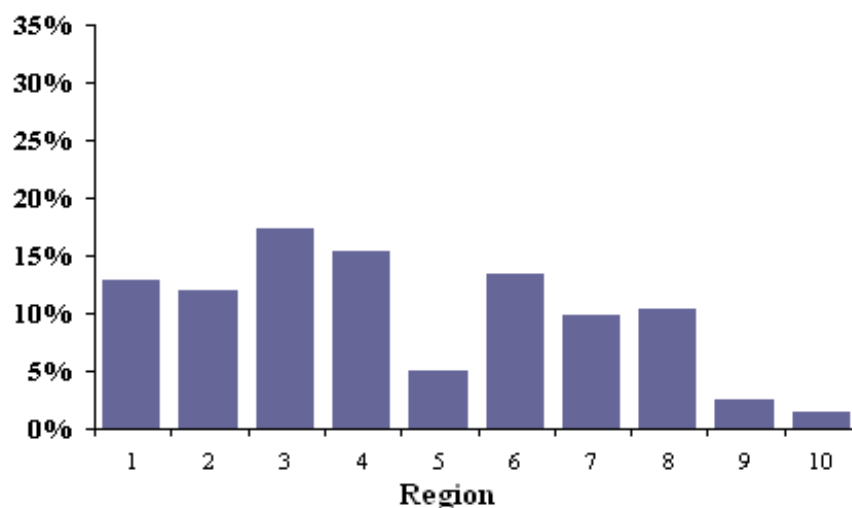
Health tends to a controversial area and the results of this survey are consistent with this.

**The region's health infrastructure is adequate**

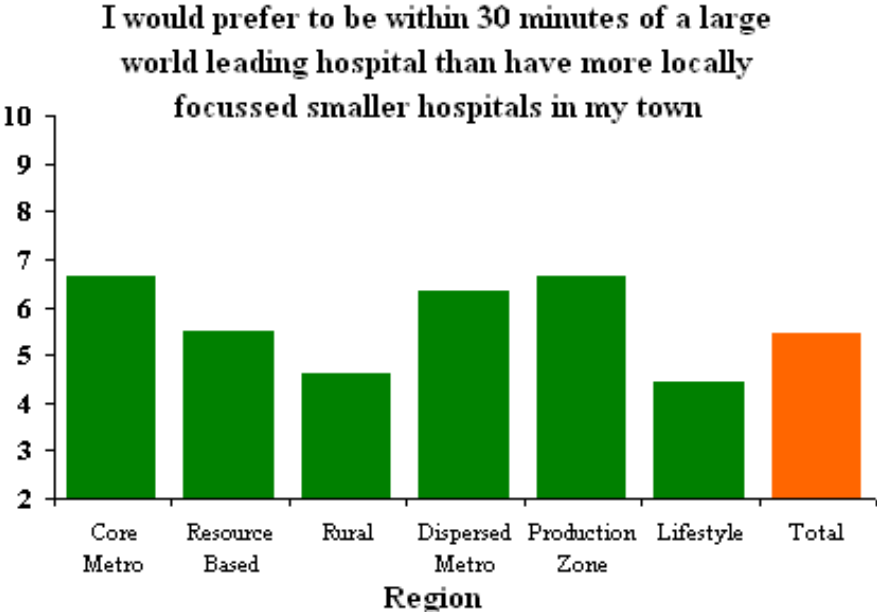


Most regions believed that the regions health infrastructure is not adequate with the lowest scores attached to the resource-based regions. The histogram below shows the high number of responses less than 5.

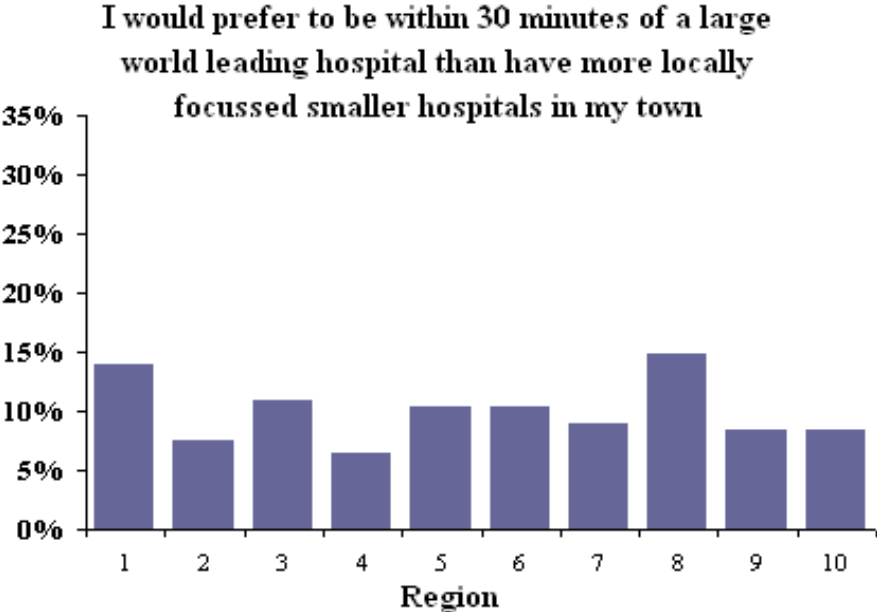
**The region's health infrastructure is adequate**



Building better systems on the back of these poor scores is difficult however. One of the simplest tests relates to whether resources should be centralised into world leading facilities for broader regions or more extensive facilities centred on local communities. The results below are consistent with research undertaken by National Economics in a range of regional locations. Rural and lifestyle areas simply do not believe that larger regionally focussed hospitals are preferable to many local hospitals. Leading hospitals are demanded in all locations regardless of the cost.

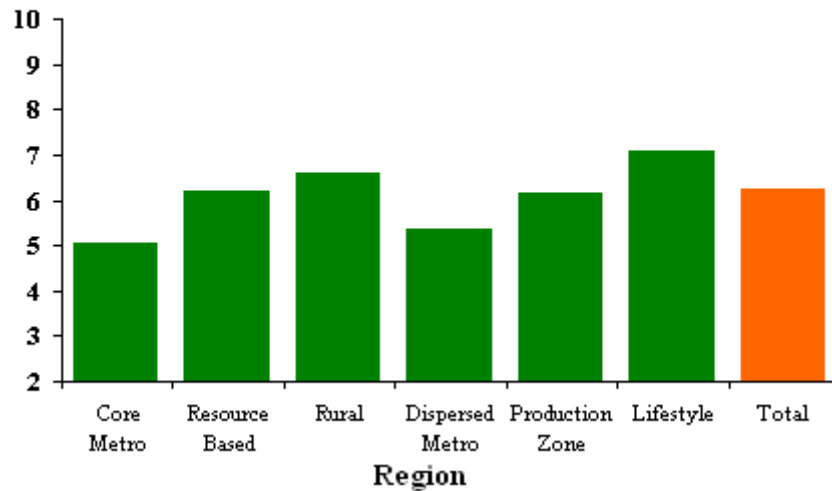


There is significant variation in responses, in fact the hospital question almost guarantees the widest range of responses as indicated in the histogram below.



As a test of the underlying principle of decentralisation which underpins the responses to the previous questions, we canvassed responses to the statement “the regions health infrastructure should be more decentralised”. As expected the rural and lifestyle regions have the highest scores for this statement.

**The region's health infrastructure should be more decentralised**



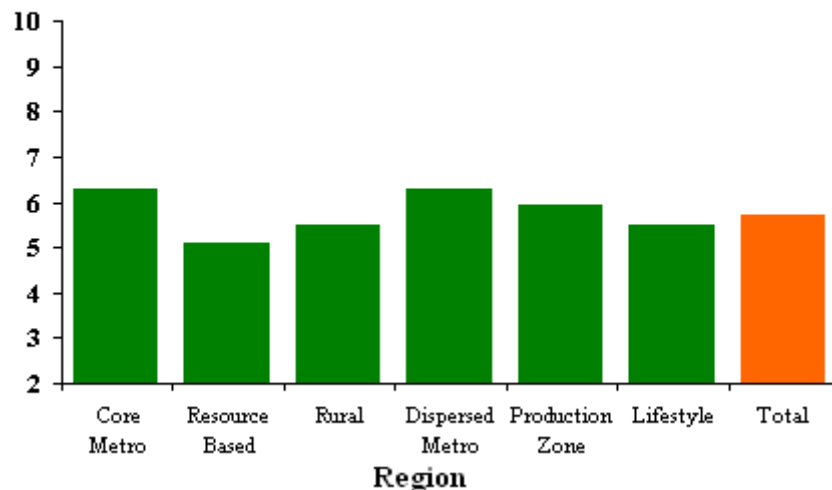
**2.3.4 Recreation, parks and gardens**

A range of questions on the provision of recreation facilities and use of parks and gardens was canvassed. The quality of current provision was investigated along with perceptions of the impact that recreation facilities have on the regions economy, level of visitation and attraction of residents.

The general theme in the responses was very pleasing; they recognised the importance of recreation facilities in the regions economy, and were optimistic about the effects that could be expected from improvements in this sphere.

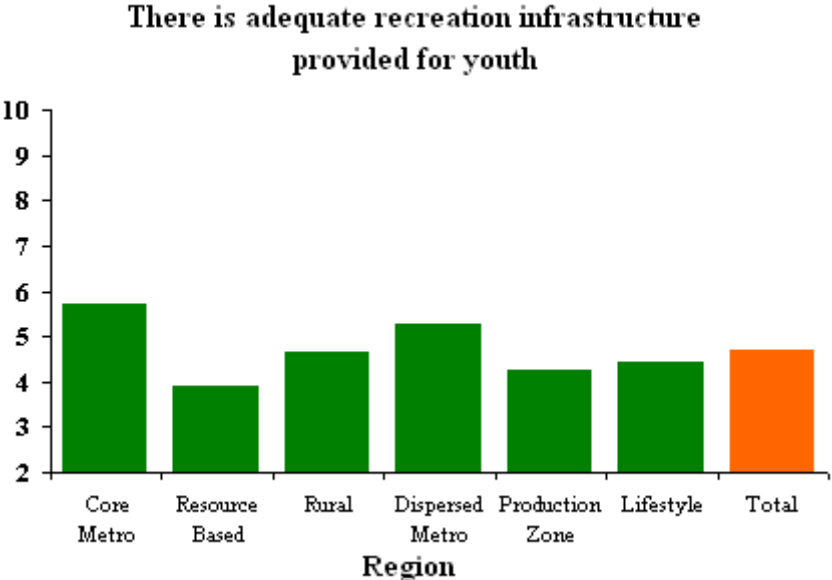
The responses to these questions varied little between most regions, although in terms of the adequacy of current provisions the core metro and dispersed metro regions had higher scores. The following narrative can be developed from the responses.

**There is adequate recreation infrastructure provided for families with young children**

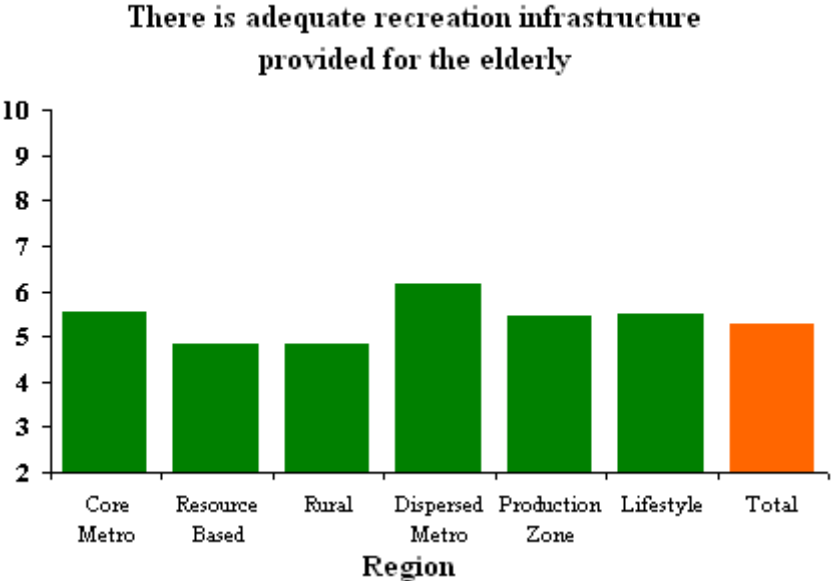




With an average score of 5.71 it was felt by many that there was “adequate recreation infrastructure provided for families with young children”. Fewer people believed that the same could be said for the statement that “there is adequate recreation infrastructure provided for youth” which scored an average of 4.69. All regions received a pass mark (>5) for family based recreation with only the two metro regions recording pass marks for youth.



The regions which identified the biggest differences between family-based provisioning and that provided for youth were the production zone and resource based regions. These regions also tend to be the least well connected in terms of public transport, and often have environmental or climate constraints to youth based recreation. The smallest gaps existed in the core metro regions.



In terms of whether there is “adequate recreation infrastructure provided for the elderly”, all regions scored its elderly recreation provision at lower levels than for families, with an overall score of 5.28. The regions with the biggest gaps between family based provisioning and the resources provided for the elderly was the rural areas along with the production zone.

**Table 2.14 Recreation adequacy by age cohort by region**

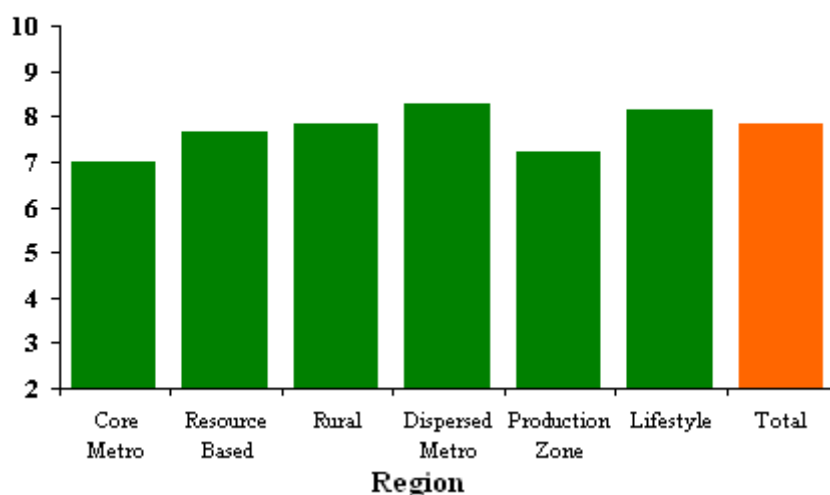
	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
Family	6.30	5.08	5.48	6.29	5.93	5.50	5.71
Youth	5.70	3.92	4.66	5.29	4.27	4.43	4.69
Elderly	5.52	4.83	4.81	6.14	5.43	5.50	5.28

Given the evaluations outlined above the nations recreational infrastructure is only failing our young people and to a lesser extent old people. The places in which it is failing by the most are the places that are losing youth at the fastest rate. The places that are failing the elderly the most are those places where many older Australian's are ageing in situ with few opportunities to access alternative facilities such as in the rural and resource based regions.

In Chapter 3 a great deal of attention is given to the importance of attracting young families to regions, it is interesting to note that despite the evaluation the regions do have a good understanding of the importance of recreation.

The survey revealed an average score of 7.83 for "Improving recreational infrastructure would improve the region's economy". This is the third highest score for any statement, behind the "Dorothy Dicks" statement of "Ageing of the population presents a challenge for infrastructure". Put simply the respondents believe that recreation is important.

**Improving recreational infrastructure would improve the region's economy**



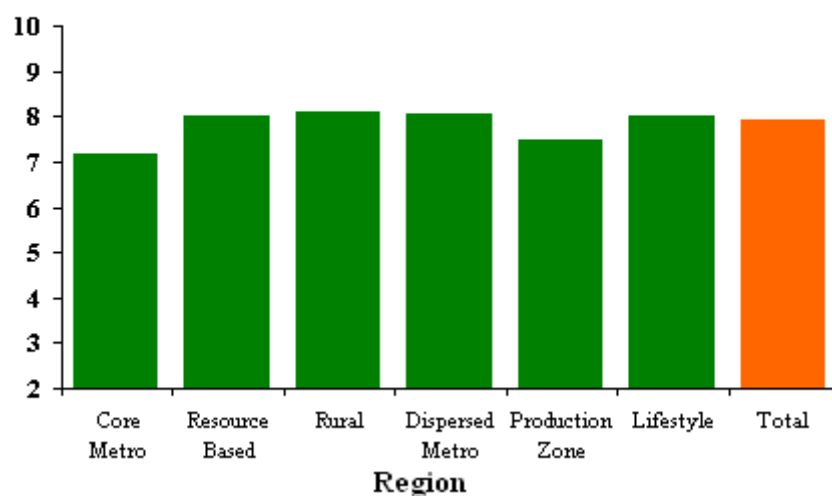
Similarly an average score of 7.91 was achieved for the statement, "Improving recreational infrastructure would attract more visitors", likely based on the fact that a score of 7.20 for the statement that "This region is a place to which people travel for recreation".

The response to this question raises at least two options:-

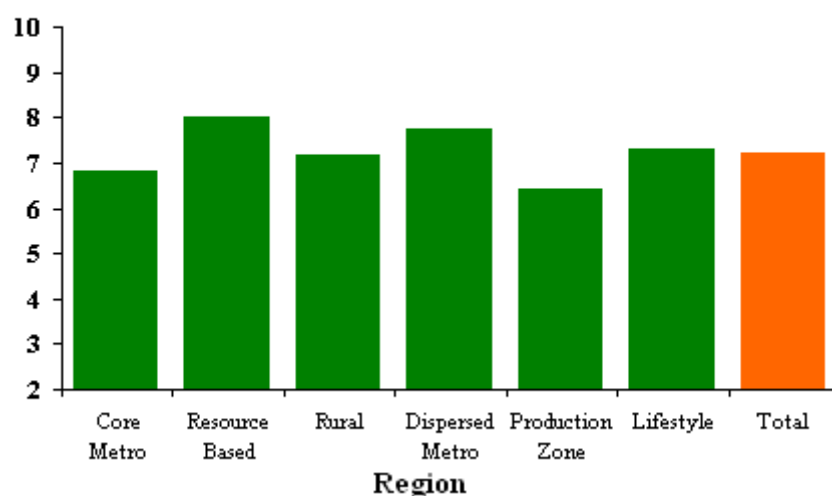
- one, all regions are places people travel to recreate and most regions have similar recreational advantages; or
- two, local perceptions of the recreation value of their community can be overstated.

If the second is true it could distort investment priorities. This is investigated further in following questions.

**Improving recreational infrastructure would attract more visitors**



**This region is a place to which people travel for recreation**



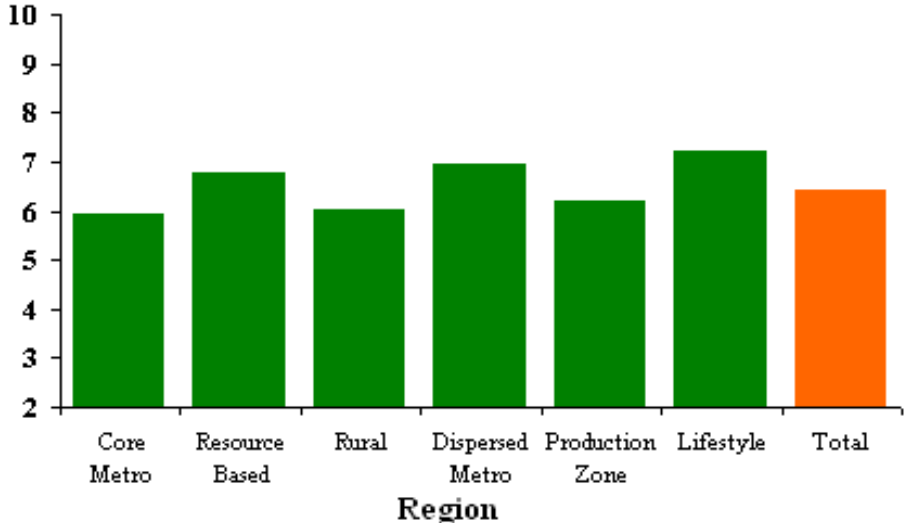
**Table 2.15 Recreation and its benefits, by region**

	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
Improving recreational infrastructure would improve the region's economy	7.00	7.67	7.84	8.29	7.20	8.14	7.83
A place to which people travel for recreation (A)	6.83	8.00	7.18	7.76	6.40	7.29	7.20
Improving recreational infrastructure would attract more visitors (B)	7.17	8.00	8.08	8.05	7.50	8.00	7.91
<i>Difference (B-A)</i>	<i>0.35</i>	<i>0.00</i>	<i>0.90</i>	<i>0.29</i>	<i>1.10</i>	<i>0.71</i>	<i>0.70</i>

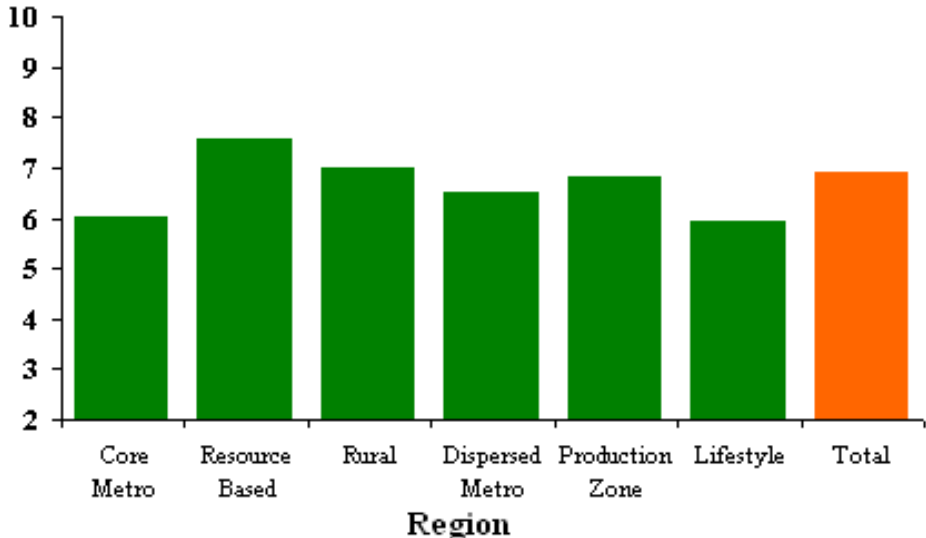
Interestingly when it came to identifying solutions for improved development alternatives for recreation facilities, uses for parks and gardens was not as highly supported as the general notion of recreational infrastructure improvements.

- ❑ Our parks and gardens need to become family oriented leisure centres, received an average score of 6.41, with most significant support from the lifestyle and dispersed metro areas.
- ❑ Our parks and gardens need to better serve the needs of the aged, scored an average of 6.89, with strongest support from rural and resourced based regions.

**Our parks and gardens need to become family oriented leisure centres**



**Our parks and gardens need to better serve the needs of the aged**



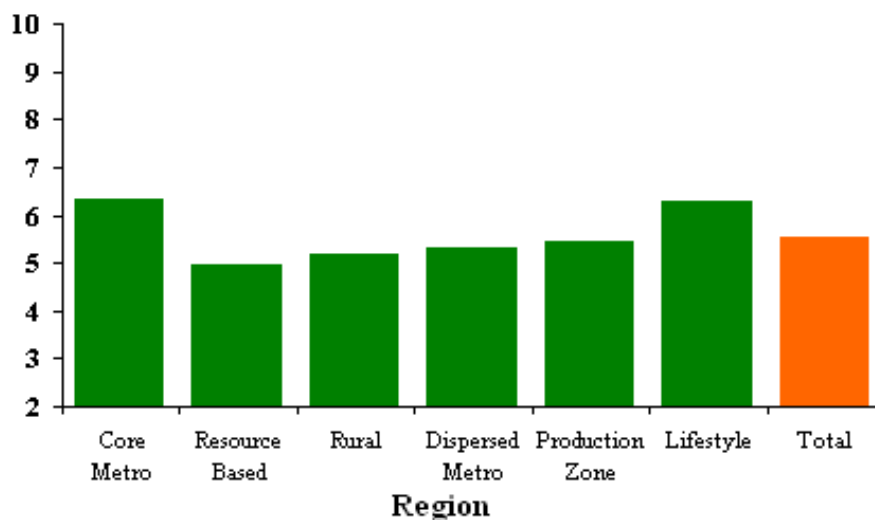
### 2.3.5 Festivals and the arts

- The infrastructure of this region adequately supports the arts.

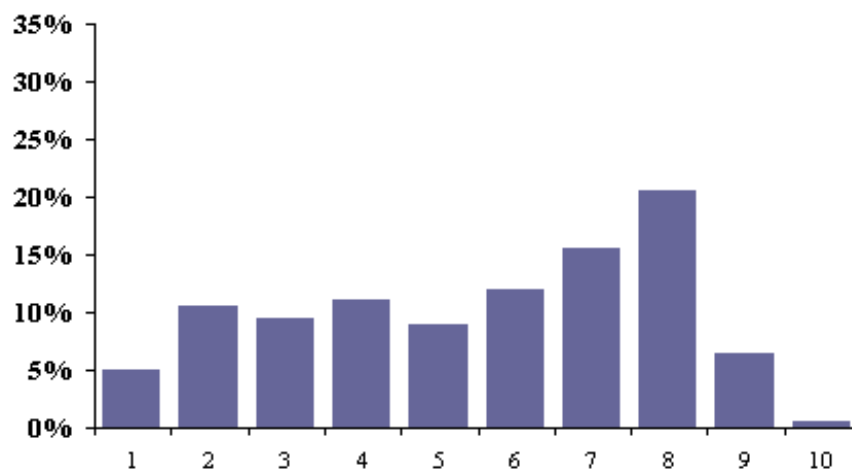
In modern communities with mobile populations, regions build and maintain identity, brand and personal allegiance through the strength of their public social events and festivals. The 2002 *State of the Regions* highlighted a range of creativity issues and features which lead to positive economic development outcomes.

Apart from the resource based regions, the responses indicate a moderate support for the arts and festivals from local infrastructure. Leading regions of the future however would be likely to have significantly higher levels of support. Unlike roads, health and education which are complicated by competing levels of government interest and responsibility, the arts and festivals are determined largely by strong local leadership.

**The infrastructure of this region adequately supports the arts**



**The infrastructure of this region adequately supports the arts**

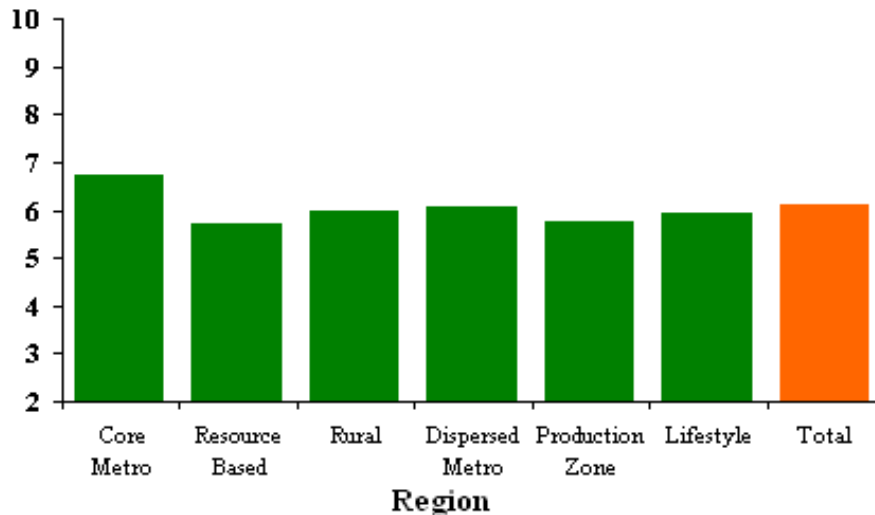


The level of variation in individual responses are greater in the arts than in the festivals and events. There are significant numbers that feel that infrastructure is inadequate to support the arts.

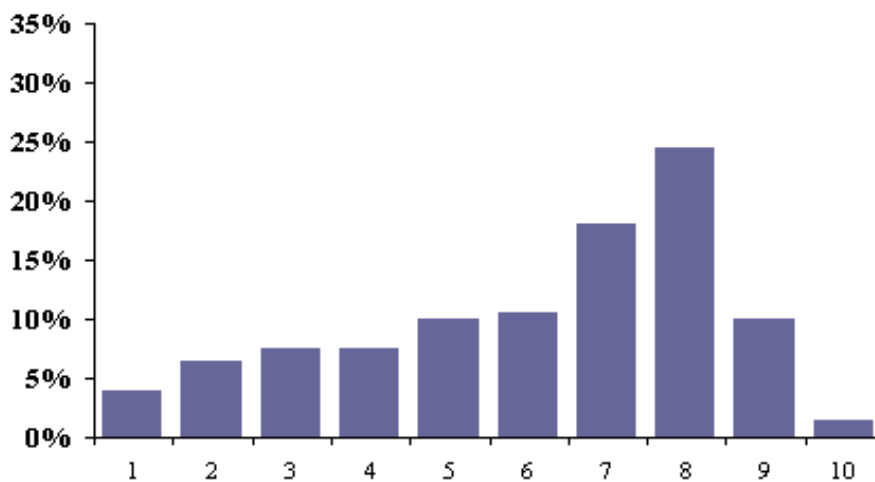
- ☐ The infrastructure of this region adequately supports festivals and events.

The scores on average for festivals and events are higher than for the arts.

**The infrastructure of this region adequately supports festivals and events**



**The infrastructure of this region adequately supports festivals and events**

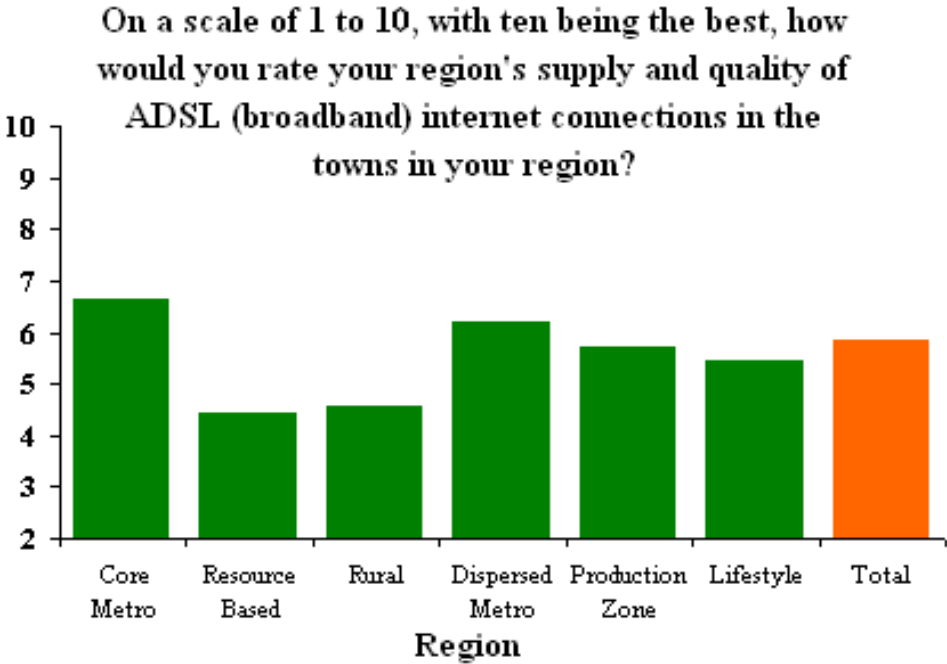


There is far less variation in the responses for the adequacy of infrastructure provision that supports festivals and events as opposed to arts. In part this may be a residual aspect of agricultural shows and historical events in many regions.

**2.3.6 Broadband infrastructure**

Consistent with the broader theme of telecommunications in this years report the following question was asked.

On a scale of 1 to 10, with ten being the best, how would you rate your region's supply and quality of ADSL (broadband) internet connections in the towns in your region?

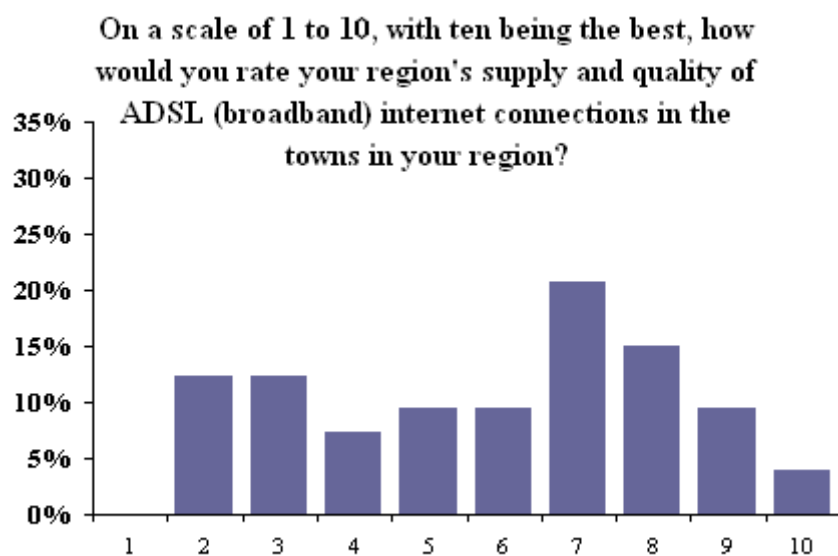


**Table 2.16 Perceptions of ADSL, by region**

Average Score	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
ADSL perceptions	6.65	4.42	4.58	6.19	5.70	5.43	5.85

The variation in the score between the region types presented in the graph above is broadly consistent with the results of the National Economics investigation into the ADSL coverage in Australia, presented in Chapter 10.

The histogram below which shows the distribution of answers makes intuitive sense based on the Chapter 11 results. For most Australian regions the ADSL supply is adequate to good and is reflected in the large number of responses of 7 or above. Fewer regions have services which could be described as “middling”, for most regions once the service falls below adequate the impact of the complaints from those with services necessarily creates a poorer view of the services than may be appropriate. Of course for a small number of regions the coverage is inadequate and would correspond to the more than 20 per cent of respondents with scores of 2 or 3.



There is a strong correlation between the size of the community and the scores provided for the ADSL question which is consistent with the largely market based supply of the services. Those communities with the smallest populations (less than 5,000 people) had a significantly lower (4.26) score than the larger communities. This score is lower than the rural or resourced based scores which generally have the smaller communities and as high as or higher than the larger metro regions scores. This suggests that the size of the community itself is likely to be a larger determinant of the perceptions of ADSL service than the type of community.

Based on the review of ADSL exchange coverage such a correlation between size and supply is warranted. For a more detailed analysis of the coverage and its implications see Chapters 10 and 11.

**Table 2.17 ADSL perceptions varying with size of population in LGA**

Size of population	Up to 5,000	5,000 to 19,999	20,000 to 49,999	50,000 to 99,999	Over 100,000
ADSL perceptions	4.26	4.84	5.13	5.53	6.52

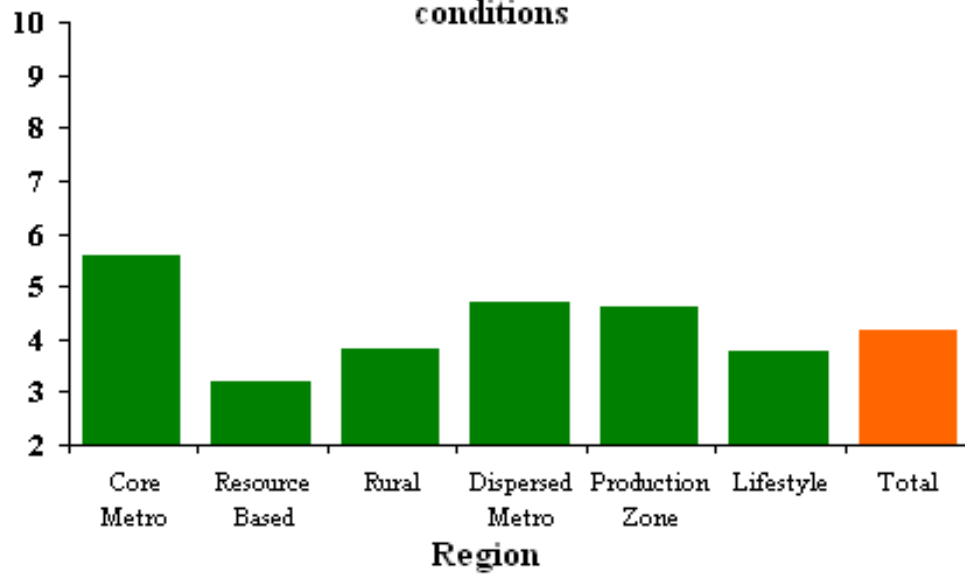
## 2.4 Allocating budgets and council priorities

The previous questions have sought responses about the current adequacy of infrastructure provision. In the real world however, improving infrastructure in one area can often require resources being removed from another. The following four questions determine responses that relate to moving resources between current council activities. The results highlight the inherent difficulties in expanding the role and influence of local government despite previous responses highlighting the difficulty in the decision making process.

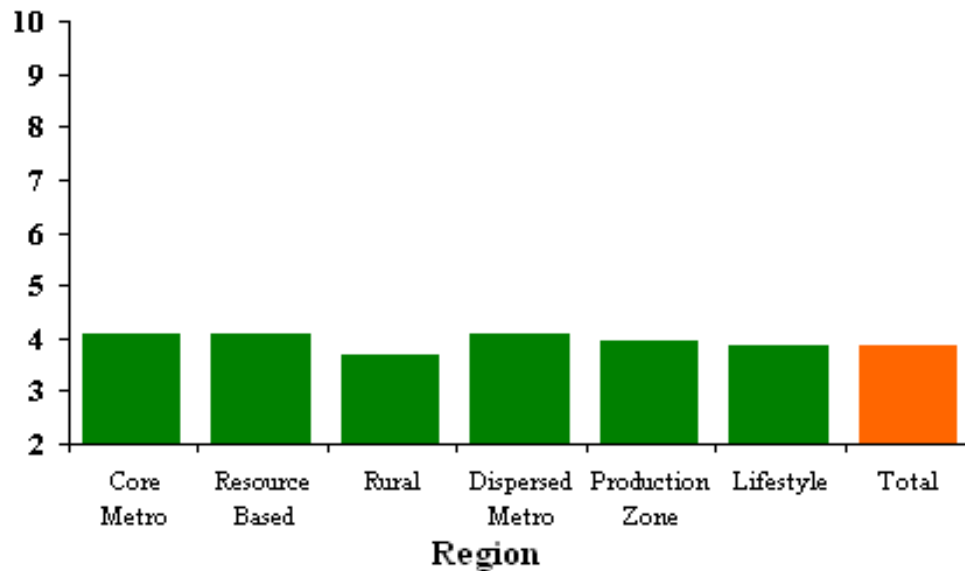
- Moving considerable resources from roads to public transport would improve local economic conditions.
- Moving considerable resources from roads to recreation would improve local economic conditions.
- Moving considerable resources from roads to community health would improve local economic conditions.
- Moving considerable resources from community health and recreation to roads and local business support would improve local economic conditions.



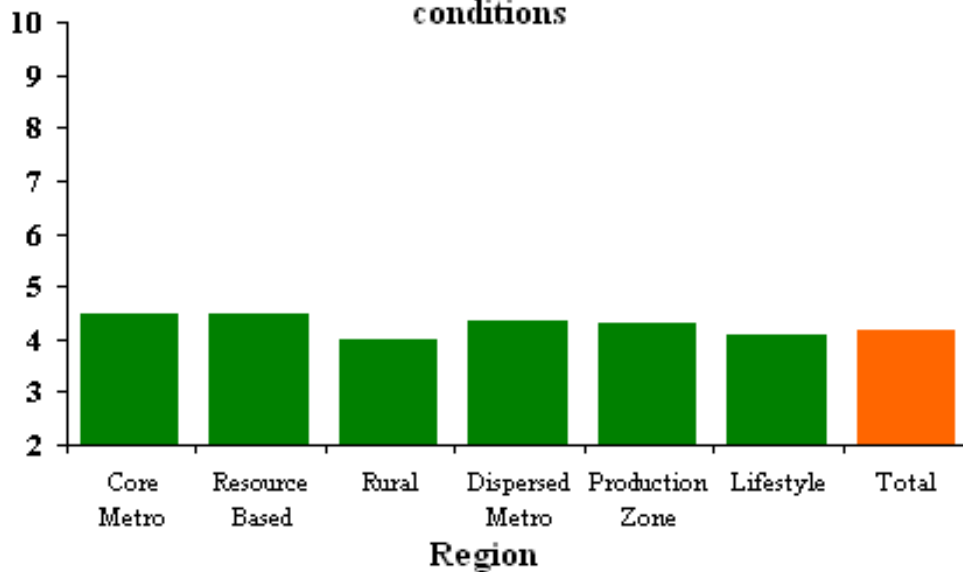
**Moving considerable resources from roads to public transport would improve local economic conditions**



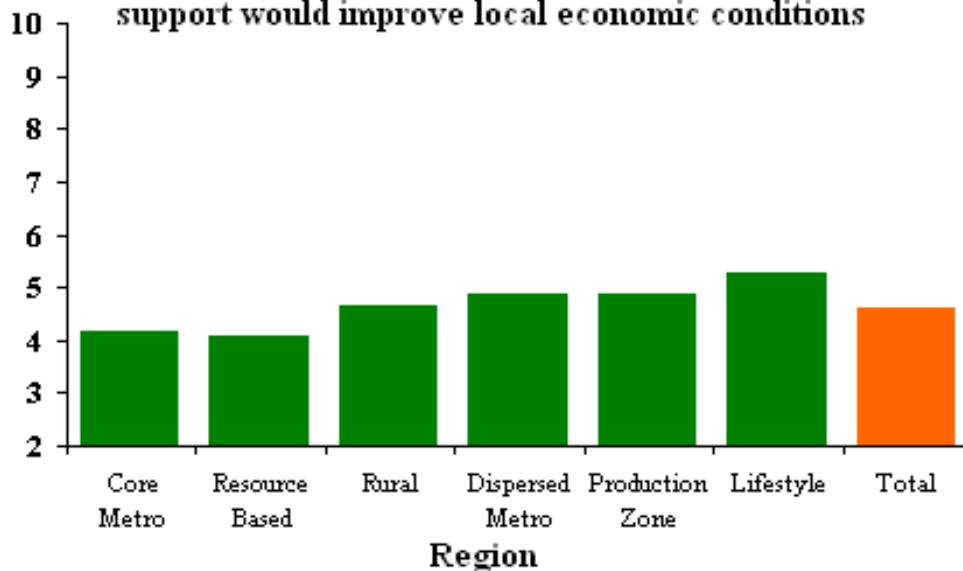
**Moving considerable resources from roads to recreation would improve local economic conditions**



**Moving considerable resources from roads to community health would improve local economic conditions**



**Moving considerable resources from community health and recreation to roads and local business support would improve local economic conditions**



Only one of the options give in the question allowed for an increase in road funding while the other three options detracted from road funding. The results in the table below show that there is a clear priority to road funding compared with public transport, recreation and health. The core-metro and resource based regions were the only regions which didn't rank this option number one.

**Table 2.18 Average score, out of ten: Budget allocation statements by region**

Average Score	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
Roads to PT	5.57	3.21	3.83	4.71	4.60	3.79	4.16
Roads to recreation	4.09	4.08	3.70	4.10	3.97	3.86	3.88
Roads to health	4.48	4.46	3.99	4.33	4.30	4.07	4.17
Health to roads	4.17	4.08	4.64	4.86	4.87	5.29	4.59
<b>Ranking</b>							
Roads to PT	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	4 <sup>th</sup>	3 <sup>rd</sup>
Roads to recreation	4 <sup>th</sup>	2 <sup>nd</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Roads to health	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>
Health to roads	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>

### 2.4.1 Responses to allocation priority question

Extending the investigation further in the allocative decision making process, we provide a hypothetical scenario in which priorities are ranked from highest to lowest in terms of priorities. This extends the previous 'pair-wise' questions and requires the respondent to make hard decisions as would be done every day at a council level. The first hypothetical question was:-

Rank by placing a number alongside each of the following selections, 1 being the most important and 6 being the least important

Given an additional \$400 per person<sup>1</sup> untied grant, please rank in order of priority the following possible spending options you would consider:-

- debt retirement;
- local roads;
- footpaths;
- community health;
- recreation; and
- festivals.

<sup>1</sup> Total amount was given in survey, varied with the local government area the respondent represented.

**Table 2.19 Average respondent allocation priority by region**

Average Priority (one - highest)	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
Debt retirement	4.86	4.91	4.88	4.93	4.79	4.46	4.84
Local roads	2.43	2.30	1.56	2.00	1.97	2.08	1.89
Footpaths	2.62	3.17	3.60	3.07	3.48	3.92	3.39
Community health	2.43	3.22	2.87	2.20	2.52	2.69	2.72
Recreation	3.43	2.96	3.22	3.40	3.03	2.46	3.14
Festivals	5.10	4.91	4.90	5.47	5.10	4.23	4.96
<b>Ranking</b>							
Debt retirement	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	5 <sup>th</sup>
Local roads	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
Footpaths	3 <sup>rd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>
Community health	1 <sup>st</sup>	4 <sup>th</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
Recreation	4 <sup>th</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Festivals	6 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>

**Table 2.20 Allocation responses varying with size of population**

Average Priority (one - highest)	Up to 5,000	5,000 to 19,999	20,000 to 49,999	50,000 to 99,999	Over 100,000
Debt retirement	5.26	5.22	5.34	4.97	4.82
Local roads	2.18	1.89	2.48	2.16	1.64
Footpaths	4.45	4.49	4.02	4.09	4.36
Community health	2.74	3.24	2.64	2.94	3.11
Recreation	2.82	2.78	2.82	2.81	3.21
Festivals	3.32	3.44	3.75	4.00	3.68
<b>Ranking</b>					
Debt retirement	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>
Local roads	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
Footpaths	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>
Community health	2 <sup>nd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
Recreation	3 <sup>rd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Festivals	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>

The previous priority question was then repeated but instead of questioning the likely priority, we questioned which priority would provide the greatest economic development potential. The question read as follows:-

In order of effectiveness could you please rank the economic development potential that each spending option would have in the local area (1 being the most effective and 6 being the least):-

- debt retirement;
- local roads;
- footpaths;

- community health;
- recreation; and
- festivals.

The table below details the responses by region in terms of the variation around the original question. For instance, in the core metro regions, for debt retirement, the regions had an original ranking of 4.86. In terms of economic development potential the average ranking was 4.76 (i.e. – its importance from an economic development perspective has diminished).

The biggest changes have been for the priorities of footpaths and festivals. This is an interesting result given the response to previous allocation priority questions. These questions clearly showed that roads were a major priority for funding, yet when asked to consider the economic development potential of funding priorities, festivals had been clearly understated in terms of priorities, while footpaths had been clearly overstated. That is, on the whole, it was considered that festivals had a higher economic development potential despite not allocating funds to this option.

**Table 2.21** Difference in average ranks between the priority of the options considered and the potential the option would have for economic development

Difference	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
Debt retirement	0.10	-0.42	-0.40	0.07	-0.31	-0.62	-0.31
Local roads	0.05	-0.28	-0.44	0.00	-0.03	0.41	-0.21
Footpaths	-0.71	-1.16	-0.81	-1.00	-0.83	-1.16	-0.90
Community health	-0.71	0.34	-0.13	-0.07	-0.24	-0.64	-0.22
Recreation	-0.10	0.21	0.51	0.27	0.14	-0.21	0.29
Festivals	1.14	1.50	1.45	0.80	1.31	1.23	1.31
<b>Improvement</b>							
Debt retirement	2 <sup>nd</sup>	4 <sup>th</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Local roads	3 <sup>rd</sup>	5 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Footpaths	5 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>
Community health	5 <sup>th</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>
Recreation	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>
Festivals	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>

## 2.4.2 A further hypothetical scenario

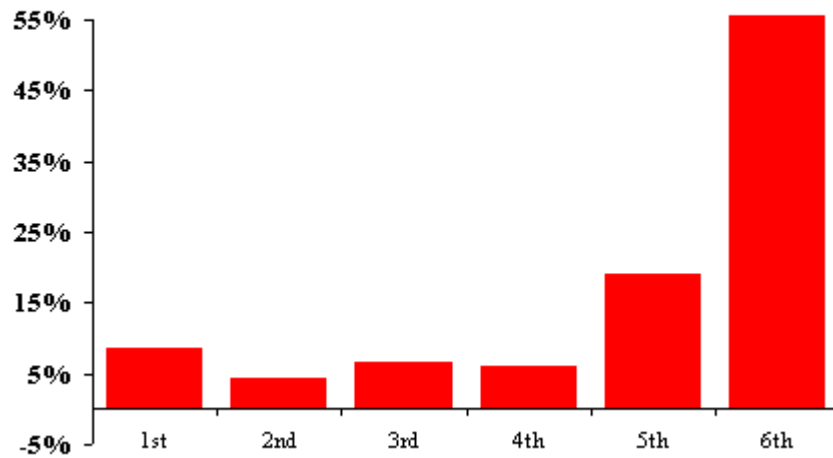
A further hypothetical scenario was further explored when respondents were asked the following question.

A major social or community infrastructure project which the council is missing (e.g. leisure centre, library, business incubator, support for events, arts precinct) is approved however requires council to borrow approximately \$200 per head of population.

In order of relevance what factors do you believe would be likely stumbling blocks to a speedy decision to approve such debt funding (1 being the most relevant, and 6 being the least)?

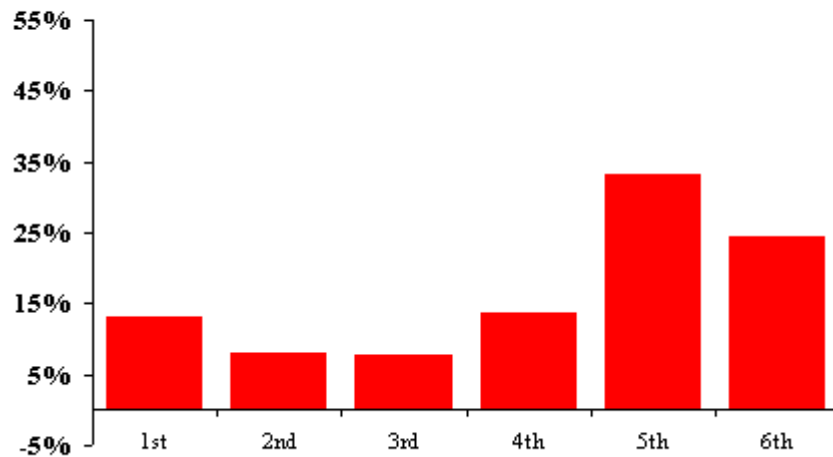
Previous *State of the Regions* reports, have explored the ability for local council to fund significant infrastructure improvements and developments using debt finance. The results presented below give an interesting insight into this as well the major issues that local council perceive as the main obstructions to such a scenario.

### Hypothetical - Too much debt already



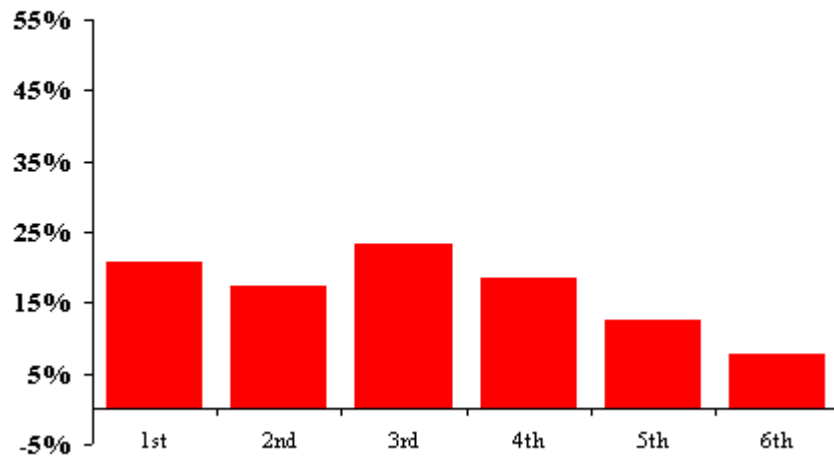
The majority of responses ranked the reason ‘to much debt already’ as one of the least important stumbling blocks for borrowing to support a major infrastructure project. Over 70 per cent of responses ranked this in the bottom two reasons.

### Hypothetical - Council policy avoids debt growth



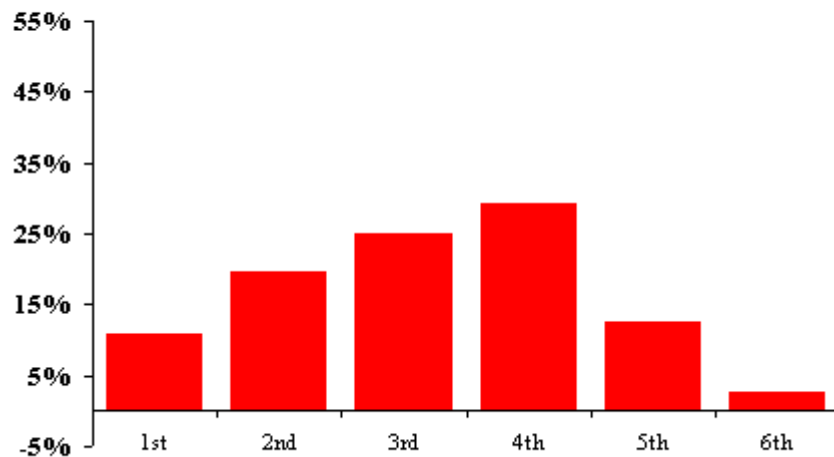
The reason that ‘council policy avoids debt growth’ also ranks lowly with about 50 percent of responses ranked in the bottom two.

### Hypothetical - Convincing public would be difficult



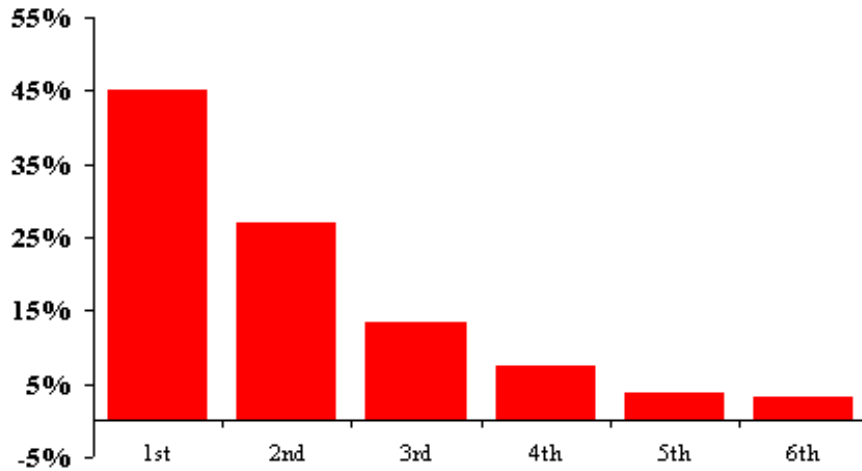
Convincing the public had the greatest variation in responses. As the graph above shows, there is a relatively even spread amongst most ranks, with the exception of ranking 6<sup>th</sup>. That is, although there are divided views of how important this reason ranks, it is clear that most find it more of a stumbling block than at least one other issue.

### Hypothetical - Debt servicing costs



Debt servicing costs were on the whole considered to be a slightly higher than average issue. Again, like the previous issue, most thought it was a least a greater stumbling block than one other issue with the majority ranking it somewhere between two and four.

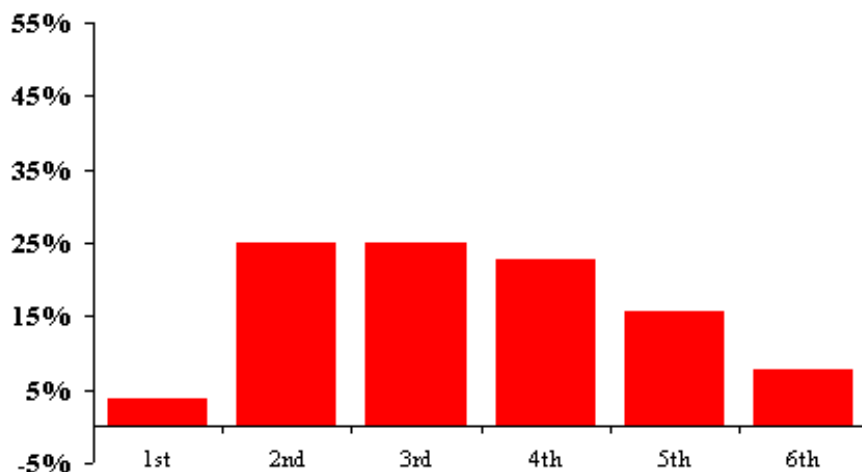
### Hypothetical - Competing priorities



Clearly the dominant reason, nearly half the responses indicated that competing priorities were the greatest stumbling block for borrowing to fund infrastructure projects; while more than one quarter considered this as the second biggest issue.

Responses for maintenance costs were highly varied similar to the issue of “convincing the public”. Nearly all respondents felt that there were bigger stumbling blocks than this, however the majority of responses ranked this reason between two and four.

### Hypothetical - Maintenance costs



The graphs above and the table below paint an interesting picture. It would seem that local government is not overly concerned with: borrowing, their current levels of debt; or even the ability to maintain new infrastructure and the debt service costs associated with borrowing. The two issues considered the greatest stumbling blocks in borrowing to fund an important infrastructure project, were competing priorities and convincing the public.



This again returns us to the issues of roads and the dominance road funding plays at the local area level. The two predominant reasons that hinder infrastructure development as identified in the survey – competing priorities and convincing the public – are predominantly due to the fact that local councils have a firm mind set that local road networks are vitally important, despite stating that they are not the best use of funds from an economic development perspective. It is clear that these competing priorities would be that the funds borrowed could be spent on local roads, and that the objection coming from the public would be that this money could be better spent on roads.

**Table 2.22 Respondent average priority level for hypothetical scenario by region**

Average priority	Core Metro	Resource Based	Rural	Dispersed Metro	Production Zone	Lifestyle	Total
Too much debt already	4.90	4.67	4.93	5.33	5.03	4.18	4.89
Avoids debt growth	4.05	4.17	4.25	3.87	3.83	5.00	4.19
Convincing public	2.80	3.00	3.30	2.73	2.90	3.09	3.08
Debt servicing costs	3.20	3.21	3.20	3.40	3.10	3.18	3.21
Competing priorities	2.75	2.29	1.94	1.87	1.83	2.18	2.08
Maintenance costs	4.00	3.00	3.30	3.80	3.52	3.36	3.45
<b>Priority ranking</b>							
Too much debt already	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
Avoids debt growth	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	5 <sup>th</sup>
Convincing public	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>
Debt servicing costs	3 <sup>rd</sup>	4 <sup>th</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>
Competing priorities	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
Maintenance costs	4 <sup>th</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>

## 2.5 Policy feedback

The final set of responses deal with more detailed answers to the local perceptions of:-

- wireless broadband;
- infrastructure shortfalls;
- changes in local government's role;
- national infrastructure projects; and
- Roads to Recovery.

Responses have been summarised based on the relevance to this report.

A major topic of the report is clear telecommunications, and National Economics believes that part of the problem with the debate in this area is the level of technological understanding required, especially when many issues are very confused in the market. The following question was asked about wireless broadband services.

With increasing internet capacity being required now and in the future, and newer more mobile technologies being considered, are you aware of wireless broadband internet connections being available in your area. If so what type?

<b>Response</b>	<b>Percentage</b>	
Understood question. Answer: No connections provided	9	4.1
Understood question. Answer: Yes connections provided	6	2.7
Misunderstood question: Responded ADSL was available	15	6.8
Misunderstood question: Responded no services available	19	8.6
Misunderstood question: Other	6	2.7
Not answered	167	75.2

Almost three quarters of the respondents fail to answer this question, which by far the least answered question on the survey. In the remaining 25 per cent who did answer the question, over half again misunderstood the technology to which the question related. Building consistent public policy in the area of broadband requires a good deal of communication. There are, however, few interested in promoting this debate at the national level, for reasons discussed in future chapters.

Moving to the impact of infrastructure shortfalls, job losses and failing investments are often seen as being the forefront of costs. To test the regions exposure to such costs the following question was asked.

Infrastructure shortfalls can contribute to losing local investment - has this happened in your region? Please give examples of business shut-down or businesses which did not open from lost investment opportunities. Include industry and size of employment (lost through closure or failure to open)

<b>Response</b>	<b>Percentage</b>	
This has not happened in the region	63	28.4
Yes has happened and examples provided	52	23.4
Identified occurrence, however consider by National Economics to have been primarily related to other factors	24	10.8
Not answered	83	37.4

A moderately high non-response to this question is to be expected. 28.4 per cent had noted that shortfalls or lost investment had not occurred in the region, whilst a further 10.8 per cent had identified closure which based on National Economics understanding would be more related to issues of international competitiveness of domestic consolidation.

This left almost one in four respondents identifying examples in which investment had been lost or businesses had closed down due to infrastructure shortfalls. By far the most identified reason was the lack of industrial land or infrastructure to directly support industrial land. Secondary issues included lack of power and natural gas. Despite answers to the previous questions in which all other issues were put aside for local roads very few people (2) identified local roads as an infrastructure shortfall which had cost investment.

The expanding role of local government has created new opportunities and potential burdens for local government. The following question explores this theme.

Do you think there has been a major change in attitude to local government from the electorate? Is local government being looked towards to provide solutions over a greater range of issues? If so, which new policy areas?

<b>Primary Response</b>	<b>Percentage</b>	
Yes a change has occurred	70	31.5
Yes the change is we are now expected to do everything	62	27.9
Yes and predominantly related to improved governance	12	5.4
No change	16	7.2
Not answered	62	27.9

<b>Policy Area</b>	<b>Percentage</b>	
Environment	5	2.3
Areas determined by cost shifting	21	9.5
Lobbying and advocacy	10	4.5
Economic development	32	14.4
Waste	1	0.5
Health	46	20.7
Age related issues	17	7.7
Infrastructure	7	3.2
Not answered	83	37.4

The answers to this question are very clear; the increased role appears to the majority of respondents to be unlimited and unfunded. Issues of cost-shifting have been discussed at length in other forums; however the previous sets of question have highlighted the difficulties for the respondents to re-priorities funds away from local roads.

At the strategic national level we also asked:-

- are there any national infrastructure projects of significance, which you believe require attention?

<b>Infrastructure project type</b>	<b>Number of responses</b>	<b>Percentage</b>
Public transport	7	5.0
Road projects	53	37.9
Rail projects	60	42.9
Water	44	31.4
Ports	12	8.6
Telecommunications	10	7.1
Health	5	3.6
Environment	12	8.6
Energy	14	10.0

Road and rail projects were the most common responses, although issues of water ports and energy received some attention. The limited number of responses for public transport, telecommunications and the environment were interesting. A selection of specific projects identified is given below.

- Rail projects – Brisbane to Adelaide, Melbourne to Darwin, Inland Rail links, Central Queensland Rail projects and Very Fast train proposals.

- Regional funding models.
- Road projects – Bruce Hwy, Bunbury Ring Rd, Calder Freeway, Eastlink return of federal funding, Pacific Hwy and the Tugun Bypass.
- Water project – desalination plants, more dams, water savings projects, Murray renewal and salinity reduction.
- Charging metro populations the real cost of water and other infrastructure to discourage migration from regional area. Tax incentives for decentralisation.
- Energy projects - PNG LNG Pipeline, Greenhouse friendly power and Renewable Energy.
- Cities Policy.
- Promote an “Infrastructure to Recovery program”.
- Optic Fibre to the home and business throughout (at least) the urban areas in Australia owned and managed by an entity independent of content and service provision and regulated in the public interest.
- Super Port.

The strongest feedback that we received in the survey related to the Roads to Recovery programs.

Without leading any of the respondents we simply asked for “Feedback on federal policies such as Auslink and Roads to Recovery”. We have subjectively classified the written responses, with more than one response possible, for instance positive feedback = “program must continue”.

<b>Policy Area</b>	<b>Percentage</b>	
Any negative feedback	0	0.0
Should be given lower national priority	4	3.1
Funding formula could be varied but program supported	18	13.7
“The program must continue”	26	19.8
Feedback : Good	36	27.5
Feedback : Very Good	38	29.0
Feedback : Excellent or better, including “unreal”	23	17.6
More funds are required for the program	29	22.1
Not answered	91	40.9
<i>Positive feedback as percentage of those recording a response</i>		<i>74.0</i>

A relatively high 40.9 per cent did not respond but of those that did 74 per cent recorded a positive response of good, very good or better.

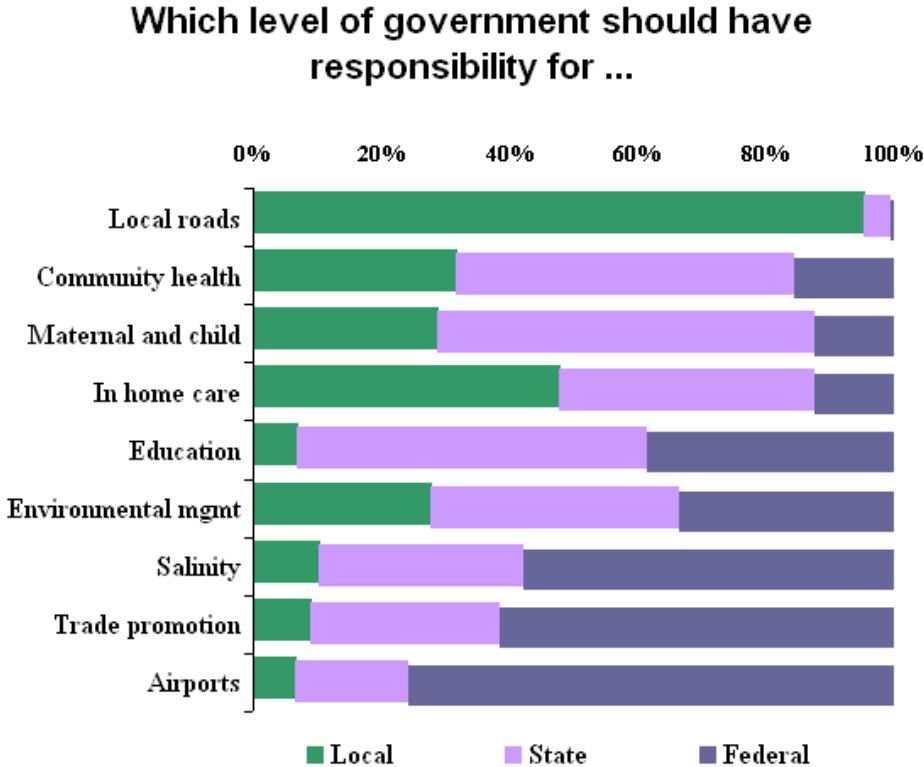
Unprompted 19.8 per cent of responses said the program must continue. 13.7 per cent thought the funding formulas could be varied, and 22.1 per cent said the program need additional money.

## 2.6 Jurisdiction of responsibility

The issue of which sphere of government is responsible for which service or issue is widely contentious. This has been displayed widely in the media in the areas of health and education, primarily between state and federal government. The question in the survey aimed to understand the local government stance on which sphere of government should have responsibility over a range of services. The question simply asked respondents to state which sphere of government, local, state or federal, should be responsible for:-

- airports;
- community health;
- education;
- environment management;
- in-home care;
- local roads;
- maternal and child care;
- salinity; and
- trade promotion.

The survey results are presented in the graph below.



As far as local government is concerned, the one major responsibility they feel they have from the list provided is to local roads. This is consistent with the survey responses to a range of previous questions that clearly demonstrate that local roads are considered one of the most important issues for local government.

In-home care, community health, and maternal and child care had similar responses with about 40 per cent of respondents feeling this was local government's responsibility; while community health and maternal and child care had about 30 per cent response. The majority of the remaining responses indicated that local government believes it is the state's responsibility; with only 10 to 15 per cent of respondents indicating that they felt it was the federal government's responsibility.

Environmental management was the issue that caused the greatest response variation. The responses were evenly spread amongst the spheres of government, with state and federal only marginally ahead of local government on this issue. This is a perfect example of an issue or service that cannot be unanimously or even partially agreed upon when responses are so clearly divided. This may be due to the interpretation of the question in that those respondents indicating "local government" may have some very local environmental issues that need addressing while at the other spectrum, those respondents answering "federal government" may be concerned with strategic policy matters, such as CFC emissions.

Four of the nine services/issues listed had very little support for local government responsibility. These were education, salinity, trade promotion and airports. Of these four, only education had a higher response rate for state responsibility as opposed to federal. Salinity, trade promotion and airports had increasingly higher rates of federal responsibility.

Nearly 80 per cent of respondents felt that the federal government should be responsible for airports. For some time now, local government has argued that the federal government's Australian Local Ownership Plan (ALOP), transferred the responsibility of the local airports to the local community – a cost shift. Councils consider that local airports are important for the social and economic development and sustainability of local and regional communities. They have argued that the federal government has a community service obligation (CSO) to regional and remote communities and, therefore, should provide ongoing financial assistance for the local airports. The costs of running these airports continue to rise. Greater demands for profitability of airlines, especially with rising oil prices; coupled with the continued concern of terrorism and aviation safety, has meant that airports continue to be seen as a federal responsibility.

## **2.7 Debt funding, public-private partnerships and the 2004 *State of the Regions* report**

The 2004 report spent a considerable amount of time analysing the subject of infrastructure and the difficulties in managing infrastructure. Central to the conclusions of last year's report was the identification of an increased role for local government in driving debt funded infrastructure solutions.

The report did note, however, that considerable education about the role of debt, education of council officers about similar financial issues and community education about the benefits of investment was required. Various workshops undertaken – including, the ALGA Regional Cooperation and Development Forum, at which the report was launched – showed that competing priorities for funding meant that debt funding infrastructure solutions are difficult.

Work such as the 2002 SGS Economics and Planning report into private sector financing of infrastructure has also identified similar impediments and a range of legal and financial hurdles which must be overcome.

The results of this year's survey refine our understanding of the competing priorities and motivations of local government, including what appears to be a pre-occupation with the funding of local roads. It is pleasing to note that initial work by the Department of Transport and Regional Services in building the platform for a National Framework for Local Government Public Private Partnerships has begun. Education of local government and finance sector alike will have a considerable role in such a framework.

It would appear that further development of the ideas presented in the 2004 report, including the ramped-up involvement of the superannuation and private investment industry, is required. This year's survey highlights how progressive and ground breaking such changes will need to be.

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## 3. Understanding demand for telecommunications

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### 3.1 Introduction

This chapter of the report uses a ground breaking survey by Digital Business insights (DB-i) and the expertise of National Economics to build a picture of information communications technology (ICT) demand in regions of Australia.

The results of this chapter point to a number of significant trends:-

- ❑ The underlying levels of broadband demand in Australia's regions are likely to be similar regardless of the region. The differences, whilst significant, still point towards strong demand existing across the board from inner metro regions to the rural and agricultural regions.
- ❑ Most regions will rely heavily on ICT use leaders or "staging leaders" to stimulate demand and generate ICT business potential. Whilst the abundance of these leaders will vary, even in the least exposed regions, the number of leaders requiring support is significant.
- ❑ The regions of Australia that are the most trade exposed have the most to gain from improvements in ICT take-up and at the same time have the lowest levels of ICT take-up.

When the results of this section are combined with our estimates of broadband coverage for each region in Australia, it is possible to understand the costs of poor access.

### 3.2 About the survey

In 2001, DB-i was created to provide research tools and training resources to organisations seeking to benefit from new opportunities created by the digital revolution.

DB-i is a publishing and research company that conducts ongoing research into the use and benefit of digital technology to small to medium sized businesses and other organisations. Research results are published as research reports, workshop resources, case studies, content for Web sites and editorial. Access to databases and other resources is by non-exclusive licence.

DB-i conducted state-wide "Benchmark" surveys in Queensland and New South Wales of small and medium sized businesses, and focused on the 150 business categories of most importance to the economy.

The surveys focussed on ICT uptake and use, broadband use, export activity and government service delivery for 150 business categories and community organisations. Information concerning the ANZSIC classification of firms by size, location, industry sector was also collected.

- ❑ Benchmark Queensland – 6,700 SMEs was conducted in May 2004.
- ❑ Benchmark New South Wales – 4,941 SMEs was conducted in December 2004 – January 2005.

The information collected was reported to federal government and state government for policy, strategy and planning, and has also been available to marketing and sales firms and individuals predominantly in the ICT industry.

National Economics purchased the unit-record based file of survey information – without specific details on the firms surveyed in April 2005, and have analysed this database to produce this chapter of the *State of the Regions* report.



Over 11,600 surveys have been utilised to build a complex picture of the demand for ICT technology in general and broadband telecommunications technologies in particular.

The unique combination of the National Economics experience in database micro-simulation with the in-depth and highly researched surveying by DB-I, has produced a regionally specific analysis of demand which provides unique insight into the importance of telecommunications to business and Australia's export future.

From National Economics' perspective the most important information collected in the survey concerns the demands by business for ICT and the understanding of the export potential created by firms at various stages of ICT use.

The fascinating development by DB-i is their success in measuring the concept of "e-journey staging". Based on the enormous range of possible ICT technologies available to firms, and the variety of activities or endeavours which could be assisted by these technologies, measuring a firm's level of technology awareness and progress requires a simple yet effective measurement technique.

A business is said to travel through six stages in use of technology – the "e-journey". Stages can be defined as processing, communication, information, transaction, integration and transformation.

**Table 3.1 Understanding the e-journey staging theory**

Stage	Technology use	Stage description	Use
0	Phone - No use of computer	None	Make and receive calls from customers and suppliers
1	Computer	Processing stage	Word processing, image and data processing
2	Internet	Communication stage	Research, e-mail, order product or services
3	Web site	Information stage	Online brochure, promotion, e-newsletter, simple Web metrics, receive orders etc
4	Intranet or Interactive site	Transaction stage	Sell products/services, online bookings, share resources within business etc
5	Extranet or integrated process	Integration stage	Supply chain management, share resources with customers or suppliers etc
6	Best practice involvement in networked economy	Transformation stage	Technology enabled customer and content focus to all business relationships

Each stage is based on use of technology (Computer, Internet, Web site etc) that enables different business processes (Research, E-mail, On-line banking etc). Technology use within a business can be used as a marker to define an e-journey stage – stage 1, stage 2, stage 3 and so on.

The heavy concentration on the small and medium enterprise level in the survey is perfect for the production of regionally specific and relevant local area information. Large corporate firms will tend to have their own specific ICT requirements and systems, with the application of those systems at the local area often having little to do with local conditions. Whereas the small and medium enterprises, which are significant sources of entrepreneurship and innovation deal with local information and conditions as a matter of course. Governments are trying to foster appropriate business environments for e-business and ICT uptake, and target programs to overcome market failures, barriers and inhibitors.

Small businesses lack objective information regarding the benefits and costs. Case studies and best practice demonstrations help to fill this gap. However there is no such thing as an average SME and countries in the OECD are recognising that analysis has to use firm level rather than industry level data.

Additional information concerning the data used is presented below. An even representation of firms were surveyed from 'metro' and 'non-metro' locations. The table below shows that slightly more non-metro business were surveyed.

Location	Total	Percentage
Metro	5599	48%
Non-metro	6126	52%
<b>TOTAL</b>	<b>11725</b>	<b>100%</b>

The surveys conducted also captured a diverse range of industries. Businesses surveyed were from the following industry sectors.

Industry sector	Total	Percentage
Property & Business Services	2,012	17.2%
Retail Trade	1,902	16.2%
Manufacturing	1,979	16.9%
Construction	1,259	10.7%
Health & Community Services	905	7.7%
Personal & Other Services	570	4.9%
Transport & Storage	652	5.6%
Wholesale Trade	595	5.1%
Agriculture	390	3.3%
Accommodation, Cafes & Restaurants	334	2.8%
Cultural & Recreational Services	378	3.2%
Finance & Insurance	323	2.8%
Education	154	1.3%
Communication Services	161	1.4%
Mining	111	0.9%
<b>TOTAL</b>	<b>11,725</b>	<b>100%</b>

The large number of property and business services firms surveyed will be important in understanding the significant variation in the sector. It is important to note, however, that the micro-simulation technique will take into account the actual distribution of firms and firm sizes in an area when determining local area estimates. For instance if a region has few, if any, firms in property and business services, then few, if any, of the surveys from such firms would be considered in the development of estimates of ICT for that area.

The survey as it was administered by DB-i provided extensive regional coverage in New South Wales and Queensland. The number of surveys by statistical division is shown in the following table. It was not possible to make a directly relevant table based on the SOR regions.

**Table 3.4 Business representation by location**

Statistical Division	Total	Statistical Division	Total
Central West NSW	463	Murray NSW	24
Central West Qld	24	Murrumbidgee NSW	5
Darling Downs Qld	613	North West Qld	47
Far North Qld	692	North Western NSW	129
Fitzroy Qld	430	Northern NSW	34
Hunter NSW	645	Northern Qld	557
Illawarra NSW	401	Richmond Tweed NSW	388
Mackay Qld	476	South Eastern NSW	171
Brisbane Qld	3219	South West Qld	13
Mid North Coast NSW	311	Sydney NSW	2370
Moreton Qld	245	Wide Bay Burnett Qld	468

The application of the results of surveys from New South Wales and Queensland to other regions of Australia is considered to be relevant due to the large number of firms surveyed and the relative consistency of economic structure expected between the regions. New South Wales and Queensland each have metro regions which will provide results applicable to other metro regions, each has a range of agricultural conditions which are reflected in similar areas in other states and other states have similar endowments in natural resources and infrastructure in parts.

### 3.2.1 Survey questions

#### *E-journey staging questions*

Stages on the e-journey are defined by the following questions.

- Do you use a computer in your business?
- Are some of your computers networked?
- Are you connected to the Internet?
- Do you have a Web site for your business?
- Do you sell products or services online?
- Does your business have an Intranet (an internal Web site for your staff)?
- Does your business have an Extranet (an Intranet with access for chosen customers/suppliers)?

#### *Connectivity and export activity*

- How are you connected to the Internet? Modem? ADSL? ISDN? Cable? Satellite? Wireless? Other?
- Are you an exporter?
- What is the main region you export to? Asia-Pacific? Europe? America? Other?
- What prompted you to become an exporter?
- Who or what organisation was your most useful source of advice?

## ***Online banking, videoconferencing, security and service delivery***

- Do you use online banking? How often?
- Do you use videoconferencing in your business? What for?
- What is your main security concern with using the internet?
- Do you use government Web sites for information and help?
- Yes? Which sites do you use?
- What information is most useful?
- What extra information would be useful to you?
- Do you interact with government online? ATO? Centrelink? Reporting? Licences? Tenders? Other?

### **3.3 The e-journey**

A more detailed description of the e-journey is provided by DB-i and repeated in the following section.

#### **3.3.1 Stages on the e-journey**

##### ***Stage 0 businesses***

They have not begun the e-journey. Typically use a phone but not a computer.

- Either no computer or doesn't use a computer.
- Uses mobile phones for out of office communication.
- Manager may be thinking about buying a computer or sees no benefit in doing so.
- Managers with businesses at this stage need to understand benefits of connection.

##### ***Stage 1 – “Processing stage”***

Businesses typically have at least one and maybe more computers depending on business size. Businesses at this stage also typically:-

- use mobile phones for out of office communication;
- use computers that may be networked (peer to peer);
- use simple business software – financial package – MYOB, Quickbooks;
- probably use word processing software – MS Office;
- may use desktop publishing or industry specific software depending on industry demands;
- the manager may be thinking about connecting to the Internet or sees no benefit in doing so; and
- the Managers at this stage needs education across a whole range of new issues.

## ***Stage 2 – “Communication stage”***

The business will have connection to the Internet and use the Internet for research and communication. The Internet connection provides a platform for e-mail communication with customers, suppliers and peers. Businesses at this stage also typically:-

- use mobile phones for out of office communication;
- have one or more computers and use simple business software;
- have computers that are probably networked (peer to peer) and if the business is bigger could be using a server network;
- may use an industry specific integrated system software package appropriate to the business sector;
- may use on-line banking for account balance and payroll;
- use e-mail as part of broader communication mix;
- have managers that typically are sceptical of the “so called” benefits of the digital revolution;
- may know someone with a Web site that didn’t deliver value;
- have managers that distrust or are sceptical of claims from solution providers; and
- have managers that need convincing about benefits and need guidance on a range of new issues.

## ***Stage 3 – “Information stage”***

Businesses may have simple web site – on-line brochure, although it is not interactive. The presentation of information onto the Internet platform supports the existing business and increases reach to customers and suppliers and peers. Businesses at this stage also typically:-

- use e-mail regularly for business communication;
- may subscribe to or send an e-mail newsletter to customers;
- use on-line banking for account balance, payroll and paying suppliers;
- may have a simple on-line catalogue;
- uses an external supplier to update their web site content;
- have managers that are likely to trust their established suppliers – computer/software supplier and ISP;
- need reassurance regarding their existing business experience and developing new skills. Some are concerned about fraud on the Internet. Uses simple security methods/anti-virus; and
- have business managers that need to develop skills and need advice about business models and best choice of technology.

## ***Stage 4 – “Transaction stage”***

Businesses typically have enabled interaction on their Web site and on their internal network. Using the Internet to share resources internally or offer products and services directly to customers and suppliers brings increased efficiency. Businesses at this stage also typically:-

- have web sites that allow the transaction of funds and/or information;
- information will be gathered where possible using forms and surveys;
- using databases to mine and drive the delivery of information within, to and from the business;
- using e-mail newsletters to build customer relationships and networks;

- have managers who are confident about technology and the benefits. May use on-line forums to share and find out information;
- have managers who have established a trusted relationship with one or more technology/solution provider(s) for specialist advice;
- may have an IT specialist depending on size. They may also host their web site internally; and
- managers need to develop their capabilities in understanding/integrating new technologies and applying new opportunities to the business.

### ***Stage 5 – “Integration stage”***

Businesses are typically integrating their internal business processes with those of suppliers and/or customers. Allowing customers or suppliers to access selected parts of the business network using the Internet as a platform builds closer relationships. Businesses at this stage typically:-

- have Extranets that allow access to information and resources by customers/suppliers;
- integrating processes with customers/suppliers where possible. Building stronger relationships;
- this may involve considerable reorganisation within the business. Processes and infrastructure may have to change to suit new software or an external industry supplier need or demand;
- smaller businesses may well need business organisation advice as well as technology advice for change to be successful;
- integration raises issues of ownership, trust and control of destiny. Not faced before;
- managers are typically innovative and concerned about how to maintain their leadership position; and
- they are concerned about suppliers/customers – out of step.

### ***Stage 6 – “Transformation stage”***

Businesses have transformed themselves into new businesses using all the benefits of digital technology as the platform for their business. Businesses at this stage are rare in Australia. Examples overseas are Dell and Amazon. These are businesses created by Web/Tech savvy entrepreneurs, aware of the possibilities offered by digital technology and using it to fulfil a clearly defined business purpose.

- Integrating processes with suppliers, complementary businesses and even competitors – marketplaces and portals.
- Reorganising and integrating internal processes to support customer focus.
- Typically have a customer/content focus supported by technology and based on a clear customer need.
- People within these organisations will all share the same customer/content focus.
- Typically use ongoing training and change management strategies to maintain skills and confidence in new direction.

Stages 5 and 6 and possibly stage 4 will not be achieved without broadband connections, with stage 5 and 6 likely to require businesses grade (at least 1.5 mbps) internet connections.

National Economics has referred to the businesses which have reached stage 5 or 6 as “**staging leaders**” and we believe that their existence within communities is vital. This is for a number of reasons.

- They are likely to be at the forefront of technology provision and the engagement of service providers including the promotion of competition.
- They will lead their own supply chain to adopt practises which are consistent with their standards which will likely lead to movement in the e-journey by those firms.
- They are likely to disseminate crucial knowledge which leads to awareness about the levels of technology which are appropriate amongst competitors.
- They will carry the information about the applications which require and hence stimulate demand for leading edge ICT connections and capabilities.
- Such leaders will be vital in the expansion of high speed broadband in many regions.

### **3.4 Regional micro-simulation**

Micro-simulation is the technique by which values collected in a small survey are matched to local populations, based on characteristics which have been collected in the survey. In this way we can infer statistically relevant and robust estimates for the local area without actually surveying a large number or in fact anyone in the area itself.

For instance in the survey of over 11,600 firms, there will be a number of small agricultural firms, but only a small number may be from the NSW Murray region. In fact the number in this region would be so small as to not provide a reliable estimate of ICT usage or e-journey staging for this region’s small agricultural firms. However, within the survey it is possible to learn about small agricultural firms in NSW Murray from all of the other small firms, all of the other agricultural firms and all of the firms from NSW Murray.

This process can be completed for all regions, for all firms’ sizes and for all industry types. At the end if we know the actual make-up of the number of firms by industry by size in a local government area, then it is possible to estimate the relevant contribution of each of the 11,600 firms in determining an overall picture of the local government area’s ICT use and expected features. National Economics does have recent estimates of the number of firms by size of firm at the appropriate industry level. This is a proprietary set of estimates based on the 1998 Business Register and subsequently modelled for changes reported in ABN numbers, Census 2001 employment and more recent employment estimates.

The result of this micro-simulation is a modelled or expected result in the sense that as stated previously, we have not actually surveyed every region or firm, and the reality may vary considerably, however the trends identified by this technique are the driving forces behind its development.

Put simply based on the large survey and the micro-simulation technique we can answer local questions about the following:-

- expected average e-journey for all firms;
- % of firms who would expect to be staging leaders;
- % of firms who would be expected to have broadband access;
- expected share of firms exporting; and
- the relative change in share of firms exporting should the average e-journey staging increase (referred to as the export elasticity).

The export elasticity is based on survey information detailing the extent of international exporting undertaken by the firm.

### 3.4.1 Export elasticity

An example of the way in which the export elasticity is calculated for an individual industry and firm size is presented below. The table shows the percentage of small agricultural firms exporting based on the e-journey stage which has been estimated for each firm. There are almost 300 firms which have surveyed to produce this level of detail alone.

Based on the gradient of export percentage for each e-journey stage we can estimate the expected marginal change in exporting firms for a one stage increase in the e-journey. For the table below the estimate is 10.5 per cent which says that if firms on average increased their e-journey stage by one then on average the share of firms exporting would increase by 10.5 percent in the small agricultural firms.

Industry	Firm size	Estimate export elasticity	E – journey stage/percentage of firms exporting					
			0	1	2	3	4	5 or 6
Agriculture	Small	10.5	3.0	4.0	14.0	19.0	58.0	50.0

Clearly a similar exercise can be completed for each industry and each firm size. When the estimated export elasticities for each firm size and industry are weighted by the share of industries and firm sizes within a region an estimate of the export elasticity for the region is determined.

## 3.5 Results

Based on the micro-simulation of the survey the following results and insights were produced.

### 3.5.1 E-journey staging

The results of the e-journey staging present a range of important implications.

- ❑ City regions will in general be expected to have more progress in the e-journey. This is not only based on the types of businesses which are formed in the city regions but also the metropolitan specific factors included in the estimation.
- ❑ The gap between the expected score in the city regions at the top of the list, and the expected score in the predominantly rural agricultural regions at the bottom is not very large. The best of the city regions have an expected score of 2.78 whilst the lowest ranked regions average 2.34.
- ❑ This result points to the crucial fact that in every industry there is a range of e-journey outcomes in Australia. As such the level of variation in the average journey that can be expected based on simply the industry and firm's size alone is not as large as the relative levels of access would suggest.



**Table 3.6 Top 10: E-journey staging**

Region	Score	Rank
Global Sydney	2.78	1
Melbourne Inner	2.77	2
Perth Central	2.68	3
Melbourne South	2.67	4
Brisbane City	2.66	5
Adelaide Central	2.65	6
Melbourne East	2.65	7
ACT	2.64	8
Sydney Outer North	2.64	9
Sydney Inner West	2.62	10

The bottom ten regions, in terms of their expected e-journey stage have a strong agricultural focus. It is interesting to note from the export elasticity example that significant increases in export focus could be expected for relatively small changes in the e-journey, in these communities.

**Table 3.7 Bottom 10: E-journey staging**

Region	Score	Rank
VIC Ovens-Hume	2.36	55
NSW Central West	2.36	56
QLD Agricultural SW	2.36	57
VIC West	2.36	58
SA Eyre and Yorke	2.36	59
WA Wheatbelt-Great Southern	2.36	60
VIC Mallee-Wimmera	2.35	61
QLD Wide Bay-Burnett	2.35	62
QLD Pastoral	2.35	63
SA Murraylands	2.34	64

### 3.5.2 Staging leaders

The average e-journey level is one measure, however for communities to develop ICT leadership there needs to be a strong core of firms for whom ICT uses has reach the “integration and transformation stages”. It may well be important to have many firms at a moderate level, however for many communities they only require a small number of exemplary firms to drive new innovation and ICT development.

The number of leading firms with the top ten regions is compelling and adequately demonstrated the broader economic contribution that quality ICT technology and its deployment is likely to provide. The table of staging leaders is similar to the e-journey staging score as one would expect, although Adelaide Central is ranked higher for staging leaders than general e-journey staging, indicative of the broader range of firms in Adelaide Central than appear in other city regions.

**Table 3.8 Top 10: Staging leaders**

Region	Score	Rank	Number of firms
Melbourne Inner	9.12	1	3,423
Global Sydney	9.08	2	6,198
Perth Central	8.38	3	2,810
Adelaide Central	7.89	4	1,857
Melbourne South	7.80	5	1,564
Brisbane City	7.76	6	3,872
Melbourne East	7.67	7	3,483
Melbourne West	7.46	8	1,588
Perth Outer South	7.42	9	1,560
ACT	7.40	10	923

In the bottom ten regions there are still a large number of firms who would be expected to be staging leaders. The percentage of firms averages less than 3.5 per cent which is approximately half of the top ten regions.

The number of staging leaders which exist in the bottom is perhaps more important than the number in the top ten, as there is a strong likelihood that adequate ICT infrastructure will be available in these regions.

**Table 3.9 Bottom 10: Staging leaders**

Region	Score	Rank	Number of firms
NSW Central West	3.52	55	374
VIC Goulburn	3.50	56	444
QLD Wide Bay-Burnett	3.44	57	422
VIC Ovens-Hume	3.43	58	185
VIC West	3.40	59	259
SA Murraylands	3.35	60	165
WA Wheatbelt-Great Southern	3.35	61	369
SA Eyre and Yorke	3.32	62	338
VIC Mallee-Wimmera	3.30	63	385
QLD Pastoral	3.25	64	126

### 3.5.3 Broadband expected use

The size of the broadband business market can be appreciated in the following sets of tables. In Global Sydney we would expect nearly 50 per cent of all firms to require broadband internet connections. This equates to over 34,000 businesses. The rate of broadband penetration in the business market is likely to have grown to even higher levels in the past year in line with general increases in its demand.

**Table 3.10 Top 10: Expected broadband use**

Region	Score	Rank	Number of firms
Global Sydney	49.9	1	34,039
Melbourne Inner	49.0	2	18,384
Perth Central	46.9	3	15,709
ACT	46.0	4	5,744
Brisbane City	45.9	5	22,894
Melbourne South	45.9	6	9,195
Melbourne East	45.7	7	20,748
Adelaide Central	45.4	8	10,676
Sydney Outer North	45.1	9	17,124
Sydney South	43.5	10	9,101

At the other end of the demand spectrum the regions with the lowest levels of demand include those with the least supply; however the number of firms this represents is still large. This latent demand in all regions, which is comparatively constant is the reason why the federal government Demand Aggregation Strategy is so important for regional communities. Put simply, we know the demand for broadband exists in most, if not all, communities. Developing the market conditions in which it is supplied relies on the market turning awareness and latent demand into committed and satisfied demand. The Demand Aggregation Strategy, which appears to have had much success, is vital in this process.

As with any market penetration scenario there is a point that exists in the natural market at which the cost of generating the information for the next marginal customer does not satisfy the marginal increase in revenue achieved. A government program which mitigates this cost is said to be valuable if the externalities associated with the adoption of a product or service that can be captured by the remaining communities or nation as a whole are significant. In the case of broadband, externalities lie in the value attributable to the education of youth, enhanced communication capabilities for all and export or development potential of our firms.

In a full circle, what starts as a service to business in the end contributes excess benefits to the same business stimulated to aggregate their demand in the first place.

**Table 3.11 Bottom 10: Expected broadband use**

Region	Score	Rank	Number of firms
NSW Far and North West	31.9	55	3,031
VIC Goulburn	31.9	56	4,042
VIC Ovens-Hume	31.9	57	1,716
VIC West	31.8	58	2,415
SA Eyre and Yorke	31.8	59	3,239
QLD Wide Bay-Burnett	31.8	60	3,886
WA Wheatbelt-Great Southern	31.5	61	3,478
VIC Mallee-Wimmera	31.5	62	3,671
SA Murraylands	31.5	63	1,551
QLD Pastoral	30.8	64	1,198

### 3.5.4 Export propensity

Based on the individual industry and firm size results and the application of those results to each region we can see the regions which would have most to gain in terms of their export potential from improvements in the e-journey staging of firms in the area.

The results are crucial in understanding why the government and the people must support the geographically broadest possible scope for high grade broadband in this country.

- ❑ Those regions with most heavily trade-exposed industries are the one's which have the largest amount to gain.
- ❑ These same regions are also more likely to currently have amongst the worst e-journey staging performance.

The top ten regions break from the standard region types witnessed in previous sections. The region with the most to gain from exports is the SA Murraylands, but unfortunately it is the region that was ranked the lowest in e-journey staging.

Improving the e-journey staging of SA Murraylands by one unit would have the impact of a further 5.87 per cent of firms or 289 firms being likely to export.

In terms of the disjoint between the export propensity and the e-journey stage the remaining regions in the top ten all have ranks of e-journey at levels less than 50.

**Table 3.12 Top 10: Export propensity**

Region	Score	Rank	Number of firms	E-journey expected stage, Rank
SA Murraylands	5.87	1	289	64
QLD Pastoral	5.69	2	221	63
NSW North	5.59	3	707	53
VIC Mallee-Wimmera	5.57	4	649	61
SA South East	5.54	5	260	52
WA Wheatbelt-Great Southern	5.51	6	608	60
VIC West	5.47	7	416	58
NSW Far and North West	5.45	8	517	51
QLD Agricultural SW	5.37	9	746	57
NSW Central West	5.36	10	569	56

Those with the least to gain from exports are a range of suburban locations and restructuring manufacturing areas. In general, the regions had above average ranks in terms of e-journey staging although did not present a compelling trend as the top ten regions.

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**Table 3.13 Bottom 10: Export propensity**

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Region	Score	Rank	Number of firms	E-journey expected stage, Rank
Global Sydney	4.13	55	2,824	1
Sydney Outer North	4.09	56	1,554	9
Sydney South	4.08	57	855	14
Sydney Outer West	4.07	58	562	24
Sydney Inner West	4.03	59	585	10
NSW Illawarra	4.03	60	646	31
Adelaide Central	4.02	61	947	6
NSW Central Coast	3.96	62	472	19
NT Lingjari	3.82	63	107	29
ACT	3.58	64	447	8

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In Chapter 4 the results of the analysis of broadband coverage will be overlaid with these results to test impact of regions with sub-optimal coverage of broadband.

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## 4. Understanding opportunities for telecommunications infrastructure expansion

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### 4.1 Introduction

This chapter is designed to introduce the reader to key forms of technology in telecommunications. The regional impact of their supply has major economic implications. To understand shortfalls in service provision, we must be aware of the options available to the market; Telstra, local communities and other telecommunication providers.

The structure of the chapter covers topics on:-

- standard telephony, copper and its uses;
- DSL and the family of copper based broadband services;
- a range of solutions to the last mile problem. The last mile refers to the final stage in the connection from individual homes and businesses to telecommunication services; and
- a range of wireless alternatives, and why they represent an enormous challenge for regional Australia as well as a range of opportunities.

We have relied heavily on industry experts to build a picture of the technology, and on the basis of this picture will introduce the regional economic development problem and solution currently presented to Australia's regions. In the first part of the chapter, much of the background material we have relied on are other expertise and previous work.

At the end of the report is a full glossary of terms, including many not used in the text.

### 4.2 Technology – but only the parts you need to understand

A standard telephone installation consists of a pair of copper wires that Telstra has installed from the exchange to your home. In the industry this technology is referred to as the POTS, short for Plain Old Telephone Service.

The POTS pair of copper wires has lots of room for carrying more than your phone conversations. It is the additional room which can be exploited to deliver broadband data services. The wires are capable of handling a much greater **bandwidth**, the range of frequencies, than that demanded for voice.

- In general, the greater the bandwidth the more information that can be sent through the copper lines in a given amount of time.
- The amount of bandwidth we have or the level of information delivered in a given time period defines our experience of the internet.
- Increasingly, available bandwidth defines the range of applications and services which can be accessed.
- Increased bandwidth has been shown world-wide to be appreciated by all markets whenever it has been delivered at appropriate prices.
- A range of bandwidth targets, benchmarks or goals have been suggested as being required. This issue will be addressed later.
- A fibre optic cable has extraordinary bandwidth and for the purposes of this discussion can be considered unlimited. For this reason many label fibre-optic connections as the ultimate future proof infrastructure.

A Digital Subscriber Line (DSL) service exploits the extra capacity of copper wire to carry information without disturbing the line's ability to carry conversations. The entire plan is based on matching particular frequencies to specific tasks.

### ***Frequencies that are ordinarily sent across the line use, and exploiting those that remain***

Human voices, speaking in normal conversational tones, can be carried in a frequency range of 0 to 3,400 hertz, or cycles per second. The wires themselves have the potential to handle frequencies up to several million hertz in most cases. Using only this tiny part of the wire's total bandwidth is historical, but thankfully it has given nearly all of us a technologically viable connection to one of the world's most important assets, the internet.

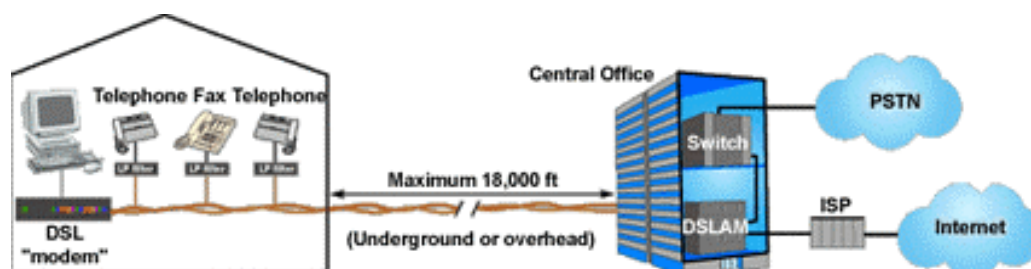
This allows us to begin to build a simple credo for broadband development:-

*“Copper is our friend, it can deliver broadband”.*

Since there are many DSL types, the general term xDSL refers to the generic DSL service. In Australia, we predominantly have been given the ADSL (Asymmetric Digital Subscriber Line) version. Asymmetry refers to the unequal bandwidth capacity between download (internet to user) and upload (user to internet). For instance, many home users in Australia receive a 512/128 service, 512 kB download and 128 kB upload.

#### **4.2.1 How does ADSL work in Australia**

- ❑ ADSL allows one line to provide data services while maintaining the telephone service on the same line, thus leveraging the existing infrastructure.
- ❑ ADSL uses two pieces of equipment, one on the customer end, and one with the provider of DSL services, in Australia predominantly Telstra, usually located at the local exchange.
- ❑ At the customer's location there is a DSL transceiver or modem. The DSL service provider has a DSL Access Multiplexer, or DSLAM to receive customer connections.



The DSLAM at the access provider end is the equipment that really allows DSL to happen. A DSLAM takes connections from many customers and aggregates them onto a single, high-capacity connection to the internet. DSLAMs are generally flexible and may be able to support multiple types of DSL.

The DSLAM provides one of the main differences between user service through ADSL and cable modems. Because cable modem users generally share a network loop that runs through a neighbourhood, additional users can mean lowered performance. ADSL provides a dedicated connection from each user back to the DSLAM, meaning that users will not see a performance decrease as new users are added--until the total number of users begin to saturate the single, high-speed connection to the Internet. At that point, an upgrade by the service provider can provide additional performance for all the users connected to the DSLAM.

#### **4.2.2 So if it is as simple as that, why don't we all have ADSL or any of the other DSL services? Is it the cost?**

No. It is not only cost which reduces the viability or capacity for all POTS to have xDSL services. Whilst the DSLAM is expensive, the returns from broadband have proven to be strong enough to cover costs in most areas. The federal government's excellent HiBis broadband scheme has contributed in marginal areas.

The cost elements of a DSL system revolve around the following elements:-

- ADSL Head End equipment (based on 640 ports);
- DSLAM Common Equipment \$50,000;
- DSLAM Interface Cards (640 ports) \$300,000;
- Splitters \$50,000;
- Spares \$19,000;
- Total \$419,000.

Such a supply of 640 ports could provide for a community with at least 3000 households based on 20 per cent uptake. So the total amount standing between your community and ADSL is likely to be far less than \$400,000.

The biggest problem with xDSL is that the quality of service declines with distance from the DSLAM.

The potential benefit you see from an ADSL service depends on how far you are from the exchange providing the service. ADSL is a distance-sensitive technology: As the connection's length increases, the signal quality decreases, and the connection speed goes down. The limit for ADSL service is 5.5 kilometres, though for speed and quality of service reasons many ADSL providers place a lower limit on the distances for the service.

In Australia, ADSL users do not experience variations in service with distance, because the performance of the system is capped at a level which all subscribers will achieve. In fact, an ADSL service will not be provided unless this quality can be delivered.

ADSL technology can provide maximum downstream (Internet to customer) speeds of up to 8 megabits per second (Mbps) at a distance of about 1.8 kilometres, and upstream speeds of up to 640 kilobits per second (kbps). Therefore in Australia, ADSL technology and the nature of its deployment presents two initial problems:-

- People who live more than 5 km from an exchange are unlikely to be able to receive ADSL services. Remember, looking at a map is often no indication of the distance a signal must travel between your house and the exchange; and
- Despite the technology being able to deliver very high levels of bandwidth for those close to the exchange, most Australians connected to ADSL services are delivered an inferior service on the grounds that one service for all is preferable<sup>2</sup>.

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<sup>2</sup> The cap is effectively set at 1.5 mbps for the majority of Australians utilising a Telstra or generic DLSAM service. The most popular and perhaps only cost effective option delivers only 512 kbps.



Updating the credo to include the impact of service quality capping:-

*“Copper is our friend, it could already deliver better broadband than we currently get.”*

And the impact of distance:-

*“Copper is our friend, it could already deliver better broadband than we currently get, but it does depend on our distance from the exchange and the number of people demanding the services.”*

#### **4.2.3 Are there other reasons why DSL services could not be delivered?**

There are a number of other features of the telephony system which impede broadband. In practice some will be fixed by Telstra upon request for broadband services, but many others are legacy technical issues which impact on literally hundreds of thousand of households in Australia.

The factors that might disqualify you from receiving ADSL include the following.

- Fibre-optic cables. ADSL signals cannot pass through the conversion from analog to digital and back to analog that occurs if a portion of your telephone circuit comes through fibre-optic cables: in Australia the fibre-optic issue usually directly relates to the issue of “RIM’s”.
- Loading coils, a device by which especially long copper lines have their signals amplified (DSL services are not available across loading coils).
- Pair Gain systems allow Telstra to run one or more phone lines over a normal single phone line. They do not affect voice quality, but almost always severely limit modem connection speeds, and also usually prevent customers from getting ADSL.
- The microwave or radio based systems often provided in remote areas are not capable of delivering DSL services.

For the purposes of public policy debate National Economics believes that, in general, these technical difficulties are best considered to be not Telstra’s fault. For the most part, the installation of these technical devices was the best available technology to achieve POTS outcomes. Most of the pair-gain systems and loadings coils helped deliver services to regional Australia.

Updating the credo:-

*“Copper is our friend, it could already deliver better broadband than we currently get, but it does depend on distance from the exchange and the number of people demanding the services. Old technologies sometimes block our access.”*

However there remains an obligation for the unintended consequences of previous actions to be redressed whether by the company (and in turn by the market in terms of company value) or in special circumstances the government, where the cost of the problem being addressed from Telstra is considered too high. Telstra has made significant progress in the past in this area and must be congratulated by regional and outer suburban people for the progress. Continuing these solutions must be a vital part in the analysis of the future treatment of Telstra and the regulation and incentives which govern it.

A more detailed explanation of a couple of the broadband constraints will highlight solutions and help us understand how xDSL will continue to deliver viable solutions going forward.

#### 4.2.4 Other technical issues

##### *Technical solutions: "RIM's"*

In Australia in the 1980's and 1990's many new estates had their telephone network installed using a device called a "RIM" (remote integrated multiplexer) to keep costs down. With a RIM system, a high performance fibre optic cable is run from the exchange to the "RIM", which usually sits in a large green metal cabinet, roadside near the houses. This RIM decodes the data, and sends the signals down relatively short cables to nearby houses.

As previously described, with the POTS each house has discrete pairs of wires which run all the way back to the exchange. At the exchange they connect to the DSLAM ports. RIM's do not support ADSL, as signals cannot pass through the conversion. ISDN services are available but remain an expensive and poor quality bandwidth solution. Even modem speeds suffer. RIMs can serve up to 480 customers.

New RIM equipment has been developed called "CMUX" units (which are basically miniature DSLAM units, and get installed into the RIM boxes in the streets). Telstra is rolling out this equipment to fix the problem. A CMUX can effectively reconfigure all of the connections between the households and the internet backbone in the area covered by the RIM. The best feature of this solution is the fact that the distance from the exchange effectively starts again. Those houses serviced by the RIM are suddenly as close to the "exchange" in the DSL sense as they are close to the RIM.

Smaller versions of the CMUX sometimes called mini-MUX can be installed in smaller locations and also deliver broadband services in a similar way to the DSLAM in the exchange.

The solution for the RIM problem begins to highlight the central issue presented in this *State of the Regions* report.

- ❑ In this case, the inherited problem was the historical fibre-optic / RIM solution to the provision of POTS service, which left households on the far side of the RIM without broadband.
- ❑ The solution through CMUX installation relies on fibre optic connection to the internet backbone, and in fact expands the coverage by effectively reducing the distance to the 'exchange'.
- ❑ Being closer to the exchange, the fibre-optic / CMUX solution can deliver significant improvements in the xDSL service, assuming the capping of xDSL services was removed.
- ❑ The quality of broadband is a function of the distance from the exchange, however the "exchange" should never be seen as only being at the current Telstra exchange. As long as a fibre-optic connection exists between the exchange and a CMUX type device the "exchange" can be as close as your street or in front of your house.
- ❑ One concern however is that whilst the copper system or unbundled local loop is notionally open to competition, competitors cannot access the RIM or CMUX to install additional competing DSL equipment. This regulatory impediment must be addressed otherwise the RIM / CMUX problem may appear again for the next technology or when competition is required to drive increasing quality.

##### *Technical solutions: Too far from the exchange/pair gains/loading coils*

Telstra is also working on other solutions to these problems, and these provide evidence of the capacity to continue to expand the coverage of Australia with better broadband services.

The Extel Communication Pty Ltd **expandsl C8sl/R8as** combination of equipment is being trialled in Australia and is likely to be available in a limited capacity in regional areas. National Economics believes that this type of technology should be more widely deployed and that the technology provides opportunities for local solutions, which will not require Telstra. The C8sl is located in a broadband enabled Telstra exchange, while the R8as is located in a manhole/pit near the end of the current ADSL transmission limit. With the addition of expandsl Regenerators, this network configuration may be able to deliver ADSL up to 20 km from the exchange.

The device takes ADSL technology to much greater lengths in discrete locations where there are small numbers of distant customers requiring the service. The products are also designed to overcome loading coils and pair gain/carrier systems.

In general the **expandsl** equipment services a small number of lines (less than 10), and costs as little as \$15,000. The reason why such initiatives are important relates to the number of exchanges in Australia. Two thirds of all the exchanges in Australia service only 10 per cent of the population and in dispersed-population declining farming communities an exchange may have only a handful of lines. These types of solutions, which deliver long-line high quality service, may allow the removal of exchanges or the expansion of coverage through exchange consolidation.

Once again technology has the capacity to move the “exchange” closer to the people, which reduces the distance and increases the quality of service.

Updating the credo:-

*“Copper is our friend, it could already deliver better broadband than we currently get, but it does depend on our distance from the exchange and the number of people demanding the services. Old technologies sometimes block our access but can and should always be fixed.”*

and replacing the term “the exchange” with “fibre-optic connected DSL equipment”.

*“Copper is our friend, it could already deliver better broadband than we currently get, but it does depend on our distance from fibre-optic connected DSL equipment and the number of people demanding the services. Old technologies sometimes block our access but can and should always be fixed.”*

### **4.3 Faster DSL and Australia’s future**

There are many variations on DSL technology justify the use of the generic term xDSL. The following is a list of DSL types.

- ❑ Asymmetric DSL (ADSL) – As noted above, it is "asymmetric" because the download speed is greater than the upload speed. ADSL works this way because most Internet users look at, or download, much more information than they send, or upload.
- ❑ ADSL2 is a more efficient technology than ADSL, permitting downstream speeds of up to 12 Mbps using the same telephone lines. It also extends the reach of ADSL services by between 250 and 750 metres. ADSL2 adds voice channel capabilities as well as an additional 256 kbps upstream capability, making it a viable candidate for digital telephone services. ADSL2 is being rolled out in Australia currently, but of course will remain capped.
- ❑ ADSL2 also supports bonding of copper wires to deliver better performance. Remember that ADSL makes a direct connection from the home to the DSLAM, one line at one speed. ADSL2 can combine lines to produce higher bandwidth.

- ❑ Carriers want to deliver a standard bandwidth requirement to the majority of home users while providing higher bandwidth offerings for corporations. The ability of bonding to aggregate the bandwidth from more than one phone line is useful in providing such selective additional capacity.
- ❑ Through bonding, carriers could increase the data throughput on an ADSL channel to as high as 40 Mbps, that is, 80 times faster than the current home connections:-
  - ❑ 20 Mbps on 2 bonded pairs;
  - ❑ 30 Mbps on 3 bonded pairs; and
  - ❑ 40 Mbps on 4 bonded pairs.
- ❑ ADSL2+ is a totally different specification to ADSL2. It doubles the downstream bandwidth on short distances. People living within 1.5 km of an exchange will get "up to" 24 Mbit/s – a scorching speed that would trump even cable internet, which has previously been the best choice for fast broadband. However, outside a 1.5 kilometre radius, most users will get at best 12 Mbit/s, and speed declines rapidly with further distance from the exchange.
- ❑ An interesting optional mode in ADSL2+ doubles the upstream bandwidth, which (if utilised) will prove very popular amongst users who host servers on their connections. For business, the capacity servers is crucial for developing strong supply chains through extranet and virtual private networks.
- ❑ Once again, should this be available in Australia it would be capped and hence predominantly used to increase the distance covered.
- ❑ High bit-rate DSL (HDSL) – Providing transfer rates comparable to a T1 line (about 1.5 Mbps), HDSL receives and sends data at the same speed, but it requires two lines that are separate from your normal phone line. It can be an important backbone service for broadband blocking equipment such as the expandsl.
- ❑ ISDN DSL (ISDL) – Geared primarily toward existing users of Integrated Services Digital Network (ISDN), ISDL is slower than most other forms of DSL, operating at fixed rate of 144 Kbps in both directions. The advantage for ISDN customers is that they can use their existing equipment, but the actual speed gain is typically only 16 Kbps (ISDN runs at 128 Kbps).
- ❑ Rate Adaptive DSL (RADSL) – This is a popular variation of ADSL that allows the modem to adjust the speed of the connection depending on the length and quality of the line.
- ❑ Symmetric DSL (SDSL) – Like HDSL, this version receives and sends data at the same speed. While SDSL also requires a separate line from your phone, it uses only a single line instead of the two used by HDSL.
- ❑ Very high bit-rate DSL (VDSL) – An extremely fast connection, VDSL is asymmetric, but only works over a short distance using standard copper phone wiring. VDSL is the future of broadband at this stage and is widely deployed in the rest of the world. More information and analysis of the importance of VDSL will be presented in following sections.

DSL Type	Maximum Send Speed	Maximum Receive Speed	Maximum Distance	Lines Required	Phone Support
ADSL	800 Kbps	8 Mbps	5,500 m	1	Yes
HDSL	1.54 Mbps	1.54 Mbps	3,650 m	2	No
IDSN ADSL	144 Kbps	144 Kbps	10,700 m	1	No
MSDSL	2 Mbps	2 Mbps	8,800 m	1	No
RADSL	1 Mbps	7 Mbps	5,500 m	1	Yes
SDSL	2.3 Mbps	2.3 Mbps	6,700 m	1	No
VDSL	16 Mbps	52 Mbps	1,200 m	1	Yes

### 4.3.1 Service standards and the rest of the world

Microsoft's submission to a Broadband Advisory Group (BAG) inquiry sums up the state of telecommunication service in Australia. "Growing evidence suggests that a failure to address Australia's slow uptake of broadband will result in a significant loss of economic opportunity for the nation. Microsoft adds that "It is not clear that the current regulatory and policy framework is conducive to encouraging broadband connectivity", singling out access and pricing in the local loop.

Compare that to the publicly expressed view in 2003 of the previous Communications Minister Alston who dismissed the importance of broadband, "as primarily a distribution platform for pornography and gambling". As recently as twelve months ago he still maintained that for consumers it was mostly for "entertainment-related activity such as music and video downloads and thus of dubious value for national productivity".

According to the BAG, criticisms of the poor availability and pricing of broadband contribute to "perceptions" that Australia lags behind other nations, raising questions as to how broadband progress is measured. For comparison, the leader in the world's second-most broadband-connected market (to use a derided OECD measure), Hong Kong, has a single price of HK\$218 (\$28), with no installation fee and no bandwidth limit (actually, it has another price, HK\$298 over 18 months, which includes a Nokia 2188 phone.) The Hong Kong incumbent's price is thus below the cheapest Australian price, with no add-ons.

In Japan the vast majority of users receive bandwidth of between 8 mbps and 12 mbps for \$37 per month.

But that's only half the story. Unlike PCCW, or Korean or Japanese providers, Telstra sets strict data transfer limits, starting at 500 MB (for total upstream and downstream data) for the low-end package and going up to 10 GB for the most expensive service. Users who exceed these must pay a per-byte penalty. What's more, the Telstra packages, for the most part, do not even come near broadband speeds. For the offerings costing less than A\$100 a month, users are getting 256-512 kbps download speeds, with the top end maxing out at only 1.5 Mbps.

## *Japan*

Japan is a vastly different market to Australia due to a range of cultural, geographic and political reasons. It leads technology deployment, such as VDSL, VoIP, and FTTH (where initially it was a late starter). It has a strong competitive market, aided by progressive regulation, with some cable, and is very much demand driven. Technology savvy users are driven by one-upmanship – particularly against Korea as well as against their co-citizens. If one subscriber buys 45 Mbps services, then chances are his neighbour will also want that and more.

National Economics believes that take-up rates of technology in Australia would lead to similar experiences. Of course, this means that those selling inferior services would have quickly contracting markets. The rewards for investment can be large however.

## *Korea*

Korea's main broadband driver was a significant government push to become a leading global force in the broadband space. The Korean Government invested significant amounts of money into the infrastructure to stimulate competition. Korean Telecom has not yet hit breakeven point in its broadband and wireless LAN services, and continues to make losses.

This is a fascinating insight into how a single country concerned by its previous progress in technology makes a watershed decision to leap-frog the natural market-based outcome, confident that the technology and market will catch up, and at the same time deliver an impetus for innovation which has national benefits.

The relevance for Australia perhaps does not lay in solutions that force a majority publicly owned Telstra into an investment scenario. However, investigating future regulation and possible corporate structures that have the capacity to correctly value the options that strong, long-term-based investment models create is worth considering.

In the case of Japan and Korea the issue of population density is often mentioned when the relevance of their experience is sought to be diminished. However it is important to remember that whilst Australia as a whole is spread thinly across a vast land, the inner areas of our major cities lose little in terms of comparison with significant parts of Korea and Japan. Given penetration rates achieved in these countries Australia's suburbs provide a large enough market to achieve similar results.

## *United States*

The US has a handful of large players (though none is particularly dominant nationally), and over 100 incumbents throughout the country. This makes for a market that appears highly competitive at a superficial level, as players tend to operate on a regional basis and resulting market shares calculated in terms of national subscriber numbers are fairly low. The other competitive characteristic is that cable is extremely strong. The players have thrown substantial investment at upgrading networks and rolling out value added services such as video-on-demand, digital cable TV, VoIP, HDTV – even targeting the SME population, normally the preserve of telcos. Players are driving to deploy fibre to the curb, VDSL, IP infrastructure, and are investing heavily in guaranteeing their future in the broadband market.

The regulatory environment in the U.S. was reshaped to provide a framework that encourages fibre-to-the-node (FTTN) CAPEX spending to increase significantly. The US Federal Communications Commission (FCC) issued Order 04-248 in October 2004, which promotes deep fibre strategies by providing immunity from loop unbundling for any hybrid fibre/copper installation in which the optical networking unit (ONU) is deployed within 500 feet of the houses it serves.

“Deep fibre” strategies are entirely consistent with the aims of the National Economics credo established in the previous section. FTTN is further investigated from a market feasibility perspective in following sections.

### ***France***

An activity worthy of note in France is the greater role played by local authorities in the development of broadband infrastructure. Government has encouraged these bodies to build out their own local access loops by offering reduced-rate loans. As a result, many of them are specifying networks, financing roll-out and contracting directly with operators and service providers to build and run them. End users of the network are then customers of those service providers.

Local authorities with France can tend to be larger than in Australia, however the French scenarios does highlight the important work that can be undertaken by local government in generating interest from those capable for building new capacity in local regions. An example of the experience of the city of Bendigo is provided in this chapter.

#### **4.3.2 VDSL, very high bit-rate DSL**

The use of fast Internet connections has grown rapidly over the last few years. As more people buy home computers and create home networks, the demand for broadband (high speed) connections steadily increases. VDSL is seen by many as the next step in providing a complete home-communications/entertainment package. VDSL provides an incredible amount of bandwidth, with speeds up to about 52 megabits per second (Mbps).

Compare that with a maximum speed of 8 to 10 Mbps for ADSL or cable modem and it is clear that the move from current broadband technology to VDSL could be as significant as the migration from a 56K modem to broadband.

VDSL operates over the copper wires in your phone line in much the same way that ADSL does, but there are a couple of distinctions. VDSL can achieve incredible speeds, as high as 52 Mbps downstream (to your home) and 16 Mbps upstream (from your home). That is 100 times faster than the ADSL the majority of Australians experience. This is not a technology which is pie in the sky or the future of broadband, but rather a service many in the world currently consider standard.

But VDSL's amazing performance comes at a price: It can only operate over the copper line for a short distance, about 4,000 feet (1,200 m).

The key to VDSL is that service providers will be replacing many of their main feeds with fibre-optic cable. Some plan a Fibre to the Curb (FTTC) solution, which means that they will replace all existing copper lines right up to the point where your phone line branches off at your house. More popular and at this stage more economically feasible, most companies expect to implement Fibre to the Neighbourhood (FTTN). Instead of installing fibre-optic cable along each street, FTTN has fibre going to the main junction box for a particular neighbourhood.

By placing a VDSL transceiver in your home and a VDSL gateway in the junction box, the distance limitation is neatly overcome. The gateway takes care of the analog-digital-analog conversion problem that disables ADSL over fibre-optic lines. It converts the data received from the transceiver into pulses of light that can be transmitted over the fibre-optic system to the central exchange, where the data is routed to the appropriate network to reach its final destination. When data is sent back to your computer, the VDSL gateway converts the signal from the fibre-optic cable and sends it to the transceiver. All of this happens millions of times each second!

National Economics' review of the economics of the FTTN solution suggests that the majority of Australian cities could be serviced by VDSL, so long as key services such as Voice over IP (VoIP) and IPTV are available. Amongst the best features of the technology is the capacity for Telstra to be supplanted by many locally based providers. Alternatively in a future scenario in which Telstra wholesale and retail businesses operate independently, the impetus for Telstra to provide the VDSL connections would be large as it seeks to develop its wholesale markets to a range of service providers, some of which will be keen to offer the improved service that VDSL provides. Without "Telstra wholesale" being overly concerned about the impact of VoIP on "Telstra retail" revenues, or the impact of IPTV on the revenues of Foxtel, present infrastructure uncertainties will be long forgotten.

VDSL and the future it offers strengthens the access concepts previously explored, the notional "exchange" need only be at the end of the street. Copper can remain the final delivery mechanism for the service, and so long as the community is large enough with the 1.2 km range, and as long as enough sign up to the service, the service should be delivered.

In a future in which significant fibre-optic cabling is delivered to regional areas, VDSL was once seen as becoming standard in rural areas. For instance consider the following edited article from the UK.

***"ADSL's big brother could be the saviour for rural communities crying out for broadband".  
Jane Wakefield, ZDNet UK 30 March 2001.***

*"The next generation of DSL is going to be even faster and could be the answer to the knotty problem of how to get broadband services to rural areas.*

*VDSL (Very High Speed Digital Subscriber Line) is currently being tested by BT (British Telecom) in cooperation with 12 other European operators. It promises download speeds of up to 14 Mbit/s and upload speeds of 3 Mbit/s. It will be particularly useful in homes with multiple PCs and televisions – BT hopes to deploy it by the end of 2002.*

*VDSL is, like ADSL, limited by distance, and performance worsens as the distance from the telco's equipment increases. But unlike ADSL, where the equipment is being deployed in telephone exchanges only, VDSL can be put in street side cabinets to act as a midway point between those exchanges and people's homes.*

*The fact that VDSL can be installed closer to homes makes it an ideal solution for getting broadband to remote areas. The government (UK) is keen to find as many platforms for broadband as possible in an attempt to prevent a rural/urban broadband divide, but there are still obstacles to overcome.*

*One such stumbling block stopping VDSL from fulfilling its perceived role, is that the cabinets will need to be connected to the exchanges by optical fibre cables, which can transmit the huge amounts of data that people will want to download at the very high speeds necessary if many homes are to be connected. BT has not yet confirmed whether it is prepared to invest in laying fibre to outlying regions."*

This article further illustrates the fact that distance from exchange in the old sense of the place your current telephone connection comes from, should be supplanted by the concept of distance to fibre optic connected DSL equipment. This article was written in 2001; yet we have made little or no progress in Australia since, on this inherent concern, despite the significant investment in ADSL equipment at the exchange level. Approaching a scenario with a privatised Telstra requires attention to the capacity to build such a future proof system, as well as the competitive framework to improve the situation in the future.



Consider a small country town of Australia, where the vast majority of residents live within 1.2 km. Such a town should have the best DSL service, especially VDSL. Why? Because compact places have a technological advantage in that their populations are closer to central exchanges. Whilst there may not be a market for such service in 2005, as the world's appetite for bandwidth continues to grow, providing environments where this can happen is vital.

VDSL compels us to update the credo once more.

*“Copper is our friend, it could already deliver **much** better broadband than we currently get, but it does depend on our distance from fibre-optic connected DSL equipment and the number of people demanding the services. **Wherever people congregate in sufficient numbers VDSL should be able to deliver Australia with world competitive technology.** Old technologies sometimes block our access but can and should always be fixed.”*

### 4.3.3 VDSL versus fibre-to-the-home

In November 2004 a Telstra spokesman maintained that Telstra was not interested in pursuing VDSL technology. As will be seen from the analysis of Chapter 5, Telstra's lack of interest in VDSL technology is perfectly content with constraints imposed by a regulated framework which places a ceiling on the maximum download speeds that service providers can offer. This ceiling is well below the capabilities of VDSL technologies.

Instead, Telstra sees fibre-to-the-home (FTTH) as the most likely technology to deliver high speed access services. However, it is very likely that the current cap will be removed and, given the high cost of FTTH, it is very likely that VDSL technologies will be coming back into contention.

For broadband access, however, VDSL technologies need to be complemented with fibre-to-the-node strategies.

### 4.3.4 Understanding FTTN as a way of delivering the ‘variable exchange’ high capacity future<sup>3</sup>

*“Copper is our friend, it could already deliver much better broadband than we currently get, but it does depend on our distance from fibre-optic connected DSL equipment .... “*

Minimising the distance to fibre-optic connected DSL equipment, is the “deep fibre” fibre to the node (FTTN) argument. The nodes in all areas of Australia are the cross-connect cabinets and curb side pedestals. Traditionally these nodes are “copper in, copper out”, and when upgraded to “fibre in, copper out” become our broadband access points with only a small amount of copper connecting us to these nodes.

Companies will be quick to realise that by fibre-enabling these points, they gain a strategic foothold deep in the network. As noted previously fibre is required to provide the per-household bandwidth needed to support revenue-generating content services such as IPTV. Copper infrastructure from longer distances such as from the exchange served well enough for basic Internet access, but as highlighted for VDSL type services it will not deliver the bandwidth required.

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<sup>3</sup> Excerpts from At the End of This Season, Will FTTN or FTTP Be Asked to Leave Service Providers' Boardrooms? OSP Magazine, April 2005.

The cost to drive fibre all the way to the consumer premises is much greater, yet yields substantially less percentage wise, in terms of available bandwidth.

*“FTTN provides a first step that in reality is more like a giant leap: it leverages telcos’ existing copper access infrastructure while providing sufficient backhaul capacity to enable the same services as FTTP, at a fraction of the cost”.*

A variety of telecommunications companies will be able to be involved in the deployment of this capacity. One of the best features of optic fibre (its capacity) may help avoid significant relocation of infrastructure at the local level, so long as many providers have access to the end points on which to mount the broadband services.

Whilst fibre-fed to the nodes flexibility for the last-mile connectivity can encompass various copper loop or wireless access options.

*“Full-rate DSL technologies, such as ADSL2+ and VDSL2, can be effectively delivered over short copper loops: ADSL2+ with a data rate of 20 Mbps can be delivered approximately 5,000 feet. But at loops of 500 feet or less, these technologies will give broadband consumers who are used to 1-2 Mbps service, an experience akin to drinking from a fire hose.”*

For Australians, who can be on the verge of a potential explosion in investment, one of the most exciting developments has been in the flexibility and range of the DSLAM type equipment that will connect to these fibre nodes.

FTTN offers a future-proof response to consumer demand for broadband content services which is exactly what metropolitan and regional cities in Australia should be demanding loudly and strongly. The caps can be removed from current ADSL technologies and the true power of ADSL2 an ADSL2+ can deliver Australians with true broadband.

For regional customers promoting and aggregating demand, especially with a “Telstra wholesale” committed to strategic infrastructure provision, will be able to utilise a range of exchange based, node based and wireless solutions for entire communities.

For Telstra, the FTTN solution enhances the existing copper and exchange based infrastructure and, therefore, from a wholesale perspective, they can maintain their competitive position and maximise revenues. Regulation concerning access fees and so on can continue to provide the market with some protection.

*“FTTN is an attractive strategy in already-built copper infrastructure areas (that is, the overwhelming majority of the consumer-broadband market) in that it is rapidly deployed, and does not cost as much as strategies that drive fibre deeper. Essentially, nobody’s yard needs to be dug up. FTTN’s time-to-market is another important differentiator. Even if money were no object, it would take many decades to achieve ubiquitous FTTH.*

*Furthermore, risks of stranded investment are minimised with FTTN, as DSLAM systems can be efficiently sized and subsequently adjusted easily to meet new levels of demand or service requirements. FTTN equipment can be relocated and fibre cable can even be reused for FTTP in later years, if customer demand justifies such a change.”*

### 4.3.5 Wireless Local Loop and Wireless Broadband

One remaining key area of infrastructure requires attention before we consider a future policy framework at the regional level. This infrastructure is the wireless solutions.

The Connecting Australia 2002 report produced by the House Of Representatives Standing Committee On Communications, Information Technology And The Arts, provides a fantastic insight into the role of Wireless in the telecommunications of Australia. This report has not concentrated on this type of technology as much as it could have because of: the limitations inherent in wireless broadband; and our appreciation of the importance of improving the wire-based solutions in the medium-term, and their success in other parts of the world.

The following edited extract from the executive summary of the *Connecting Australia* report accurately portrays the current situation with wireless broadband.

*“The terminology of wireless broadband is complex and there are many technologies, each of which is being continuously refined. Each has been developed for a specific role according to the type of data transmitted, the data rate required, the need for mobility, the need for long distance transmission to remote sites, or operation on dedicated or class-licensed spectrum.*

*No wireless broadband technology is able to handle the data rates of the best wire-line technologies but there are many situations where the latter cannot yet be used or is simply unavailable (such as in remote and regional areas, and even in some suburban metropolitan areas). Also, there are situations where wireless technologies are cheaper and/or more flexible than wire-line solutions. Nowhere is this flexibility more apparent than in mobile applications.*

*The Committee concludes that the solution to the ‘last mile’ service involves a mixture of technologies, both wire-line and wireless. **Clearly, however, for regional and remote Australia where wire-line solutions are not economically viable in the short to medium-term, the last mile problem could be addressed by a variety of wireless techniques.***<sup>4</sup>”

Returning to the credo established in this chapter the wireless solution effectively supplants the copper connections from the fibre-optic enabled node.

Hence the Wireless Local Loop (WLL) functionality is broadly similar to copper cable services. From the WLL high bandwidth services suitable for Internet and data networking applications are becoming available.

Customers require a small antenna typically mounted on the roof or outside wall. A WLL base station will service around 1000 customers within a radius of 10 km. The technology could support IP based traffic of up to 2 Mbps but only if the number of customers is reduced by a factor of at least 100.

For an amount less than \$300,000 a community could be connected with a small number being able to receive premium broadband services.

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<sup>4</sup> Page xi, “Connecting Australia 2002” report produced by the House Of Representatives Standing Committee On Communications, Information Technology And The Arts, bolding added by National Economics.

Why is it a good solution and for whom.

- ❑ Small compact towns should in general be able to be better served by an ADSL enabled exchange
- ❑ However for a farming community spread across a larger area, especially one which is suited by the terrain, could be well served by such a system.
- ❑ From an infrastructure perspective this solution can be perfect when the cost of maintaining the copper network is very high. There are many such places in Australia, and based on the Universal Service Obligation this cost remains an ongoing problem for Telstra.

For a regional community the mix of wireless and wired solutions begins to create a fantastic vision of future broadband capacity. Exchanges enabled with a range of xDSL services extending coverage to the limits of the towns, broadband blockers overcome with investment and “*expands!*” type solutions, key institutions and the areas surrounding them covered by VDSL. Further out on surrounding high points many households in the region would be connected by wireless solutions, reducing the costs in the area, which may have helped fund more mobile based solutions. Small settlements surrounding the regional communities without exchanges will have new FTTN connections providing services, and those small places with exchanges with very small markets may have received support through Telstra sale proceeds to connect fibre to the exchange, and developed there own relationships with service providers to enable the DSLAM equipment to be installed.

### ***ClearTowns***

ClearTowns is an example of a company in Australia providing communities in regional and remote Australia with HiBIS subsidised broadband Internet access. A central communications hub enables services including Voice over IP (VoIP) to other community members, and internet services at comparable rates to copper based ADSL services.

To demonstrate the range of places which have been serviced by this type of solution, National Economics provides the following list of “ClearTown” locations.

<b>Table 4.1 Example of communities with wireless broadband, (ClearTowns)</b>			
<b>New South Wales</b>	<b>Queensland</b>	<b>Tasmania</b>	<b>Victoria</b>
Coffs Harbour	Childers	Dover	Berwick
Dubbo		Flowerpot	Cranbourne
Gunnedah		Hobart	Diggers Rest
Lowanna		Kettering	Frankston
Mt Moombil		Kingston	Narre Warren
Narromine		Mt Nelson	Pakenham
Trangie		North Bruny Island	Skye
Ulong		Sandy Bay	Sunbury
		South Hobart	
		Woodbridge	

### 4.4 The current Australian broadband market

The growth in the broadband market in Australia has been consistent with that experience in other parts of the world, although as discussed the types of services provided lag behind.

For many, however, the growth rates are not the important issues, but rather what level of market penetration are we likely to achieve as a nation as a whole and what that would mean for our international competitiveness.

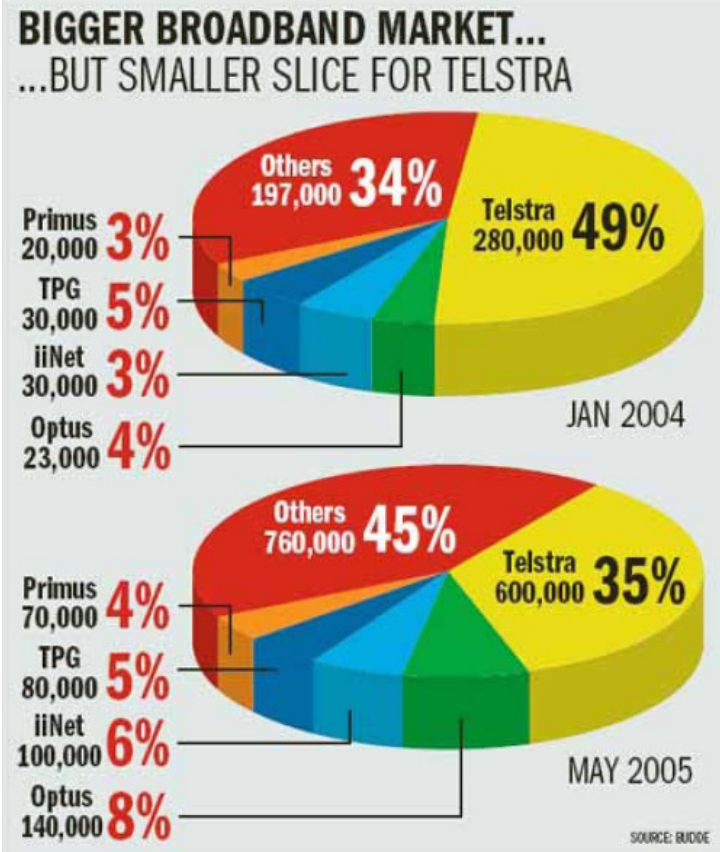
IDC, a global provider of market intelligence, advisory services, and events for the information technology and telecommunications industries, recently described Australia as remaining the "broadband backwater" when compared to take-up in other developing countries.

IDC suggests that 2.8 million broadband subscribers will exist in 2008, up from 727,440 in 2003.

As noted in this report in a number of places, IDC also states that Australian subscribers operating on a download speed of 256 or 512 Kbps, "significantly limits the delivery of content and hinders potential initiatives for high-content value proposition such as TVoVDSL and VoIP services".

Utilising research by Paul Budde (www.budde.com) and the Australian Competition and Consumer Commission (ACCC) Snapshot of Broadband deployment we can see how strongly the broadband market is growing in Australia, and why National Economics believes that providing it with a second best, non-future proof set of technologies is short-sighted.

The first piece of information shown compares the market shares of Telstra in the growing broadband market. The insight that these pie-charts provide is clear, as long as those providing the infrastructure need to be continually cognisant of the fact that new technology is reducing retail share, the impetus for investment must be stifled. It is not Telstra's fault, but simply a result of the market position which it finds itself in.



The ACCC report on the deployment of broadband services throughout Australia as at 31 March 2005 provides more detail. The report includes aggregated data in relation to the availability of broadband services and gives estimated numbers of services in operation in respect of cable, satellite, ADSL, other DSL and miscellaneous offerings.

### ***Main findings***

- ❑ As at 31 March 2005 total broadband take-up was 1,839,700.
- ❑ Broadband take-up has increased by 1,010,400 or 121.8 per cent, from the March 2004 figure of 829,300.
- ❑ The take-up of ADSL services is now at 1,298,100.
- ❑ Total quarterly growth in broadband was at 18.8 per cent for the March 2005 quarter
- ❑ This is broadly in line with the December 2004 figure (18.2 per cent).

	<b>Cable</b>	<b>Satellite</b>	<b>ADSL</b>	<b>Other</b>	<b>Total</b>
31 July 2001	92,500	2,200	28,000	100	122,800
31 March 2002	124,200	7,400	68,100	100	199,800
30 June 2002	140,900	9,000	108,100	100	258,100
30 September 2002	158,200	10,700	142,800	500	312,200
31 December 2002	173,200	12,200	177,900	200	363,500
31 March 2003	191,900	12,600	218,800	300	423,600
30 June 2003	215,400	13,000	288,100	300	516,800
30 September 2003	236,300	13,200	361,000	300	610,800
31 December 2003	251,200	13,300	433,900	300	698,700
31 March 2004	283,300	13,200	532,500	300	829,300
30 June 2004	324,400	12,900	710,200	300	1,047,800
30 September 2004	375,900	12,700	921,400	300	1,310,300
30 December 2004	404,300	13,500	1,130,200	300	1,548,300
31 March 2005	438,700	14,400	1,386,300	300	1,839,700

*Source:* ACCC Snapshot of Broadband deployment, March 2005

Both pieces of research highlight the size of the market, and priced at least at \$30 per month for the 1.8 million customers, it is easy to see why it is so important to Australia, as well as to the companies providing the services.

The following section highlights the progress made in the particular regional city of Bendigo in the area of telecommunications, and it serves as an example of the potential the technologies provide regional communities.

## **4.5 Bendigo Community Telco – a case study**

The Bendigo Community Telco began its operations in 2000 and was the first telecommunications organisation of its type in Australia. The development of the Bendigo Community Telco can be seen to have come about because of a similar set of circumstances that drove the creation of the community banks movement in financial services sector across Australia's regions.

The development of the Bendigo Telco was driven by two key factors:-

1. The focus of larger telecommunications companies on larger markets in cities with greater populations. This trend has typically meant that smaller and regional communities have had more costly and less effective services. As in the finance sector, the larger telecommunications companies were probably content to see regional communities aggregating their own needs and demand.
2. The opportunity for regional communities to take greater control of their local telecommunications services. The perception by regional communities that they were not provided with access to the latest technologies at the same pace as the major cities. Rural and regional Australia regard high quality and cost competitive access to technologically advanced and high speed telecommunications services as a major factor in future competitiveness of their region.

The telecommunications industry is an industry where global innovation and technical advances are rapid. It is easy, therefore to be left behind and the likelihood, because of rapid technological improvements and evolution in the form and function of telecommunications services, is that regional communities are increasingly at risk of being left even further behind. The imperative for the regional communities to future proof their own position is therefore compelling.

It is likely that, given the structure of Australia Regions today, that 80 to 90 regions across the nation could successfully adopt the Bendigo Community Telco model.

### **4.5.1 The background to the Bendigo Community Telco's development**

Bendigo has a population of around 90,000 and is situated in Central Victoria, about 150 kilometres north-west of Melbourne. From its beginnings, during the gold rush era, Bendigo has been an important regional Victorian centre. The city's commercial base has diversified to incorporate retail/wholesale and financial services, health and education services, public administration and retail. The mining industry is also still active in Bendigo and the city serves as a regional centre for entertainment and other social activities. There is also an arts precinct with the recently restored Bendigo Regional Gallery and other commercial and educational art related activity.

Bendigo has a number of knowledge based service industries that include the Bendigo HealthCare Group, the Bendigo Bank and Latrobe University, there is also a significant level of GIS business related activity within the city.

Telecommunications spend in Bendigo is estimated at approximately \$60 million per annum and businesses and educational use is expected to increase significantly. In the most recent census (2001) Bendigo comprised of seven statistical local areas (SLAs). The census showed that 24 per cent of Bendigo's population used the internet from home and in total 35 per cent used the internet from either home, educational facilities, from the workplace or other facilities. Internet usage diverged considerably across the seven SLAs. Greater Bendigo – Strathsfieldsaye had the highest connectivity at 46 per cent of the SLA's population from any site, a figure that is far higher than the regional Victorian average.

As part of a smart city strategy representatives from the City of Greater Bendigo visited the USA to investigate telecommunications initiatives. The vision was **to create a smart community, where the community is empowered to direct the future for information communications and technology**. The development of a council initiated strategy that the Greater Bendigo region could develop strengths in education, e-learning, geographic information systems, electronic commerce and financial services and e-health was the result. Call centre development was also flagged as an opportunity, particularly if on-shoring trends in certain business sectors continue.

The council, together with a group of locally based businesses, began to investigate the processes that would allow Bendigo and its regional community to become innovators in the use and information and communications technology. As part of this overall strategy it was seen to be essential that Bendigo and its region should be equipped with contemporary telecommunications systems which were highly cost effective as well as providing high standards of efficiency.

The model that was applied to the project was based on the Bendigo Bank model, which incorporated the following principals:-

- local regional support and financial commitment;
- use the buying power and technical capacity of the major players; and
- create a franchise model that could be adopted by other regions.

Improving and developing information and telecommunications systems was regarded as a core component of the Bendigo smart community, smart city strategy.

Bendigo Community Telco's original shareholders included businesses from the financial services industry, education and health organisations, utilities, retail, manufacturing and service industry firms. Additional capital raisings have increased participation, with the eventual goal being broader based community ownership.

#### **4.5.2 The regional benefits of developing the Bendigo Community Telco**

The benefits provided by the community telco model are both direct and indirect benefits; these include:-

- opportunity to aggregate regional telecommunications demand and create the ability to provide better services, better access to new technologies and competitive pricing;
- to improve community access to communications and information technology to provide enhanced business, educational and entertainment opportunities for the future;
- opportunity to create demand driven services and more value added services;
- to enhance future regional competitiveness by providing the infrastructure to attract knowledge based businesses to the region and create opportunities for new local knowledge-based enterprises;
- to provide a platform and cluster to attract innovation and additional regional funding. Examples are Optus funding of \$2.5 million for Bendigo HealthCare Group to investigate e-health, the development of the Central Victorian Innovation Park which attracted a Victorian regional infrastructure grant (RIDF) of \$3.3 million in 2002, the Bendigo ICT Centre which attracted another RIDF grant of \$3.2 million in 2001 and the Central Victorian Communities project which received funding of \$588,240 under the Commonwealth government's Networking the Nation program;
- provides the ability to create the infrastructure the community demands by using new technologies and tailored solutions;
- to retain shareholder dividends in the local community;



- ❑ to retain, at least some, of the information and telecommunications profits and value adding benefits in the local community; and
- ❑ is more likely to create a more competitive local telecommunications environment as existing players try to regain lost ground.

### **4.5.3 Forming a community telco**

The complexity of forming a community telco should not be underestimated. It means bringing together key partners that compliment each others role and who will work together for the communal good. It means dealing with technology and financial and investment issues and, above all, it means building strong community support.

There are two broad models for developing a community telco; these are:-

- ❑ community reselling. This means aggregating community demand through the community telco entity and buying the wholesale access, services and products that are required by the community and then resell these to the community who are now community telco customers; and
- ❑ infrastructure development. This model combines the community reselling model with the need to invest and build the local infrastructure that was not provided by the major carriers.

The process for establishing a community telco might look something like the following:-

- ❑ form a company to represent community interests with a group of local strategic partners, council, bank, major regional businesses who are interesting in building the regional economy, and so on;
- ❑ build committed customer base;
- ❑ the company acquires rights to use the intellectual property and know-how to set up a regional telco;
- ❑ raise capital;
- ❑ undertake a competitive tender to select a telecommunications provider to provide access, services and ongoing support;
- ❑ continue to build customer base in the broader community; and
- ❑ manage standards of governance in terms of financial issues, meeting statutory reporting requirements and high standards of service, managing dividend payments and new investments and ongoing strategy.

In the case of the Bendigo Community Telco the organisation was established as a limited liability company with issued capital of five \$1 shares, an initial information memorandum was issued to interested parties in early 2000. The initial investors provided paid up capital of \$395,000. Subsequent capital raisings increased the amount of paid up capital to \$1.1 million in the following year.

The initial offering to the core customers was the attraction of the opportunity to build demand aggregation strategies and the resulting reduction in costs. The second phase of the Bendigo Community Telco's development strategy was to build its strategic partnership with its chosen telco provider and encourage the provider to develop infrastructure.

#### **4.5.4 Future development issues**

It is an obvious commercial response that the successful implementation of a community telco may revive the interest of existing industry players to create a much more competitive telecommunications environment. Keeping customers may become a major task for the community telco.

Setting up the community telco may have been a complex and time-consuming process. Growing the community telco and building profitability may well prove much harder.

The strategic planning capability and ongoing management of the community telco will be critical to future success. Building the community telco customer base, getting the right technology in place, particularly the last mile delivery of services, maintaining cost and technology competitiveness are all major contributors to building future success.

If the community telco succeeds, the benefits to the community as a whole will be significant. The Centre for Sustainable Regional Communities, Latrobe University, Bendigo has estimated that the contribution by the Bendigo Community Telco to the regions economy has been significant in terms of flow on effects. Since the establishment of Bendigo Community Telco's operations total regional output has increased by \$34 million and some of this growth was driven by the strategy to develop the community telco and a smart city smart community approach. The opportunity to build local skills, retain investment and build clusters may make a considerable contribution to growing the local economy in future years.

#### **4.5.5 Demand aggregation**

It is important to understand how demand aggregation, that is the pooling of information and communications demand in a particular region or sector, can assist the local community.

The Bendigo Community Telco case study gives some pointers to how demand can be aggregated to create cost savings and improved service and infrastructure in the local region. Demand aggregation will benefit local communities but can also provide significant savings to business groups or government clusters when the principles of demand aggregation are implemented.

Because of increasing demand for broadband services, broadband may drive the need for a community to aggregate demand. The issues that govern broadband availability are:-

- the standard of core telecommunications infrastructure and its availability in regional communities;
- the cost of providing or upgrading sub-standard infrastructure; and
- the business case to justify the expenditure to provide the standard of infrastructure required to deliver a suitable service.

Public sector demand including health, schools and local government, can have a significant presence in regional communities and can play an important role in future telecommunication development strategy. Without public sector demand aggregation, when these types of organisations manage their procurement of services and broadband individually, it becomes difficult to justify upgrading core infrastructure. If demand is not being aggregated, telecommunications providers may adopt the strategy of providing one off solutions for individual customers that are less technically effective and more costly.

In the United Kingdom the British Government plans to create the most extensive and competitive broadband market in the G8. The British Prime Minister, Tony Blair said *'We spend millions every year on IT and communications. It is clear that if we manage our role as a purchaser better, we can both improve value for money and have a significant impact on the availability of broadband.'*

The British Government clearly recognises that it can drive broadband availability, particularly in regional communities by aggregating its own regional demand through regional aggregation bodies (RABs). In this case, regional stakeholders provide local stakeholder networks and expertise to integrate the RAB aggregation model into their own operating model.

The overall aim of the RABs is to provide the mechanism and framework for procuring public service broadband with two key objectives:-

1. enhance cost effectiveness of public service purchasing; and
2. drive broadband availability for both public and private sectors because aggregation tends to drive infrastructure development.

The purchasing model is straight forward and is driven by value for money and maximisation of broadband delivery. The project was established with a core group of anchor customers who provided the initial demand and purchasing muscle to negotiate significant discounts and infrastructure quality improvements. In 2002 the spending review allocated one billion pounds of new money to UK government departments to spend on broadband infrastructure.

Among the core recipients of funding were the Department of Education and Skills for the provision of broadband to schools (8 MBps for secondary schools and 2 MBps to primary schools) and the National Health Service for the provision of broadband to all hospitals and GP surgeries. Other public sector bodies were also encouraged to become customers and this included the local government sector.

#### **4.5.6 Demand side issues**

Regions are different, some regions and some customers may have different needs. Business will usually want and be able to afford the best available broadband services. Many home customers may not be able to afford current broadband connectivity costs and may not have a perceived need for, or gain a benefit from, these services.

In regional Australia the internet and broadband access may be seen as a way to provide crucial services, which in many regions are in decline. These services may include financial services, health, education and commercial services such as agricultural information services and trading portals for farmers.

As new technologies and new product groups develop, downloading of films, radio and music will increase. Online games will also become a greater part of the entertainment industry. If broadband services are not effectively aggregated by regional communities so that appropriate infrastructure can be developed there is a danger that the regions with poorer quality infrastructure will not be able to participate in the future revolution of communication technology entertainment and information.

It can be argued that the market will eventually come to the aid of communities and provide the standards of connectivity that the community demands and is willing to pay for. There may also be a strong argument that says that better standards of infrastructure, connectivity and cost competitiveness may drive a region's capacity to innovate and compete in the global market place.

The question for local government here is, how can local government assist the aggregation process to ensure the best possible outcomes for their region?

In the new landscape of information communications technology, being left behind will become an increasingly dangerous space and create an increasingly difficult catch up task for regional communities. As in the retail supply chain where the most costly part of the delivery chain is the last few metres to the supermarket shelf, the most costly task for the telecommunications provider is the 'last mile' delivery to the individual customer. The more remote the customer, the more costly the connectivity.

Traditionally, Australia's remote and regional communities have been the most expensive to service with telecommunications infrastructure and have, therefore, been less well provided for than metropolitan areas. Paul Budde, the telecommunications analyst, points out that the debate over the privatisation of Telstra has elevated the level of debate in regard to the provision of regional telecommunications infrastructure and services, and regional users are now demanding services that provide the same quality and pricing as those supplied to metropolitan customers.

Paul Budde also points out that despite its enormous size, Australia is almost alone in not having a structured regional telecommunications infrastructure and that, throughout the rest of the world, local governments, regional economic development authorities, regional power companies and regional businesses have far more input into regional telecommunications infrastructure development and service standards.

The aggregation of demand within regions is therefore even more important in Australia as the strategy will at least begin a process of building regional input into regional telecommunications developments.

#### **4.6 Opportunities for regional companies and the demand aggregation model**

##### *Internet infrastructure by State*

<b>STATE</b>	<b>PoPs 2000</b>	<b>PoPs 2001</b>	<b>PoPs 2002</b>
New South Wales	804	781	683
Victoria	548	500	476
Queensland	438	437	418
Western Australia	185	239	221
South Australia	255	186	180
Tasmania	72	73	71
Australian Capital Territory	30	62	51
Northern Territory	62	32	31
<b>TOTAL</b>	<b>2394</b>	<b>2310</b>	<b>2131</b>

*Source:* Paul Budde Communications based on ABS data.

The structure and metropolitan focus of the larger telecommunications providers does mean there are opportunities for smaller players with innovative technology solutions for connecting regional customers. Paul Budde gives the regional internet market as an example of a sector within the telecommunications industry that is able to thrive in areas outside of the major cities. In 2004, regional internet service providers had built a market share of well over 60 per cent of the five million Australian internet subscribers. Budde's current view is while some regional consolidation will take

place, most regional Internet service providers are well enough established to maintain their market position.

These regional firms are more likely to be sympathetic in assisting with regional demand aggregation. Budde again suggests that, with a widely dispersed regional Internet service provider network, it makes sense to develop state based internet exchanges. The most successful of these exchanges is the Western Australia Internet Exchange (WAIX). These groupings of regional Internet service providers enable a stronger negotiating position for the providers when they are negotiating with the major national carriers, this in turn benefits the regional customer.

The new group of wireless Internet service providers may provide a positive contribution to 'last mile service connectivity' in regional and remoter environments. While last mile connectivity may involve a mix of both wire and wireless technology, regional demand aggregation strategies may provide a vehicle for cost effective connections for rural customers and smaller communities where wire-line solutions may not prove cost effective. By aggregating wireless demand regional communities are more likely to drive the infrastructure development required to run high speed services.

#### **4.6.1 Social impact of high speed connectivity**

How will improved bandwidth and new information telecommunications technology impact on culture and entertainment? It is likely that more entertainment opportunities will be web based and form the extension of the home entertainment revolution that is being driven by DVDs and large viewing screens. The ability to rapidly download image and voice and to play interactive games will become the mainstay of family entertainment.

Internationally, the boom in DVD sales, has driven the trend away from the traditional cinema to home entertainment centres. Over the next few years film distribution will inevitably move towards online delivery. The under 25 male demographic, traditionally the driver of box office success, are turning away from film entertainment towards online interactive games. iPods and MP3 players will mean that music, voice entertainment and news and current affairs will be sourced from around the world. Online home education and training will also be increasingly important to community development.

Given the rapid development of online products and services it is inconceivable that regional Australia will not demand the same standards of telecommunications infrastructure as their urban counterparts.

Regional businesses will also continue to demand improved internet access and band width as this will be seen as a measure of global competitiveness and future opportunity. The development of global skill sets will also be increasingly driven by information communications technology and high speed connectivity.

These developments will impact the regional economy in a number of ways, many of these impacts may well be positive if the infrastructure for appropriate delivery standards can be put in place. Carefully conceived regional demand aggregation strategies may well be major contributors to delivering the next wave of the information communications technology economy.

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## 5. ADSL broadband coverage and the economic benefits of extending the coverage

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### 5.1 Introduction

Based on the research into DSL technologies and their alternatives in the previous section, National Economics was keen to understand the DSL supply situation at the regional level in Australia. The process to determine supply was very labour intensive; however, it has produced some unique insights into the development of broadband across all of Australia's regions, from the core metro regions to our rural areas.

Analysis of the ADSL broadband coverage in terms of population, geographic area and exchanges covered the whole of Australia, utilising:-

- ❑ Telephone Exchange information available from Telstra's website (ADSL Demand Register) in July 2005;
- ❑ ABS 2001 Census population data at the SSC (Suburb), UCL (Urban Centre / Locality), SLA (Statistical Local Area) and LGA (Local Government Area) levels; and
- ❑ Area (hectares) at the SSC (Suburb), UCL (Urban Centre / Locality), SLA (Statistical Local Area) and LGA (Local Government Area) levels.

The ADSL status of over 5000 exchanges in Australia was gathered, and the SLA in which the exchange is located was determined. In addition, within each SLA the exchange was assigned to a suburb (SSC) or locality (UCL). Where an exchange could not be explicitly located in an identified suburb or locality, it is referred to as being in the 'unallocated area' of the SLA. This means we have each exchange allocated to a suburb (SSC) or a UCL or to the unallocated part of each SLA.

Matching this exchange based information to the demographic information requires the same classification.

As such, each individual CCD (Census Collector District) (over 33,000 in Australia in 2001) is allocated to a SSC, UCL and SLA. From the Census we know the population within each CCD along with its areas in hectares.

For CCD's well outside of suburban areas the SSC will often be simply referred to as "Unclassified", and for a number of CCD's within this "Unclassified" area they will be classified as being in a locality (UCL) instead. For instance, small country towns will usually be defined by their UCL and remain "Unclassified" in terms of the SSC or suburb.

For suburbs within metropolitan or large regions centres the locality identified will simply refer to the larger metropolitan regions, for example Melbourne, Ballarat or Sydney. For these places we revert to the SSC or suburb name. For instance, Eureka is identified as a suburb in Ballarat.

Thus, where possible country CCDs are classified into localities and CCDs in the metropolitan areas and regional cities are classified to suburbs. The CCDs which are neither in a locality (UCL) or a suburb (SSC) as grouped together in SLA's and referred to as "Unallocated".

Now we can match the information at the UCL and SSC level to the demographic information about the UCL or SSC. A similar matching is undertaken to match all of the "Unallocated" exchanges and population.

At the level of the UCL or SSC, coverage is measured by the level of ADSL enabled exchanges amongst the exchanges servicing the UCL or SSC. Where two exchanges service a single locality, one of which is enabled and the other not, it is assumed that half of the population is covered. This does not occur in many towns and is a viable assumption, for which we have few alternatives.

As this ADSL status is used for the whole UCL/SSC, it may in a small number of cases overstate the actual coverage, specifically in some larger towns or dispersed outer metropolitan suburbs where exchanges are enabled, but homes may be further than 5 km from the exchange, and thus not actually able to access ADSL. In addition, the coverage figures are based on the exchange status, not the quality of connections available to individual premises, so there may also be some areas where the exchange is enabled, but due to other technical difficulties some homes or businesses will still not have access. As such, the coverage data produces a maximum value.

In general the metropolitan areas of Melbourne, Sydney and Brisbane have all exchanges enabled, so these areas are deemed to have 100 per cent coverage. However, as noted in the previous chapter, there are a number of broadband blockers which may prevent individual houses and suburbs from actually sourcing ADSL services despite their exchange being activated.

For the unallocated areas we assume that the coverage for the area depends on the level of ADSL enabled exchanges which service the area. However as many of the SLA's have a mixture of dense population areas (towns or suburbs) and more sparsely populated areas, the calculation of population and area coverage used weighted values based on the number of remaining settlements, and the geographic area encompassed by the "Unallocated" region. In general the larger the area and sparser the population the lower the assumed level of coverage that is applied in these unallocated areas.

For instance suppose that in the "Unallocated" there were 300 people in the areas which covered 5000 sq km with 12 exchanges, of which 4 were ADSL enabled. The raw percentage of 4 / 12 (33 per cent) is unlikely to be a good estimate of actual coverage considering that the 4 exchanges will probably cover a maximum total area 314 sq. km ( $4 \times \pi \times 5^2$ ). Nor is it likely that substantial township with a population in excess of 100 exists in the region as they have not already been identified as a UCL. The initial estimate of 33 per cent is accordingly scaled down and applied to the population of 300, that is, less than 100 people would be assumed to have ADSL coverage in such an area.

In assessing the ADSL broadband situation, a number of factors were examined using this method, namely:-

- percentage of population covered;
- per cent of children covered;
- per cent of exchanges ADSL enabled; and
- per cent of area covered.

For each region the actual number of exchanges, number of exchanges per person and number of HiBIS (Higher Bandwidth Incentive Scheme) activated exchanges was also calculated for each SOR region and report in the standard appendix format.

## 5.2 Population coverage

A clear picture of ADSL coverage across Australia's population emerged from this modelling, which highlights the differences between coverage in metropolitan areas and in remote rural areas. Not unexpectedly, the inner city SOR regions of Melbourne Inner, Melbourne South, Global Sydney, Sydney Inner West and Brisbane City had the highest population coverage. At the other end of the scale SA Murraylands, NT Lingiari and WA Wheatbelt – Great Southern had the lowest population coverage.

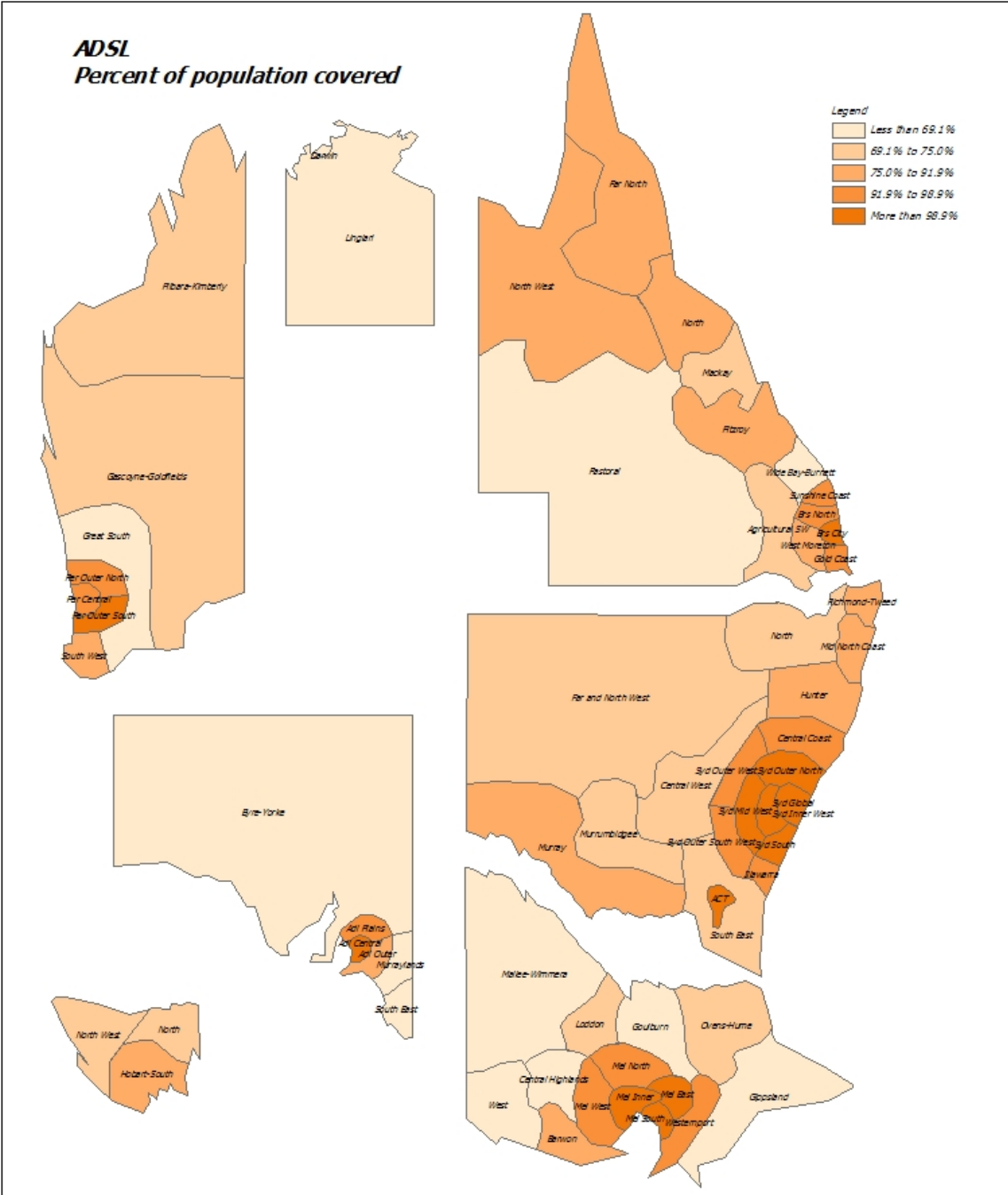
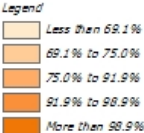
Highest coverage		Lowest coverage	
Region	Coverage %	Region	Coverage %
Brisbane City	100.0	SA Murraylands	44.6
Global Sydney	100.0	NT Lingiari	46.6
Melbourne Inner	100.0	WA Wheatbelt-Great Southern	50.9
Melbourne South	100.0	VIC Central Highlands	52.1
Sydney Inner West	100.0	SA Eyre and Yorke	57.8
ACT	99.9	QLD Pastoral	64.3
Adelaide Central	99.9	VIC West	65.2
Sydney South	99.8	Darwin	66.8
Melbourne East	99.8	QLD Wide Bay-Burnett	67.3
Sydney Mid West	99.6	VIC Goulburn	67.5

Source: NIEIR analysis.

The Australian average ADSL population coverage is 90.4 per cent, and 31 of the SOR regions have a population coverage of over 80 per cent, whilst only 5 regions have a coverage below 60 per cent. As the following map illustrates, the state with the highest population coverage is New South Wales. Northern Territory has the lowest, and the regions of highest coverage centre around each of the state capitals.



**ADSL  
Percent of population covered**



In nearly all SOR regions, the percentage of children with ADSL access is within 1 per cent of the general population coverage. The regions with the greatest difference are shown below.

Region	% pop	% childn	Region	% pop	% childn
Darwin	66.8	62.1	WA Gascoyne-Goldfields	69.2	72.7
NSW South-East	70.5	69.0	QLD North West	78.6	81.7
QLD Wide Bay-Burnett	67.3	66.1	QLD Pastoral	64.3	67.3
			NT Lingiari	46.6	49.4

Source: NIEIR analysis.

### 5.3 Area coverage

As for the population coverage, the SOR regions with the highest ADSL coverage by area are the inner metropolitan areas of the state capitals, and the lowest coverage is in the remote rural regions. What the following table and map do highlight is the even greater disparity between the lowest and highest area coverage.

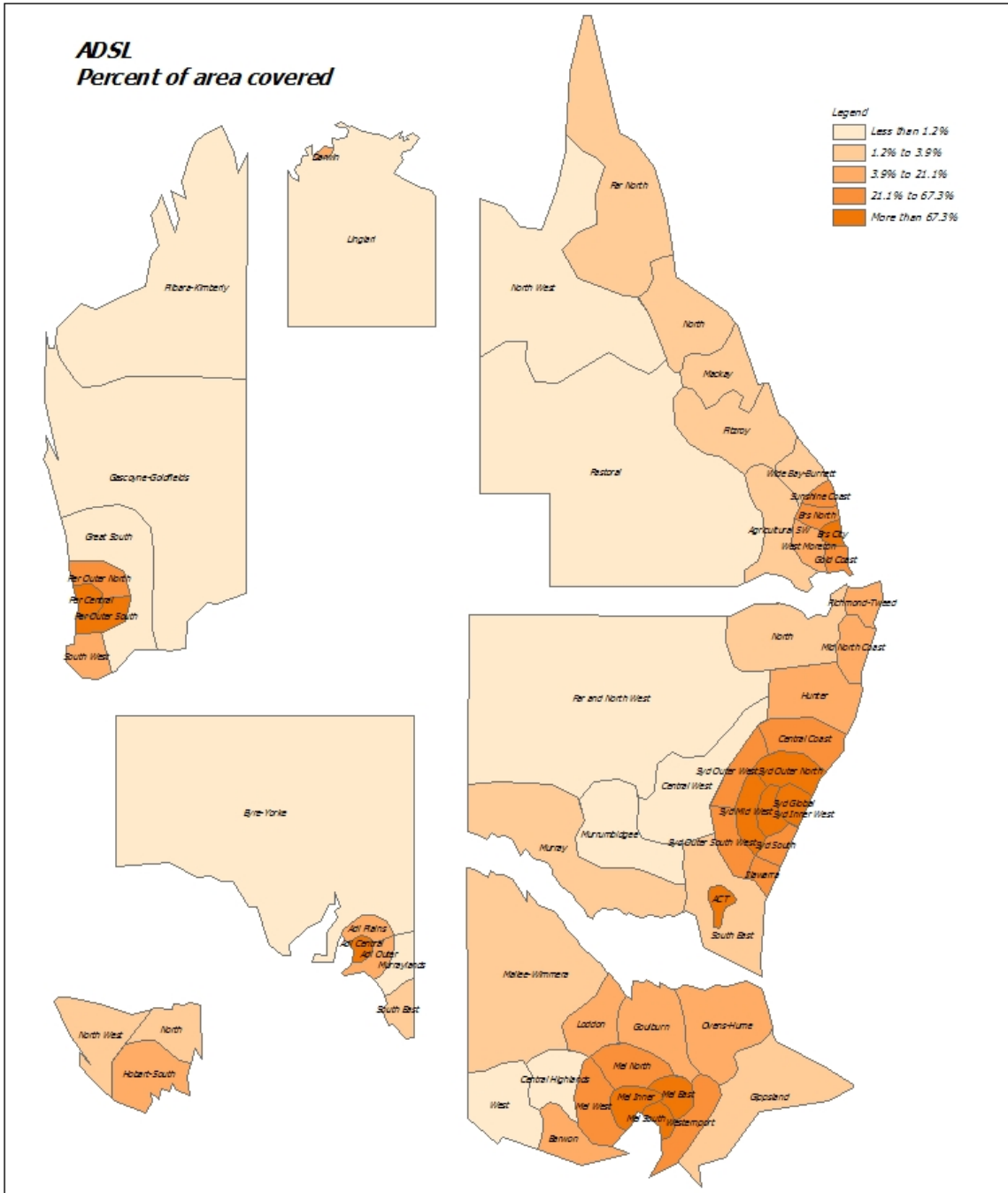
Part of this divergence of course the fact that Australia, for all its size, is actually quite densely populated in pockets and very sparsely populated in the remaining areas. To provide services for all is much harder than simply to provide services for the majority who live in cities on our Eastern seaboard.

The Australian average ADSL area coverage is 1.2 per cent, and 30 of the SOR regions have a coverage below 5 per cent, whilst only 11 regions have an area coverage of over 80 per cent.

Highest coverage		Lowest coverage	
Region	Coverage %	Region	Coverage %
Brisbane City	100.0	NT Lingiari	0.0
Global Sydney	100.0	SA Eyre and Yorke	0.1
Melbourne Inner	100.0	WA Gascoyne-Goldfields	0.1
Melbourne South	100.0	WA Pilbara-Kimberly	0.2
ACT	99.9	NSW Far and North West	0.2
Sydney Inner West	99.7	SA Murraylands	0.2
Adelaide Central	98.4	WA Wheatbelt-Great Southern	0.4
Melbourne East	92.5	VIC Central Highlands	0.6
Sydney Outer North	90.5	QLD Pastoral	0.7
Sydney Mid West	87.3	VIC West	0.7

Source: NIEIR analysis.

**ADSL**  
**Percent of area covered**



## 5.4 ADSL enabled exchanges

Examination of the percentage of ADSL enabled exchanges, reveals that whilst the inner metropolitan regions enjoy a 100 per cent enabled level, the more sparsely populated and remote regions have as few as 6.4 per cent of their exchanges enabled.

The Australian average ADSL exchange enablement rate is 34.3 per cent, and 22 of the SOR regions have a coverage below 30 per cent, whilst 18 regions have an enabled exchange rate of over 80 per cent.

Although this appears to be a low level of access, the not-enabled exchanges serve small populations, the actual percentage of people without access is a much lower than the table below would suggest (see Population coverage section above).

Highest coverage		Lowest coverage	
Region	Coverage %	Region	Coverage %
Adelaide Central	100.0	SA Murraylands	6.4
Global Sydney	100.0	WA Wheatbelt-Great Southern	8.3
Melbourne East	100.0	SA Eyre and Yorke	10.0
Melbourne Inner	100.0	VIC West	10.4
Melbourne South	100.0	WA Gascoyne-Goldfields	11.3
Sydney Inner West	100.0	NSW Central West	12.1
Sydney South	100.0	SA South East	16.0
Melbourne North	94.9	VIC Central Highlands	17.2
Sydney Mid West	91.9	QLD Agricultural SW	17.4
Sydney Outer North	91.9	NSW Far and North West	17.6

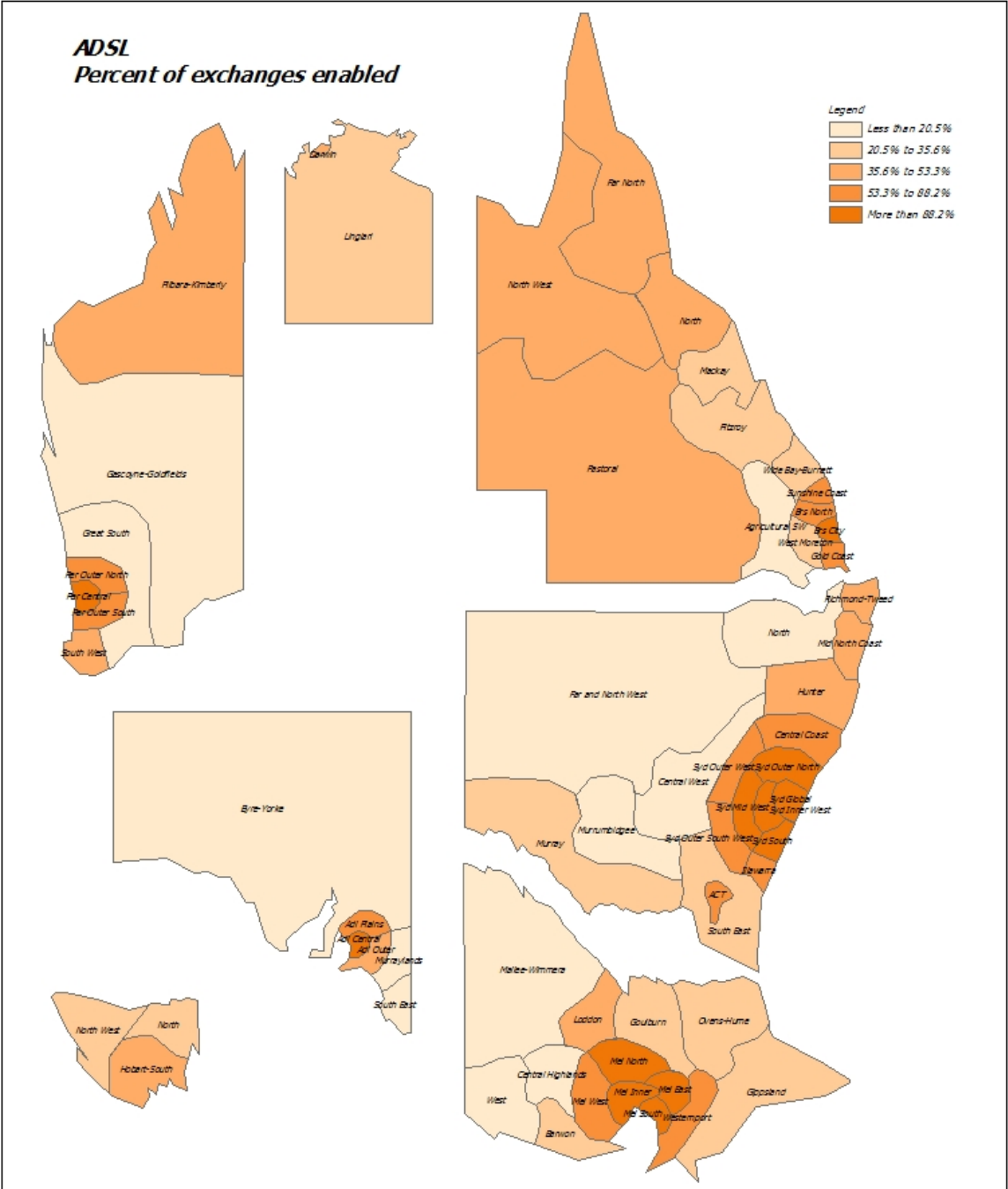
Source: NIEIR analysis.

The HiBIS (Higher Bandwidth Incentive Scheme) federal government initiative is assisting in providing access to over 130 additional exchanges. The following table details the Regions with the highest number of HiBIS exchanges.

Region	Number HiBIS exchanges	HiBIS as % of exchanges not enabled
VIC Gippsland	12	8.9
Melbourne Westernport	10	50.0
VIC Goulburn	8	8.3
VIC Barwon	7	9.2
NSW Hunter	6	7.9
VIC Mallee-Wimmera	6	4.2
Brisbane North	5	38.5
QLD Gold Coast	5	22.7
NSW Illawarra	4	44.4
NSW North	4	2.5

Source: Telstra ADSL Demand Register and NIEIR analysis.

As the following map illustrates, Queensland has the highest number of regions with an enabled exchange rate over 35 per cent, whilst most of South Australia has a rate below 20 per cent. Western Australia, Victoria and New South Wales also have a significant proportion of regions with a rate below 20 per cent



## 5.5 Lost business use of ICT

Combining the chapter on demand and the results of this chapter's coverage estimates we can produce an indicative estimate of the loss to business of restricted broadband supply.

- ❑ The results in this section demonstrate the important of the HiBis scheme because many of the firms identified will be likely to have taken up the program's offer of satellite based internet connections.
- ❑ Maintaining programs similar to the HiBis is crucial.
- ❑ However it is time to build future capacity to a point where we understand that the satellite is a second best outcome for these firms and these regions.

In terms of lost export potential, we have chosen to utilise the Export Propensity or Elasticity measure developed in Chapter 3. The higher the elasticity, the more likely that a one unit increase in the e-journey staging of firms in the area, would produce conditions favourable to increasing exports. The regions with the highest export elasticity are the most trade exposed regions, and the following table multiplies the previously reported elasticity by the share of the region without broadband ADSL coverage.

Based on these results, literally scores of firms within each of the following regions are likely to be shut-out from achieving an e-journey staging level which is consistent with exploiting the full export potential of their industry. A full set of results for each region is presented in the SOR region appendices.

For instance in SA Murraylands the export elasticity was 5.89 which related to 289 firms. The ADSL coverage in the area is only 40 per cent, therefore the number of firms shut-out is (1-0.4, or 60 per cent) of the 289 firms. This equates to the regions missing out on at least 160 firms exporting even if the region was to improve its e-journey staging or ICT use.

**Table 5.6 Lost export potential – export elasticity \* lack of coverage**

Region	Export elasticity foregone, % of firms	Rank of export elasticity foregone	Number of firms
SA Murraylands	3.25	1	160
WA Wheatbelt-Great Southern	2.71	2	299
SA Eyre and Yorke	2.20	3	225
NT Lingiari	2.04	4	57
QLD Pastoral	2.03	5	79
VIC West	1.91	6	145
SA South East	1.78	7	84
VIC Mallee-Wimmera	1.74	8	202
VIC Goulburn	1.67	9	212
QLD Wide Bay-Burnett	1.67	10	204
NSW North	1.64	11	208
NSW Far and North West	1.64	12	155
WA Gascoyne-Goldfields	1.57	13	124
VIC Gippsland	1.53	14	213
NSW Central West	1.49	15	158

A similar exercise can be completed for the ICT leaders, those firms who lead the pack in terms of developing businesses to the integration and transformation stages of the e-journey. Such businesses are seen as vital in progressing the market for ICT services and capitalising on the regional specific advantages that can be created in such a sector.

The table of Staging Leaders lost is similar to the previous table, predominantly due to the same levels of ADSL coverage being used to determine the value.

Of note are the three or four regions in Australia that are characterised by their small towns and agricultural bases, often built on soldier settlements in the early part of the century. SA Eyre and Yorke, SA Murraylands, WA Wheatbelt-Great Southern and VIC West are each examples of export exposed, small town based regions which have been caught short in the provision of ADSL coverage.

**Table 5.7 ICT leaders lost – expected staging leaders as percentage of firms adjusted for lack of coverage**

Region	Staging leaders lost, % of firms	Rank of staging leaders lost	Number of leading firms
NT Lingiari	2.09	1	59
SA Murraylands	1.86	2	92
WA Wheatbelt-Great Southern	1.65	3	181
TAS North	1.42	4	100
SA Eyre and Yorke	1.40	5	143
Darwin	1.36	6	72
TAS North West	1.28	7	72
WA Gascoyne-Goldfields	1.21	8	95
QLD West Moreton	1.20	9	83
NSW South-East	1.20	10	127
VIC West	1.19	11	90
QLD Pastoral	1.16	12	45
VIC Goulburn	1.14	13	144
SA South East	1.14	14	53
QLD Wide Bay-Burnett	1.12	15	138

## 5.6 The economic benefits of additional ADSL coverage

Additional ADSL coverage would increase the quantity and quality of the communications capital stock available as well as increase the range of communication services that would become available. Over the last quarter of the 20<sup>th</sup> century economists began to take a particular interest in the unique contribution of communications and associated services to economic growth. Previously communications infrastructure had not been distinguished from other forms of capital stock as a growth driver.

### 5.6.1 Telecommunications and the economy – overseas findings

Various studies have been made over the past two decades to attempt to quantify the contribution of telecommunications infrastructure to economic growth. The studies vary in terms of the communications and information technology hardware and services considered. Some are narrow, focussing on telecommunications infrastructure and services, while others also consider the stock of computers and related services. Other studies use the level of communication and/or computer services instead of the stock as a driver.

Indicative findings are as follows.

S.D. Oliner and D.F. Sichel, “*Computers and Economic Growth Revisited: How Big is Puzzle*”, Brookings Papers on Economic Activity, No. 2 1994 estimated that computers and computer services explained 11 per cent of total United States growth between 1987 and 1993.

Given the increasing pressures of globalisation and the need for high income countries to maintain competitiveness by increasing the intensity of use of information technology to maintain a knowledge-based competitive edge, it would be expected that the importance of information services (telecommunications and computers) would be increasing. This seems to be verified by D.W. Jorgenson and K.J. Stiroh, “*Raising the Speed Limit: US Economic Growth in the Information Age*” and in L. Paganetto, “*Knowledge Economy, Information Technologies and Growth*”, Ashgate, Addershot, England 2004.

Jorgenson and Stiroh point out that the estimate of the contribution of information technologies to economic growth depends on the deflator used for these services in order to convert them into “real” inputs. For the middle case Jorgenson and Stiroh estimate that United States’ total factor productivity growth was 0.3 per cent per annum between 1990 and 1995 and 0.93 per cent per annum between 1995 and 1998. For the 1990 to 1995 period information technology explained 0.46 percentage points of the total factor productivity growth with communications services alone explaining 0.13 percentage points, or just under 30 per cent of the total factor productivity growth. For the 1995 to 1998 period, the United States’ total factor productivity growth was 0.93 per cent per annum, of which information technology explained 0.64 per cent per annum, or just under 70 per cent. Communications services explained 0.13 per cent per annum.

Such results assume that communications services and computer services are independent of each other. However, as this SOR report clearly shows, communications and general information hardware and services (that is, computers, etc.) should be more correctly regarded as complements. Unless the communications services are available to reach stage four to six e-staging, no amount of sophisticated computer equipment is going to make up the difference.

More importantly, a number of studies show that telecommunications infrastructure and services are relatively more important in encouraging innovation than other forms of information hardware and services. (For example, G.M. Brooke, “*The Economics of Information Technology: Explaining the Productivity Paradox*”, MIT Sloan School of Management Centre for Information Systems, Research Working Paper No. 238, 1992.) This is verified in the case of firm survey information by L. Paganetto, “*The Impact of IT Investment in Production and Efficiency*”, in L. Paganetto op. cit.

The reason for this relationship is that appropriate telecommunications infrastructure and services complements computer and computer services by allowing e-commerce and production/supply chain networking. This allows firms to quickly gain insights into changing consumer tastes and the new production requirements of firms downstream in the supply chain. The studies have found that firms that can and do invest in telecommunications hardware and services had a higher probability of successful innovation.



### **5.6.2 Innovation and exporting**

For non-resourced based exports, innovation is the key to export success. Hence, the higher the e-staging, the higher the probability of successful innovation. The higher the probability of successful innovation, the higher the exporting effort. This relationship is clearly embedded in the survey material used for this SOR report.

It could be argued that high level e-staging is as much a consequence of successful exporting as a cause. However, the international evidence is that the weight of causation rests with the availability of telecommunication infrastructure and services to allow high level e-staging and then exporting success, rather than the other way round. This would explain the dynamics supporting the uncontroversial general proposition that the supply of telecommunications hardware and services is a supply side driver of overall economic growth.

### **5.6.3 Exporting and productivity**

Increased exporting effort does not stop creating additional wealth generation from the increase in exports. Numerous studies have shown that firms that have a significant exporting effort (at least around 10 per cent of sales and above) have:-

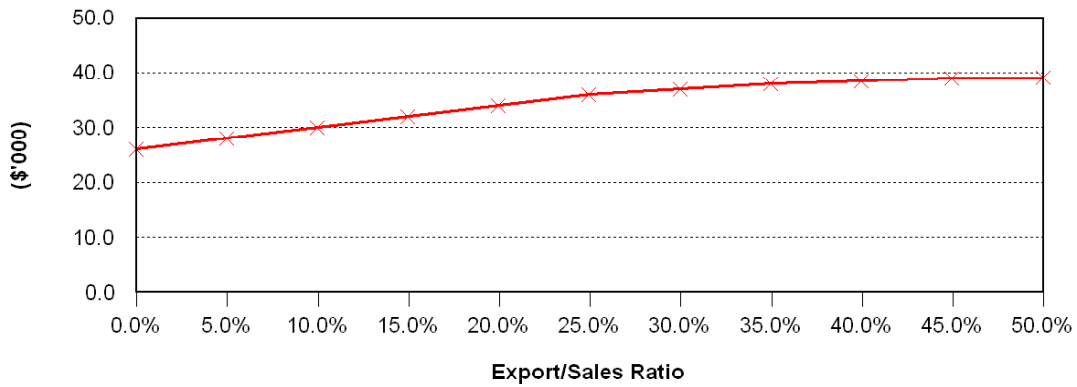
- significantly higher levels of profitability than firms that do not export;
- pay significantly higher average wage and salaries compared to firms which do not export; and
- have significantly higher growth prospects compared to firms which do not export.

For example see H. Lewis and J.D. Richardson, “*Why Global Commitment Really Matters*”, Institute for International Economics, Washington D.C. October 2001.

These relationships have been verified by National Economics for Australia using the Australian Bureau of Statistics’ (ABS) CURF firm unit record database. There are substantial gains to firms from committing to the global economy by increasing the export share in total sales. The database was analysed in terms of the eight manufacturing two-digit industries in the database. The period is 1997-1998.

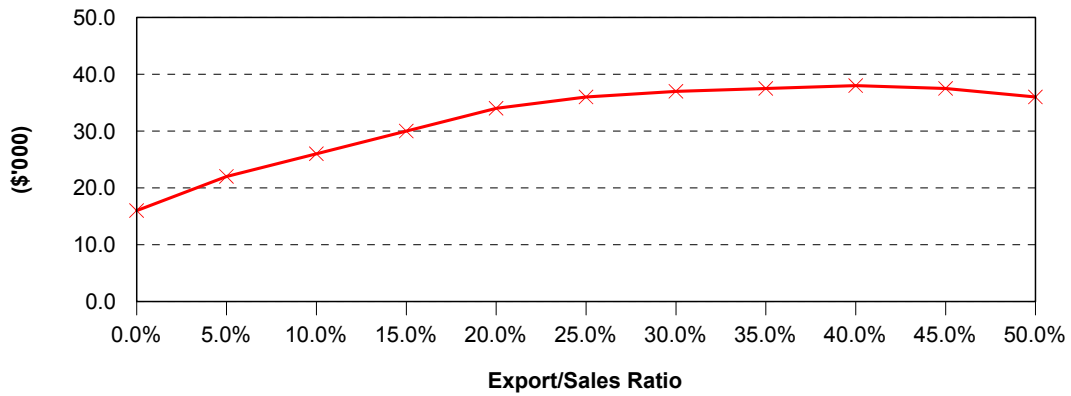
At the firm level the key measure of productivity was gross product (as distinct from gross output) per employee. Gross product was defined as wages plus gross operating surplus. The relationships estimated from the CURF database are shown in the following figures. For most manufacturing industries there is strong improvement in productivity (value added per employee) as export effort expands, especially up to the 20 per cent threshold level.

### Wages per employee: Food, beverage and tobacco manufacturing



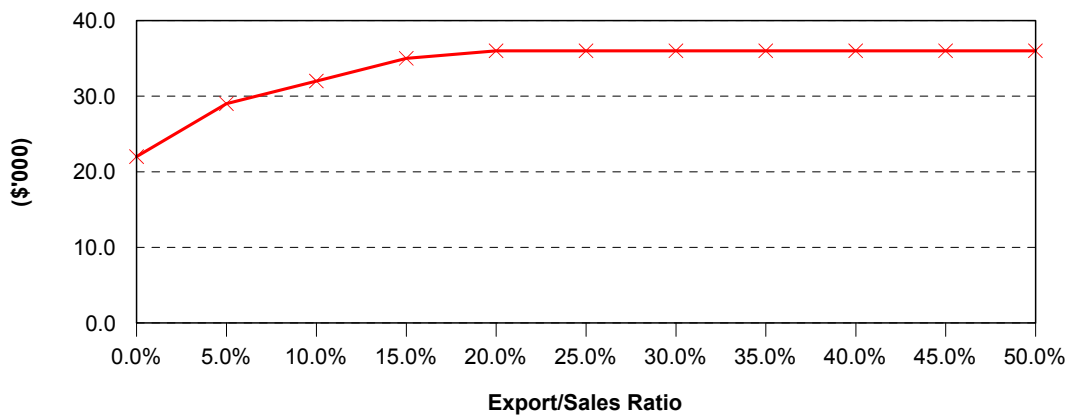
Source: NIEIR.

### Profit per employee: Food, beverage and tobacco manufacturing



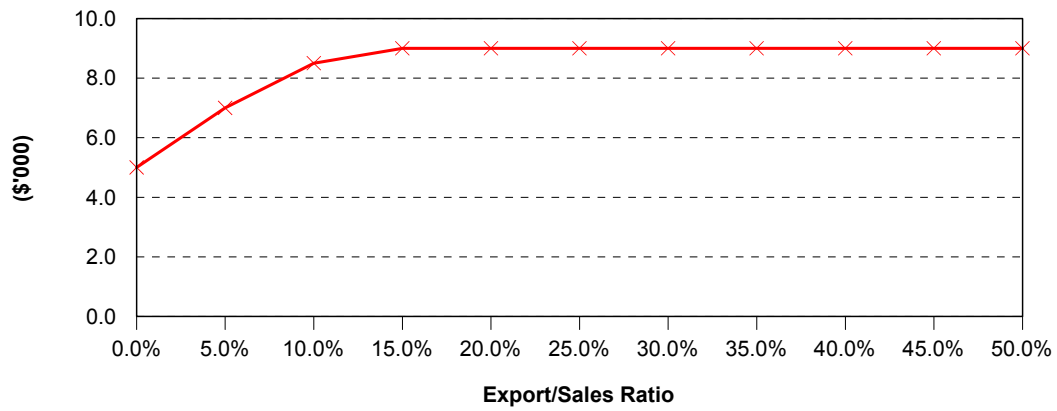
Source: NIEIR.

### Wages per employee: Textile, clothing, footwear and leather manufacturing



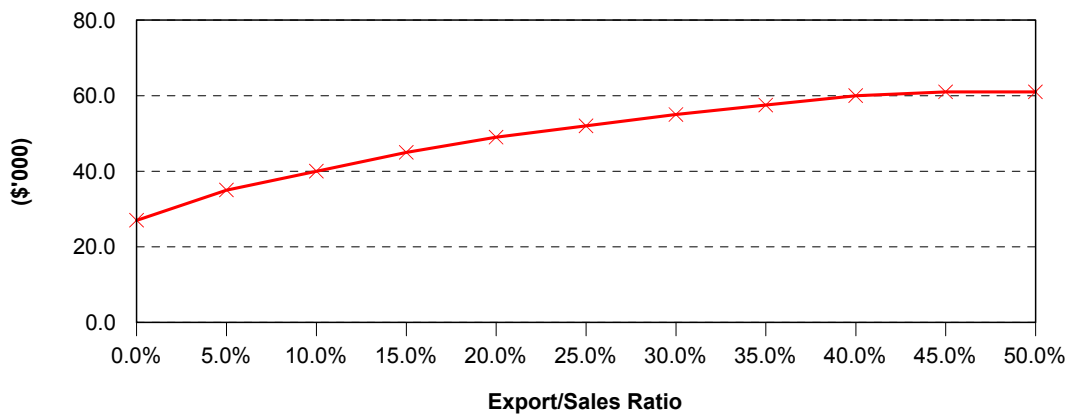
Source: NIEIR.

**Profit per employee: Textile, clothing, footwear and leather manufacturing**



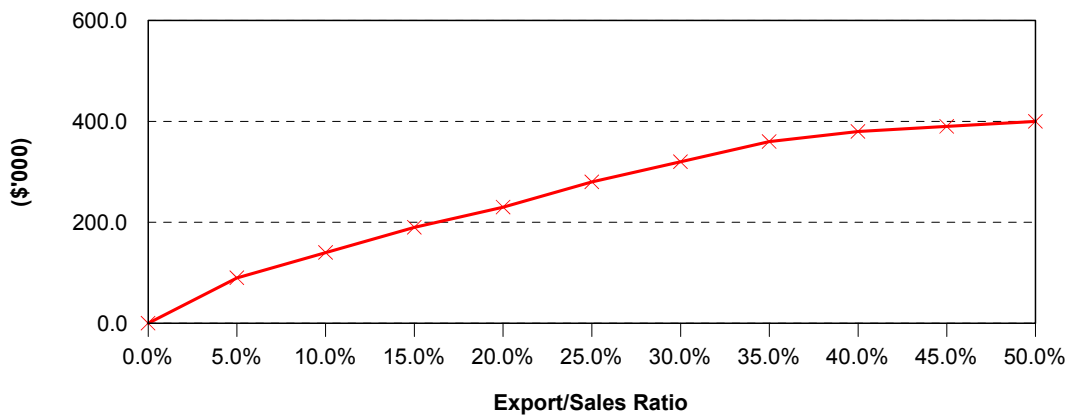
Source: NIEIR.

**Wages per employee: Wood and paper product manufacturing**



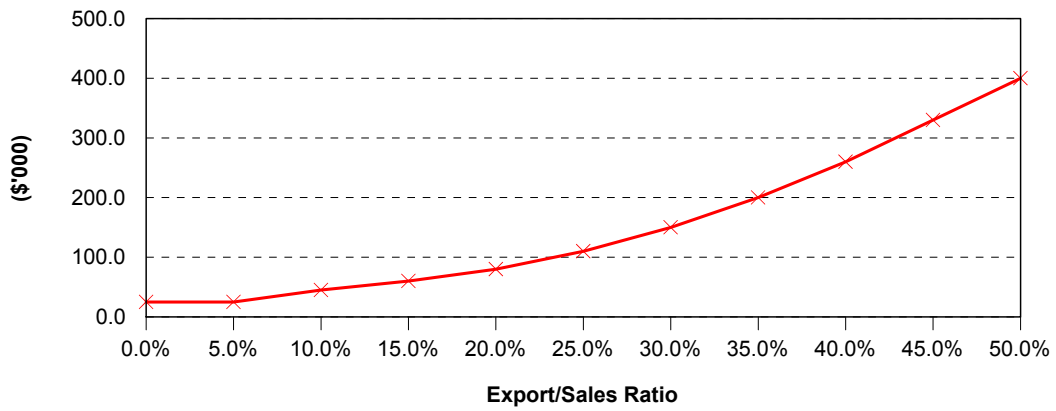
Source: NIEIR.

**Profit per employee: Wood and paper product manufacturing**



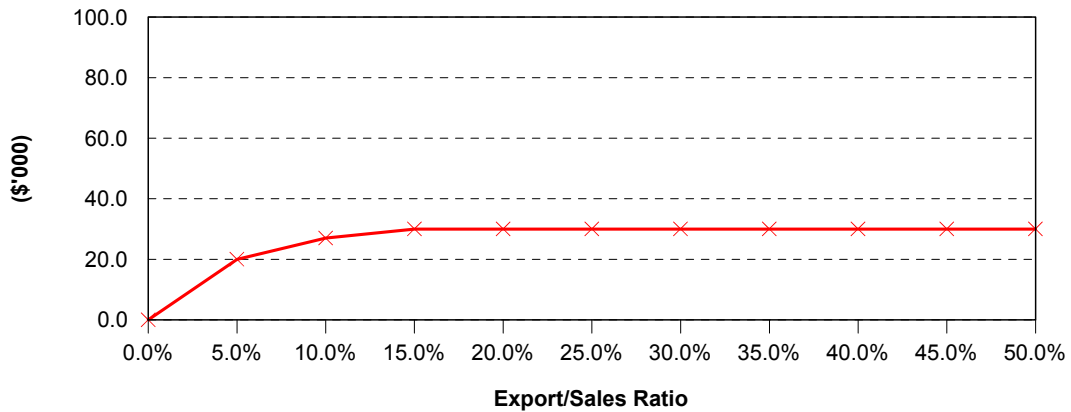
Source: NIEIR.

**Wages per employee: Printing, publishing and recorded media manufacturing**



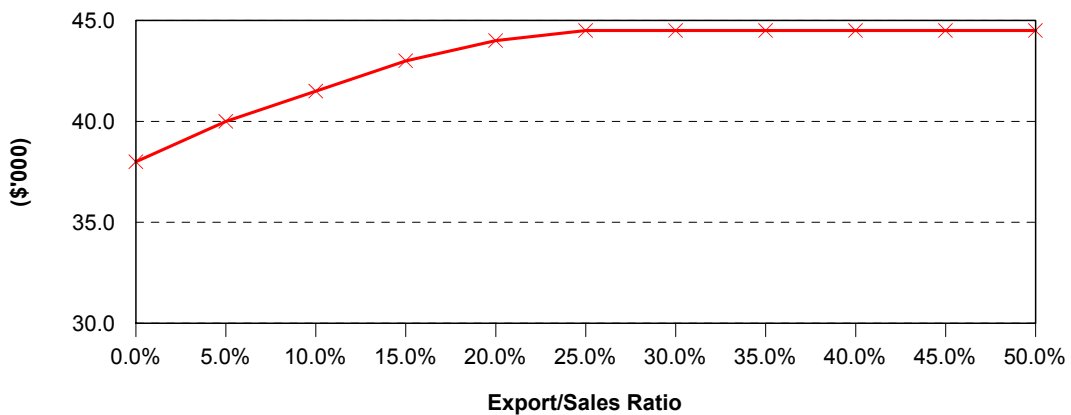
Source: NIEIR.

**Profit per employee: Printing, publishing and recorded media manufacturing**



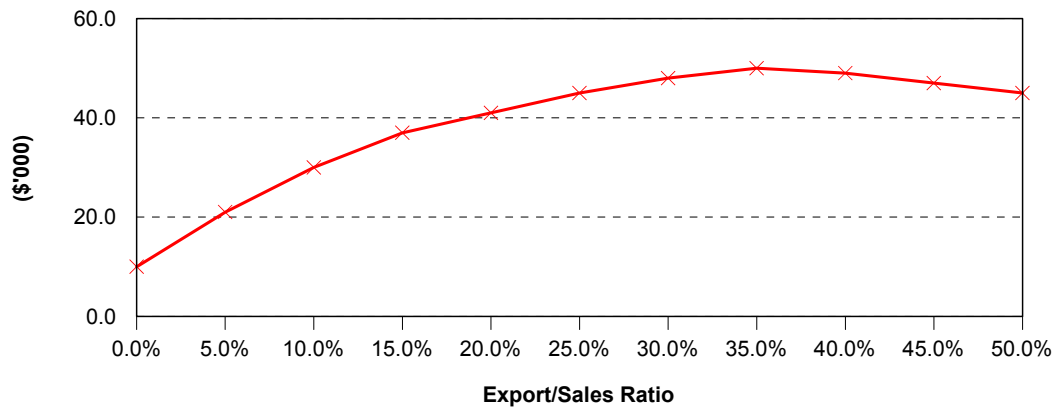
Source: NIEIR.

**Wages per employee: Petroleum, coal, chemical and associated product manufacturing**



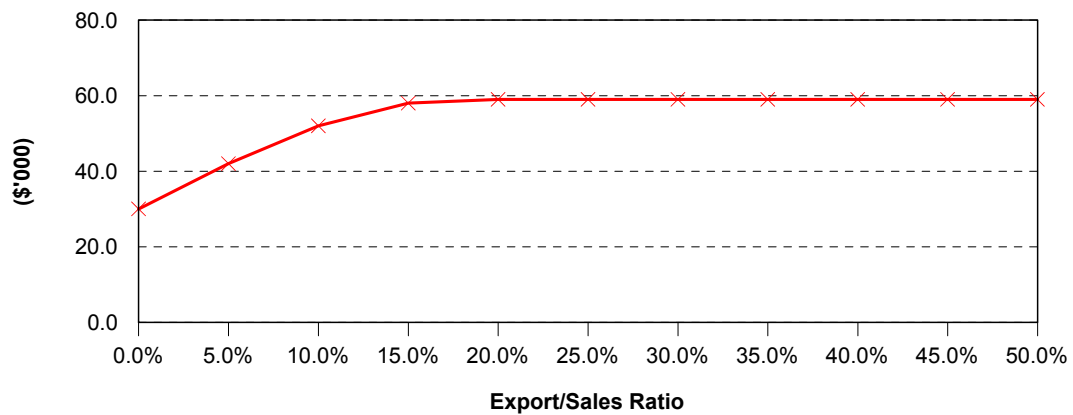
Source: NIEIR.

**Profit per employee: Petroleum, coal, chemical and associated product manufacturing**



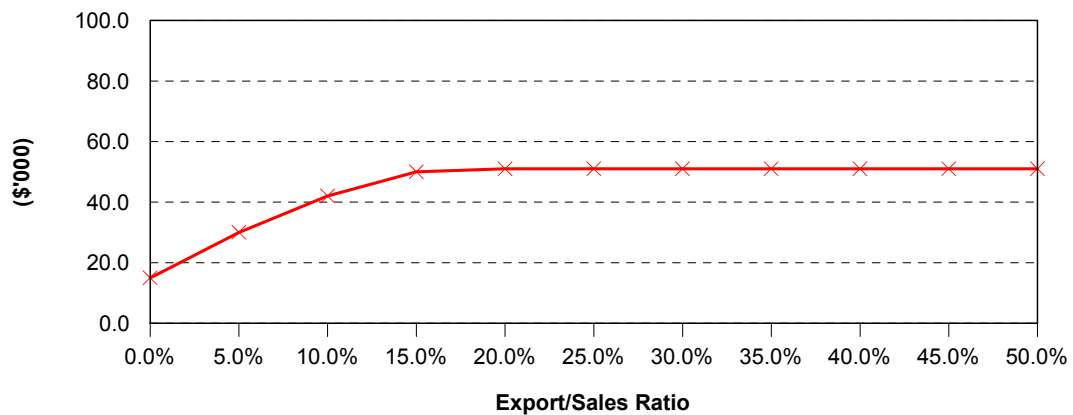
Source: NIEIR.

**Wages per employee: Non-metallic mineral product manufacturing**



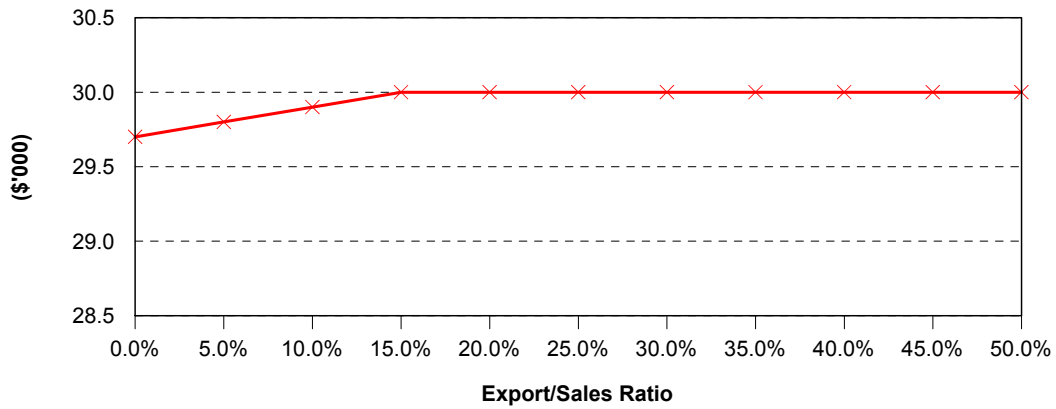
Source: NIEIR.

**Profit per employee: Non-metallic mineral product manufacturing**



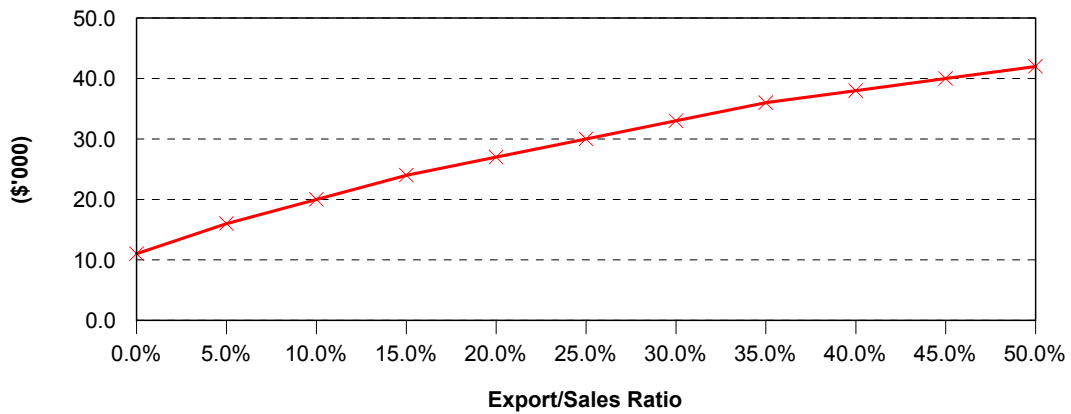
Source: NIEIR.

### Wages per employee: Metal product manufacturing



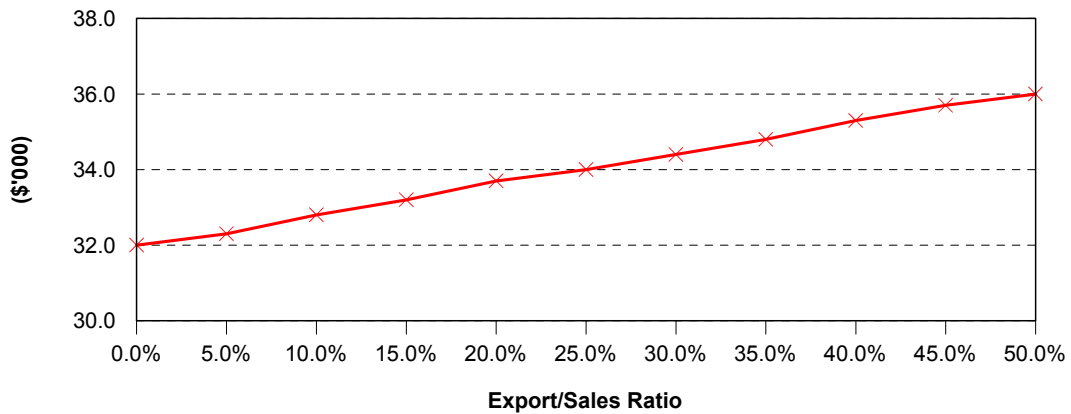
Source: NIEIR.

### Profit per employee: Metal product manufacturing



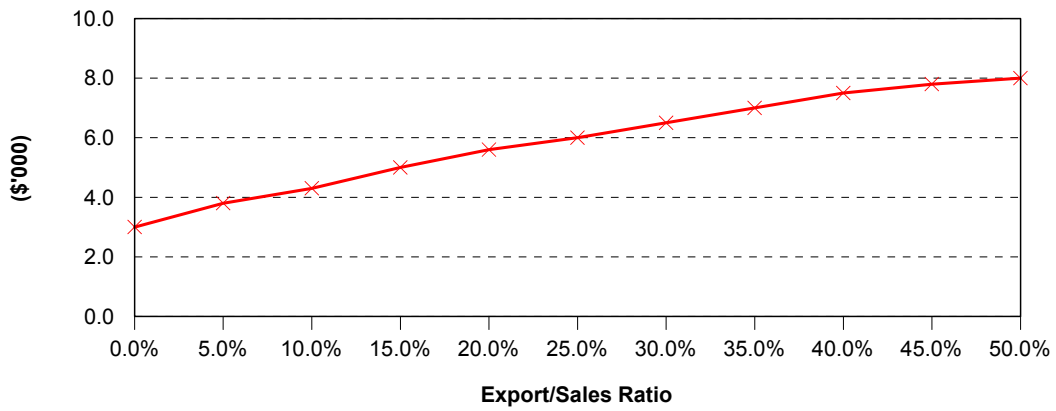
Source: NIEIR.

### Wages per employee: Machinery and equipment manufacturing



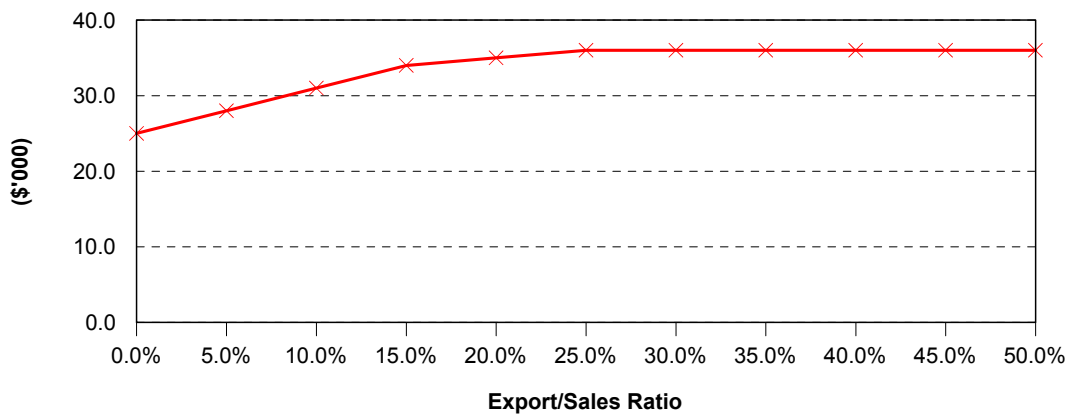
Source: NIEIR.

### Profit per employee: Machinery and equipment manufacturing



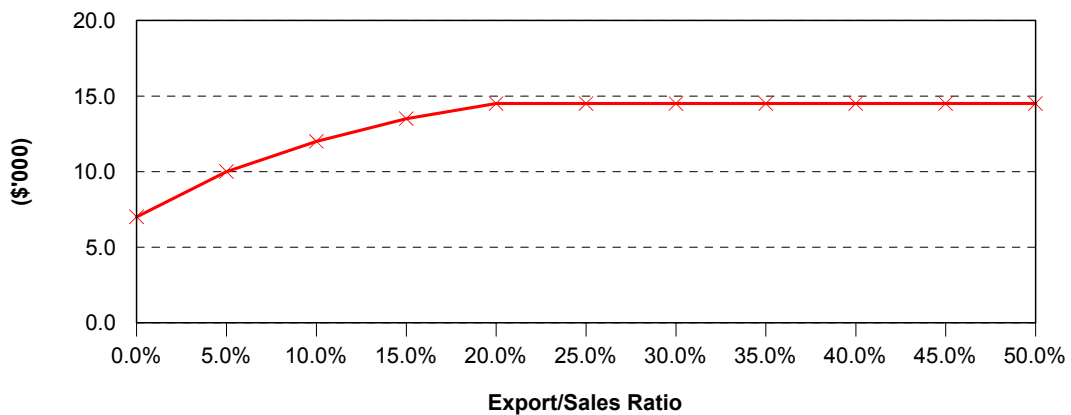
Source: NIEIR.

### Wages per employee: Other manufacturing



Source: NIEIR.

### Profit per employee: Other manufacturing



Source: NIEIR.

Given the above, the following figure outlines the causal steps between higher levels of telecommunication investment (that is, higher ADSL coverage), firm expansion and higher levels of regional incomes.

#### **5.6.4 Quantifying the regional benefit of higher ADSL coverage**

Using the number of staging leaders lost due to the absence of ADSL coverage, as shown in Tables 5.6 and 5.7, the economic benefit of additional ADSL coverage can be calculated. The information used to make the estimates include:-

- an assumption that the foregone staging leaders reach a 20 per cent export effort of sales as a result of ADSL availability;
- the exporting effort productivity relationships for firms as indicated by the CURF database. In addition to manufacturing, additional CURF relationships were estimated for agriculture, mining, transport services and business services; and
- the average firm sales, value added and employment by SOR by ANZSIC industry.

In order to complete the analysis the assumption was made that the foregone staging leaders were distributed over the SOR regions' key exporting industries in proportion to the stock of enterprises in these industries.

The results are given in Table 5.8. The results in column one of Table 5.8 show the increase in value added by region should the foregone staging leaders reach export status as a result of the availability of ADSL. The value added impact includes:-

- the value added impact of the exports;
- the value added impact of the increased productivity of the exporting firms; and
- a regional multiplier effect.

The total comes to \$922 million in 2004 prices. The percentage impact of the impact on SOR regions' gross regional product at factor cost is also given. For example, SA Murraylands' gross regional product is estimated to increase by 1.4 per cent as a result of the increased ADSL coverage.

The third column in Table 5.8 gives the estimated associated employment increase. The total across all regions is a little over 10,000.

It should be noted that there will be many additional benefits that have not been considered. It will increase the benefits of non-exporting firms and the real incomes of households. That is, the results in Table 5.8 are conservative.

#### **5.6.5 Additional ADSL coverage: Toward a cost-benefit evaluation framework**

The benefits given in Table 5.9 will take some years to be realised after the telecommunication investment has been made. Table 5.9 shows an indicative cost-benefit impact nation-wide on the assumption that the additional ADSL coverage costs \$5,000 million. It is assumed that the benefits in Table 5.9 are not realised until year 10. However, the benefits in Table 5.10 are larger than the benefits in Table 5.9 because the benefits in Table 5.10 are national benefits and, therefore, include "spillover" economic benefits from the SOR regions to the nation (which will take the form of a second round regional impact).



### The steps from additional ADSL coverage and higher industry employment

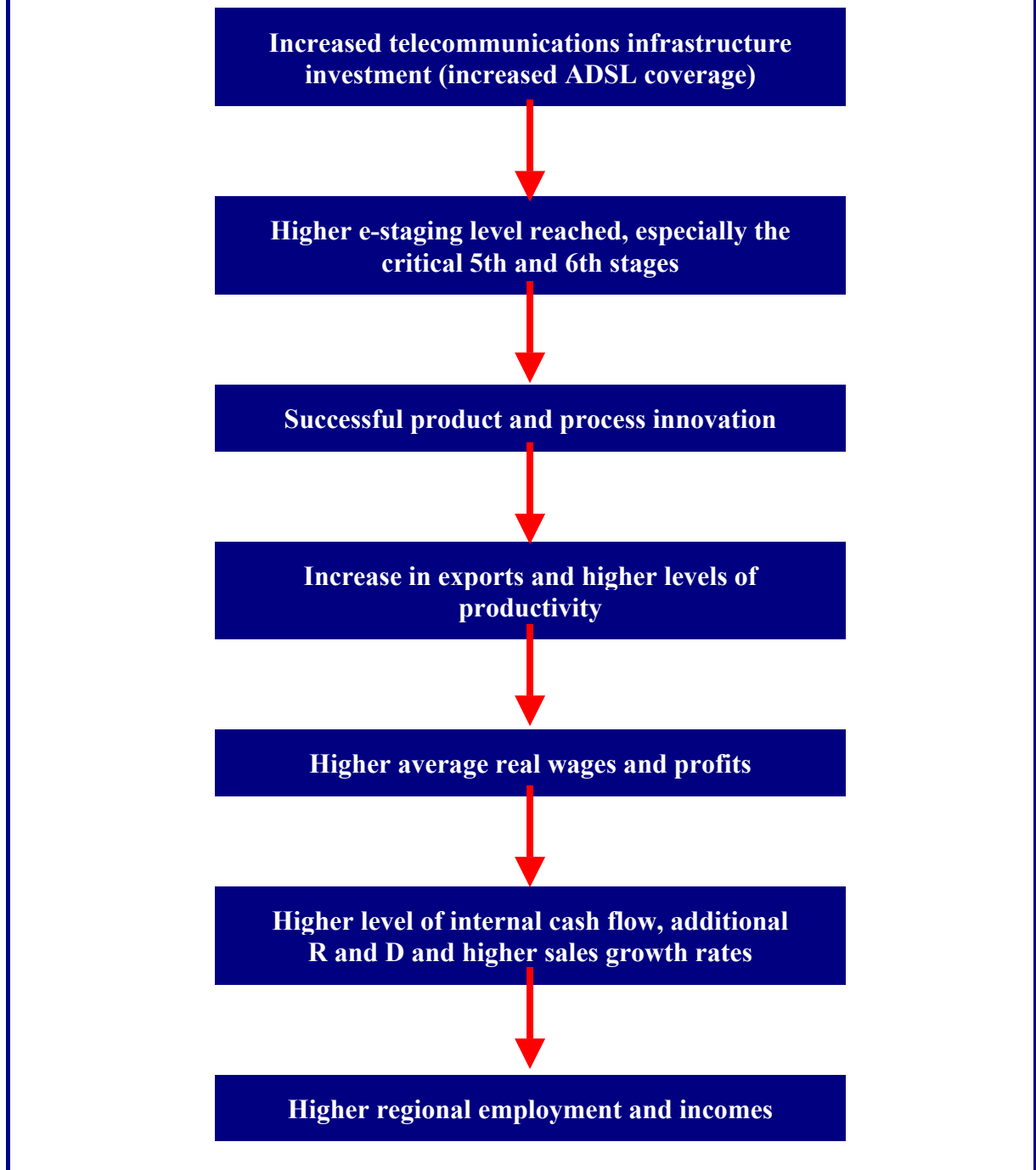


Table 5.10 shows that after 20 years at a cost of \$5,000 million, the internal rate of return is 13.8 per cent. However, if the cost is \$3,000 million the internal rate of return is 20.4 per cent per annum. At a cost of \$8,000 million the internal rate of return is 8.5 per cent. These estimates assume that the economic benefits of additional ADSL coverage in Table 5.10 remains constant as the cost changes.

The internal rate of return estimates are in terms of the benefit (additional gross product) relative to the cost (the additional ADSL investment).

**Table 5.8 Direct and indirect SOR regional benefit of increased ADSL coverage**

	Value added impact (2004 \$m)	Direct and indirect value added as % of GRP	Total direct and indirect employment
NSW Central West	25.3	0.47	336
NSW Far and North West	21.5	0.51	287
NSW Hunter	20.9	0.11	237
NSW Illawarra	5.7	0.05	68
NSW Murrumbidgee	22.2	0.45	299
NSW Murray	12.3	0.34	163
NSW Mid North Coast	15.0	0.24	213
NSW North	26.1	0.50	363
NSW Richmond-Tweed	11.4	0.23	164
NSW South-East	15.3	0.33	225
NSW Central Coast	4.1	0.06	51
Global Sydney	0.0	0.00	0
Sydney Inner West	0.0	0.00	0
Sydney Outer North	1.3	0.01	13
Sydney Outer South West	4.6	0.10	59
Sydney Outer West	4.0	0.06	53
Sydney Mid West	2.8	0.01	34
Sydney South	0.2	0.00	2
Melbourne East	0.8	0.00	9
VIC Gippsland	49.9	0.48	423
VIC Barwon	10.6	0.15	136
VC Goulburn	33.5	0.59	447
Melbourne Inner	0.0	0.00	0
VIC Loddon	14.1	0.33	191
VIC Mallee-Wimmera	34.3	0.67	398
Melbourne North	3.5	0.02	44
VIC Ovens-Hume	11.8	0.41	161
Melbourne South	0.0	0.00	0
Melbourne West	2.8	0.02	35
VIC West	18.9	0.59	254
Melbourne Westport	7.5	0.04	103
VIC Central Highlands	9.7	0.26	137
QLD Pastoral	11.8	0.70	158
QLD Agricultural SW	22.7	0.36	329
QLD Far North	19.2	0.27	265
QLD Fitzroy	24.9	0.31	251
QLD Mackay	32.5	0.53	297
QLD North West	8.8	0.33	58
QLD North	9.6	0.14	122
QLD Wide Bay-Burnett	23.0	0.41	331
QLD West Moreton	9.6	0.23	131
QLD Gold Coast	9.2	0.05	125
QLD Sunshine Coast	4.3	0.07	60

**Table 5.8 Direct and indirect SOR regional benefit of increased ADSL coverage (continued)**

	Value added impact (2004 \$m)	Direct and indirect value added as % of GRP	Total direct and indirect employment
Brisbane North	0.7	0.02	11
Brisbane City	0.0	0.00	0
Adelaide Central	0.2	0.00	1
SA Eyre and Yorke	45.7	0.76	327
SA Murraylands	30.5	1.40	271
Adelaide Plains	4.7	0.04	40
SA South East	15.1	0.72	117
Adelaide Outer	12.9	0.19	108
WA Pilbara-Kimberly	56.5	0.41	145
WA Gascoyne-Goldfields	39.3	0.57	319
WA Wheatbelt-Great Southern	41.1	1.02	532
WA Peel-South West	27.6	0.41	317
Perth Central	0.0	0.00	0
Perth Outer North	2.8	0.03	41
Perth Outer South	1.6	0.01	21
TAS Hobart-South	9.4	0.13	121
TAS North West	10.1	0.39	153
TAS North	10.6	0.29	150
Darwin	13.2	0.28	137
NT Lingiari	34.1	0.58	204
ACT	0.1	0.00	1
<b>Total</b>	<b>921.8</b>		<b>10,047</b>

**Table 5.9 Cost of increased ADSL coverage and the national benefit – indicative schedule**

Years	Investment	GRP benefit (2004 \$m)
1	1000	0
2	1000	38
3	1000	59
4	1000	92
5	1000	143
6		221
7		343
8		531
9		823
10		1276 <sup>(a)</sup>
11		1327
12		1380
13		1436
14		1493
15		1553
16		1615
17		1680
18		1747
19		1817
20		1889

Note: (a) The \$921.8 million adjusted for spillover benefits.

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**Table 5.10 The cost of ADSL coverage and the internal rate of return**

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Investment (2004 \$ million)	Internal rate of return (per cent)
2000	26.4
3000	20.4
4000	16.5
5000	13.8
6000	11.7
7000	9.9
8000	8.5

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## **6. Market conduct, regulation and broadband access in regional Australia**

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The broad outline of the infrastructure provision task was established in the previous chapter. Ninety per cent of the population has broadband access. However, this is done via 35 per cent of the exchanges and covers 1.9 per cent of the nation's area. A further shortcoming is the low speed of many existing ADSL services. The cost of extending ADSL access will be assessed in more detail in this chapter. Initially, however, it is insightful to consider examples and combinations of communication technologies and how market conduct and regulation can influence the efficiency of use of whatever infrastructure is in place.

The proposed full privatisation of Telstra has focussed attention of the role of market conduct and the regulatory regime in complementing infrastructure provision to ensure that efficient communication services are provided.

### **6.1 Public sector leadership, competition and regulation**

In a modern networked economy, telecommunications infrastructure plays a similar role in linking Australian regions to each other and to the world as railways and shipping did in the 19<sup>th</sup> century. If port and railway development had been left to market forces in the 19<sup>th</sup> century, Australian GDP, population and living standards would have been significantly lower now than what is the case. Governments exercised strong leadership in ensuring that the transport infrastructure was in place to develop Australian regions. The same quality of leadership should now apply to telecommunications.

Sadly, it is clear that there has been a failure of government leadership. If the Australian Government had been as aggressive as other governments, such as that of the Republic of Korea, Australia would now be considerably better off in the provision of broadband infrastructure to its citizens.

The political tension created by the full privatisation of Telstra may well provide the catalyst for more aggressive public sector leadership to provide the infrastructure.

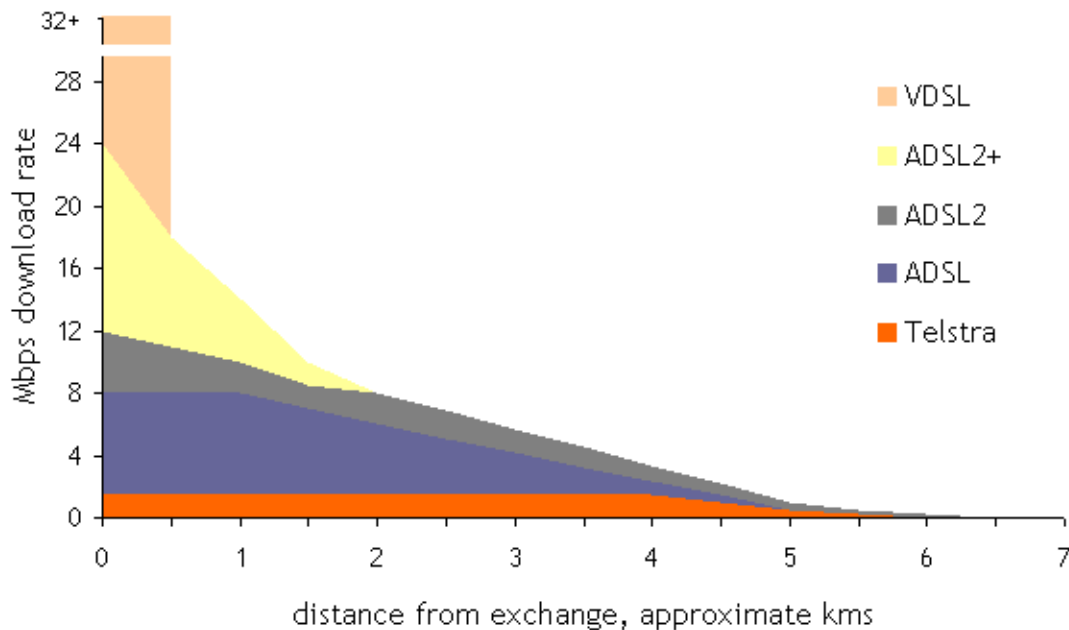
An equally important role for the governments, in a world of private sector infrastructure providers, will be to get the right balance between the regulatory regime and competitive forces to ensure that whatever infrastructure is provided is used efficiently, as a result of good market conduct by the infrastructure providers.

Equality of access would be accepted widely as a good principle that should characterise market conduct and regulatory regime policy. However, in telecommunications markets, equality of access, interpreted as equality of line speed, makes no more sense than requiring all children to spend 20 minutes each way on journey to school, whatever the actual distance between they have to cover.

A significant proportion of Australia's current ADSL broadband infrastructure could be used at 8 Mbit/s by consumers. However, for the standard Telstra broadband service the speed is capped at 1.5 Mbit/s, because that can be given to most customers within the catchment area of an ADSL equipped exchange. The standard for fringe customers in the catchment area thus sets the standard for all. This not only denies access to a better quality service to those who are closer to the exchange, it also underpins a pattern of prices which do not reflect costs and hence lead to inefficient decisions by users. In this respect it has been claimed that the capping of service standards is discouraging ISPs from investing in DSLAM rollouts.

Capping of service delivery standards more generally, reduces the efficiency of the communications infrastructure provided. This outcome reflects the interaction of the cap and the fall-off in performance by broadband technologies with distance from the exchange. This issue has been analysed in detail in Chapter 4. The following figure indicates how the performance standards of various broadband technologies decline with the distance from the exchange. It also indicates how the performance levels of the broadband technologies varies.

### Broadband performance standards and distance from exchange



## 6.2 Market conduct: service capping and efficiency loss

A practical regional example can be designed to show the efficiency loss from the constraint of capping service options available to customers.

Assume the catchment area of an exchange has the following characteristics.

- Regional city with a population 10,000 living within 10 km of a central exchange.
- Density of population reduces considerably around the centre of the town with its outskirts predominantly rural or rural residential populations.
- No additional broadband blocking technology is installed between the population and the central exchange.
- Distance is a perfect proxy for line quality.
- The value or utility (U) derived from bandwidth is proportional to the square root of the bandwidth provided, and can be multiplied by the population of interest to determine the value created in a community. This calculation is a key indicator in the tables presented below.

The following table begins to build a picture of the geography of the town and the various xDSL services that could be provided to it.

Within a 500 metres radius of the exchange a population of 99 people live. This part of town is the highest density, with subsequent circles having a lower density.

The service provider offers two capped services, namely:-

- ❑ Premium at 1.5 Mbps; and
- ❑ Basic at 512 Kbps.

These are similar to the service options currently available in the market, for example Telstra Home and Telstra Max.

The current Telstra Home service (that is, the Basic service here) does not vary with distance from the exchange and as such continues to 5 km (for the sake of argument) and covers a total population of 6,413 people before the service is no longer available. The higher cost, higher bandwidth 1.5 Mbps service (Premium) is available to approximately 3.5 kms from the exchange from which point it degrades to the 0.5 Mbps service at 5 km. In an alternative scenario without the ADSL Cap the bandwidth will vary with distance.

Exchange population coverage				ADSL, service options		
Density pop/km <sup>2</sup>	Additional population	Total Population	Km	Premium	No cap	Basic (512 Kbps)
127	99	99	0.5	1.5	8.0	0.5
123	289	389	1.0	1.5	8.0	0.5
117	461	850	1.5	1.5	7.0	0.5
110	607	1,456	2.0	1.5	6.0	0.5
102	723	2,180	2.5	1.5	5.1	0.5
93	807	2,986	3.0	1.5	4.2	0.5
84	857	3,843	3.5	1.5	3.3	0.5
74	875	4,718	4.0	1.2	1.2	0.5
65	865	5,583	4.5	1.0	1.0	0.5
56	830	6,413	5.0	0.5	0.5	0.5
47	776	7,189	5.5	-	-	-
39	708	7,897	6.0	-	-	-
32	631	8,528	6.5	-	-	-
22	476	9,005	7.0	-	-	-
6	998	10,003	10.0	-	-	-

Table 6.1(a) indicates the performance standards under capped and uncapped service options with ADSL technology. Table 6.1(b) calculates the total utility achieved by the population under the capped and uncapped service options.

**Table 6.1(b) Market conduct and customer utility – ADSL technology**

Exchange population coverage				Total utility by service options		
Density pop/km <sup>2</sup>	Additional population	Total population	Km	Utility Premium	Utility No cap	Utility Basic
127	99	99	0.5	122	281	71
123	289	389	1.0	354	818	207
117	461	850	1.5	564	1,219	330
110	607	1,456	2.0	743	1,487	434
102	723	2,180	2.5	886	1,630	517
93	807	2,986	3.0	988	1,646	577
84	857	3,843	3.5	1,049	1,545	613
74	875	4,718	4.0	959	959	626
65	865	5,583	4.5	865	865	619
56	830	6,413	5.0	594	594	594
47	776	7,189	5.5	-	-	-
39	708	7,897	6.0	-	-	-
32	631	8,528	6.5	-	-	-
22	476	9,005	7.0	-	-	-
6	998	10,003	10.0	-	-	-
Total utility				7,124	11,044	4,589
Average utility per person (AvU)				1.11	1.72	0.72
Coverage loss (total – pop without service * AvU)				3,988	6,182	2,569
Total utility less coverage loss				3,136	4,862	2,020

Clearly the total utility in the system is higher with the cap removed; a complex table is not required to demonstrate this fact. The Basic solution provides total utility of 4,589 units as compared to the 7,124 were all to receive, and pay for, the Premium service. The difference in service levels allows the potential maximisation of revenue through price discrimination. From this commercial point of view, the discount of 35 per cent ( $1 - 4589 / 7124$ ) on service for the generic product may appear reasonable. However the true cost is the discounted utility of the system as a whole from the 11,044 that would be achieved by removing the cap. It need only be remarked that price discrimination like this is only possible where there is monopoly power. Despite the existence of multiple cabling in some Australian urban areas, and the existence of wireless alternatives, there is a considerable degree of natural monopoly in “last mile” telecommunications services – hence the importance of regulation. The cap gained regulatory approval largely on the grounds that it provides a fair average quality service for all, but at the cost of allowing pricing which is not cost-reflective. National Economics suggests that the regulatory regimes should focus on minimising barriers to entry to exchange catchment areas to allow competitors to provide DSLAM equipment and then sell uncapped or cheaper capped services.

In our hypothetical example, a regional community receives total utility that is 59 per cent lower than would be achieved at the same cost in a similar system without capping. In suburban areas the losses are likely to be even greater, with higher proportions of subscribers living close to the exchanges and hence denied speed by the cap.

This dual-capped system is defended on equity grounds. Those who happen to live close to exchanges are denied service that could be freely provided, in order to level them down to those who live five kilometres away. This is not done for any other aspect of transport costs, so why should it be done for telecommunications?



The true equity issue is the denial of all ADSL service beyond five kilometres. To measure this cost we have valued the “coverage loss” presented in the previous table. Coverage loss is defined by the average utility received by those receiving the service, multiplied by the numbers who are not receiving the service.

When we estimate the impact of coverage loss the results are very interesting. It is likely that coverage would be extended by enabling more exchanges, or extending DSLAMs into the unserved area. The potential broadband speed in the unserved areas is therefore much higher than the cap. The true loss to unserved people is accordingly much higher than the loss measured against the cap. The cap is, accordingly, providing a strong political disincentive to expand services to currently unserved households and enterprises.

For whatever reason, the current situation is one where:-

- those receiving services receive a product substantially inferior to the product which could be delivered at no extra cost; and
- those not receiving services miss out on less, disguised as equity for all.

### 6.2.1 Capped broadband services are acting as a strong disincentive to upgrade broadband quality

The poor outcomes associated with capped broadband services extend beyond reducing the efficiency of the communications stock installed and limiting the benefits of increased coverage. It also acts as a disincentive to upgrade the quality of broadband services.

To see this all that needs to be done is to extend our indicative exchange catchment area to the case of ADSL2 and ADSL2+ technologies, which are becoming available in Australia. Assume that the indicative exchange in Table 6.1 can now be upgraded to the two new technologies. In terms of coverage, the new technologies extend the range of the Basic service by 0.5 kilometres, from 5 kilometres to 5.5 kilometres. The result is that an additional 776 people can be covered.

Exchange population coverage				ADSL2/2+ service options		
Density pop/ km <sup>2</sup>	Additional population	Total population	Km	Basic	Premium	No cap
127	99	99	0.5	0.5	1.5	11.0
123	289	389	1.0	0.5	1.5	10.0
117	461	850	1.5	0.5	1.5	10.0
110	607	1,456	2.0	0.5	1.5	9.0
102	723	2,180	2.5	0.5	1.5	8.0
93	807	2,986	3.0	0.5	1.5	7.0
84	857	3,843	3.5	0.5	1.5	4.8
74	875	4,718	4.0	0.5	1.5	3.6
65	865	5,583	4.5	0.5	1.5	1.9
56	830	6,413	5.0	0.5	1.1	1.1
47	776	7,189	5.5	0.5	0.5	0.5
39	708	7,897	6.0	-	-	-
32	631	8,528	6.5	-	-	-
22	476	9,005	7.0	-	-	-
6	998	10,003	10.0	-	-	-

At the fringe of the exchange catchment area the new technologies only deliver at the Basic service standard. Hence, the Cap is maintained in the two service options available.

Comparing Table 6.1(b) with the results in Table 6.2(b), the utility that customers obtain at the Basic service option is 5,144 compared to 4,589, or a gain of 12 per cent. The potential gain with uncapped services is 14,858 compared to 11,044, or a gain of 35 per cent.

Exchange population coverage				Total utility by service options		
Density pop/ km <sup>2</sup>	Additional population	Total population	Km	Basic	Premium	No cap
127	99	99	0.5	71	122	330
123	289	389	1.0	207	354	915
117	461	850	1.5	330	564	1457
110	607	1,456	2.0	434	743	1821
102	723	2,180	2.5	517	886	2045
93	807	2,986	3.0	577	988	2134
84	857	3,843	3.5	613	1049	1877
74	875	4,718	4.0	626	1072	1661
65	865	5,583	4.5	619	1059	1192
56	830	6,413	5.0	594	871	871
47	776	7,189	5.5	555	555	555
39	708	7,897	6.0	-	-	-
32	631	8,528	6.5	-	-	-
22	476	9,005	7.0	-	-	-
6	998	10,003	10.0	-	-	-
Total utility				5,144	8,264	14,858
Average utility per person (AvU)				0.72	1.15	2.27
Coverage loss (total – pop without service * AvU)				3,131	5,029	9,042
Total utility less coverage loss				2,013	3,235	5,816

With the cap in place service does not improve for anyone other than those who previously could not receive DSL services. Thus instead of all people receiving a better service at points closer to the exchange, the Basic service option only improves by a total 555, less than one sixth of the actual benefit to be achieved from the technology. It is not surprising that the excitement with ADSL2/ ADSL2+ in Australia has not been as large as in other areas of the world.

Including the impact of coverage loss, it is not surprising that ADSL2/2+ rollout has not been saleable as an improvement for regional Australia. Total utility would rise from 2,020 with ADSL to 3,131 with ADSL2/2+. However, this is only achieved by capping a system that can produce three times larger benefits for regional cities.

The impacts on investment are also clear. Instead of being able to value improvements derived from capital investment in terms of high payoffs, the scenario is constraining the benefits that can be achieved from technological improvement.

**Table 6.3 A comparison of customer utility and coverage loss by ADSL technologies**

Service option	Total utility	Average utility per person	Total less coverage loss
ADSL, Premium	7,124	1.11	3,136
ADSL, No cap	11,044	1.72	4,862
ADSL, Basic	4,589	0.72	2,020
ADSL2 / 2+, Premium	8,264	1.15	5,029
ADSL2 / 2+, No cap	14,858	2.07	9,042
ADSL2 / 2+, Basic	5,144	0.72	3,131
<b>Benefits of moving to ADSL 2/2+</b>			
Basic	555	0.00	1,111
Premium	1,140	0.04	1,893
No cap	3,814	0.35	4,180
<b>Utility loss as compared to No cap service (per cent)</b>			
ADSL, Basic	-65		
ADSL2 / 2+, Basic	-68		

Table 6.3 summarises the results from Tables 6.1 and 6.2. The table shows that using the Basic service as the standard with ADSL2/2+ technologies, the total utility loss approaches 70 per cent.

The analysis can be extended to VDSL technologies examined in Chapter 3. In such circumstances VDSL equipment would be installed in the exchange to cover the most densely populated areas close to the exchange, assuming the market for this premium service could be justified on commercial grounds.

The table below updates the technology provided and compares to the two previously outlined above. The scenario is referred to as VDSL Add + ADSL 2/2+ No cap. The total utility in the system rises again from 14,585 to 15,979, a large result considering the small population covered by the new services.

**Table 6.4 Customer utility VDSL technologies**

Exchange population coverage				ADSL bandwidth and utility		
Density pop/ km <sup>2</sup>	Additional population	Total population	Km	VDSL add + ADSL 2/2+ no cap	ADSL 2/2+, no cap	Utility (VDSL add, no cap)
127	99	99	0.5	32.0	11.0	562
123	289	389	1.0	24.0	10.0	1,418
117	461	850	1.5	16.0	10.0	1,843
110	607	1,456	2.0	9.0	9.0	1,821
102	723	2,180	2.5	8.0	8.0	2,045
93	807	2,986	3.0	7.0	7.0	2,134
84	857	3,843	3.5	4.8	4.8	1,877
74	875	4,718	4.0	3.6	3.6	1,661
65	865	5,583	4.5	1.9	1.9	1,192
56	830	6,413	5.0	1.1	1.1	871
47	776	7,189	5.5	0.5	0.5	555
39	708	7,897	6.0	-	-	-
32	631	8,528	6.5	-	-	-
22	476	9,005	7.0	-	-	-
6	998	10,003	10.0	-	-	-
Total utility				15,979		
Average utility per person (AvU)				2.06		
Total utility less coverage loss (total – pop without service * AvU)				9,725		

Once again, part of the problem is one of expectations. The improved average service means that those without any service appear to suffer more, however the Total Utility less Coverage Loss has still increased. The movements are summarised in Table 6.5.

Service	Total utility	Average utility for Premium	Total less coverage loss
ADSL, Basic	4,589	0.72	2,020
ADSL2 / 2+, No cap	14,858	2.07	9,042
VDSL plus ADSL2 / 2+, No cap	15,979	2.22	9,725
<i><b>Benefits or addition of VDSL</b></i>	<i><b>Change</b></i>	<i><b>Average utility for Premium change</b></i>	<i><b>Revised total benefit (loss)</b></i>
To population of 850 receiving VDSL	1,121	1.32	3,833
To remaining 6,413 receiving ADSL	0	0.00	12,156
Increased coverage loss for 2,814 without service	-439	-0.15	-6,254

For VDSL technologies in Australia, a regional city of the size and configuration of our indicative exchange would be achieving a utility of 4,589 as compared to a possible 15,979. Accounting for coverage loss, the value attributable to broadband deployment is 2,020 compared to a possible 9,725. It is not surprising that broadband has not been a bigger issue in Australia, for the simple fact is that current communication market conduct does not give customers an opportunity to understand the true value of broadband.

## **6.2.2 Capped services options limit the benefits from investment to increase exchange coverage**

Chapter 4 considered a range of technologies available to expand broadband coverage beyond current 5 to 6 kilometre limits. Capped services options limit the total benefits gained from the investment in expansion strategies.

From Chapter 4, coverage more than 6 kilometres from the exchange can be achieved by using fibre optic from the exchange. That is, through the strategic deployment of fibre those previously up to 5.5 kms from the exchange now average a maximum distance of only 3.5 kms from the exchange. Those between 6 and 7 kilometres would have services at higher than 1 Mbps.

Those between 7 and 10 kilometres could receive on average the 0.5 Mbps service. This could be provided by wireless solutions, or in the case of small settlements, CMUX type units. For farming communities a range of bonded Basic services or satellite would currently be viable. VDSL services remain in place as per the previous scenario and hence provide premium services close to the exchange.

**Table 6.6(a) Bandwidth availability options and increased coverage investments**

Exchange population coverage				Bandwidth availability		
Density pop/ km <sup>2</sup>	Additional population	Total population	Km	VDSL add + ADSL 2/2+ no cap	Increased coverage uncapped services	Increased coverage Basic capped services
127	99	99	0.5	32.0	32.0	0.5
123	289	389	1.0	24.0	24.0	0.5
117	461	850	1.5	16.0	16.0	0.5
110	607	1,456	2.0	9.0	9.0	0.5
102	723	2,180	2.5	8.0	8.0	0.5
93	807	2,986	3.0	7.0	7.0	0.5
84	857	3,843	3.5	4.8	4.8	0.5
74	875	4,718	4.0	3.6	4.8	0.5
65	865	5,583	4.5	1.9	4.8	0.5
56	830	6,413	5.0	1.1	4.8	0.5
47	776	7,189	5.5	0.5	4.8	0.5
39	708	7,897	6.0	-	3.6	0.5
32	631	8,528	6.5	-	1.9	0.5
22	476	9,005	7.0	-	1.1	0.5
6	998	10,003	10.0	-	0.5	0.5

**Table 6.6(b) Changed utility by capped and uncapped service options – increased coverage investments**

Exchange population coverage				Customer utility		
Density pop/ km <sup>2</sup>	Additional population	Total population	Km	VDSL add + ADSL 2/2+ no cap	Increased coverage uncapped services	Increased coverage Basic capped services
127	99	99	0.5	562	562	71
123	289	389	1.0	1,418	1,418	207
117	461	850	1.5	1,843	1,843	330
110	607	1,456	2.0	1,821	1,821	434
102	723	2,180	2.5	2,045	2,045	517
93	807	2,986	3.0	2,134	2,134	577
84	857	3,843	3.5	1,877	1,877	613
74	875	4,718	4.0	1,661	1,918	626
65	865	5,583	4.5	1,192	1,895	619
56	830	6,413	5.0	871	1,819	594
47	776	7,189	5.5	555	1,700	555
39	708	7,897	6.0	-	1,343	507
32	631	8,528	6.5	-	870	452
22	476	9,005	7.0	-	499	341
6	998	10,003	10.0	-	715	715
Total utility				15,979	22,459	7,158
Average utility per person (AvU)				2.22	2.25	0.72
Total utility less coverage loss (total – pop without service * AvU)				9,725	22,459	7,158

The results by service option are given in Tables 6.6(a) and 6.6(b).

With full coverage to 10 kilometres we no longer have coverage loss, and the entire system without capping produces a total utility of 22,459. The cost of providing this solution may not be cheap, as the total area coverage by a radius of 10 kilometres versus a radius of 5.5 kilometres is well over three times as large. However strategic positioning of infrastructure would achieve the using of only currently available technologies. For example, VDSL infrastructure is already enabled throughout Canberra, and examples from the rest of the world highlight how this could be achieved. The important gains are not only to those at the edges of the system. The improvement for those living with the 5.0 to 5.5 radius are particularly large.

Table 6.7 summarises the outcome for the coverage expansion case versus the VDSL plus ADSL2/2+ case. With capped Basic services the total utility less coverage loss goes from 2,020 to 7,158, or a three and a half fold increase. However, with uncapped services the total net utility gain is 22,459, or 130 per cent greater than the Basic service capped utility. The fundamental point, however, is that the utility gain for uncapped services is significantly greater than simply the utility gain to those receiving the coverage. For uncapped services, the utility gain for receiving the coverage is 3,427, while the overall utility gain is 22,459 – 15,979, or 6,480. That is, half the utility accrues to those newly covered, while the other half accrues to those already covered.

Service	Total utility	Average utility per person	Total utility less coverage loss
VDSL plus ADSL2 / 2+, uncapped services	15,979	2.22	9,725
VDSL plus ADSL2 / 2+, capped Basic services	4,589	0.72	2,020
Expand uncapped service	22,459	2.25	22,459
Expand, capped Basic service	7,158	0.72	7,158

### **6.3 Local area institutions for improving telecommunication infrastructure – a case study**

To understand the impact of current policies and how future improvements could be delivered the report utilises a real life regional example.

The example of Penshurst and its surrounds in Western Victoria (VIC West), in an area close to the author's regional home of Hamilton, is utilised. VIC West has been identified in the report as having low levels of ADSL coverage.

Penshurst is a small village located 275 km west of Melbourne and 31 km south-east of Hamilton on the Hamilton Highway. It is the centre of a large dairying, agricultural and pastoral district on a lava plain near the foot of an extinct volcano named Mt Rouse, pictured below.



Penshurst has a declining population and has seen many of its banks, hotels and churches gradually close and its services withdrawn. The town however has undertaken beautification projects, the restoration of old buildings and is now a great place to stop for a coffee, and as a base to explore the volcanic features of the area. It remains a viable residential option with excellent services provided in Hamilton.

There are 19 exchanges in the ABS Statistical Local Area of the Shire of Southern Grampians – Balance, in which Penshurst is located. One exchange in Dunkeld is ADSL enabled. Dunkeld is a picturesque town at the southern end of the Grampians which is now famous for its refurbished hotel pictured below.



The remaining exchanges in the area include Branxholme, Bulart, Byaduk, Byaduk North, Cavendish, Dunkeld, Gazette, Glenisla, Glenthompson, Hensley Park, Mirranatwa, Mooralla, Penshurst, Tabor, The Gums, Victoria Valley, Wannon, Woodhouse, and Yulecart.

Four hundred people live in Dunkeld and less than 500 live in Penshurst with all other settlements having smaller populations still. Incomes are not particularly high especially in Penshurst and the ageing of an agricultural employment base in the dispersed region reduces the potential market for residential broadband. However, as noted in the Chapter 3 research into business demand, the export-exposed sectors which dominate this region are a prime market for broadband, and that better utilising ICT technologies will increase export potential.

The remaining exchanges include those originally designed for the soldier and other closer settlement schemes of the early to mid 20<sup>th</sup> century and include Hensley Park, Woodhouse and The Gums. Other settlements were based on religious institutions such as at Tabor. Branxholme, a very small town was a junction in the railway network of the early 20<sup>th</sup> century. A railway connected Penshurst to the Victorian network and the once extensive network of railway stations in the region has provided the locations for some of the remaining exchanges. The Victoria Valley, Glenisla, Mirranatawa area is an attractive part of the region and is nestled into the base of the southern end of Grampians. Apart from being an attractive place to well-heeled farmers and city-based professionals, it remains a viable agricultural area.

The total population of the region is 5,258 with well over 4,000 people living in the predominantly rural areas. Removing Penshurst and Dunkeld from the equation, the average number of people per exchange falls to less than 200, or approximately 70 houses. Many of these houses will be sufficiently far from their own small exchange to preclude current ADSL technology. It is also likely that many houses face broadband blocking technologies between them and their exchange.

The regional city of Hamilton, which can be reached by a drive of less than 30 minutes from all of the locations, is currently experiencing strong growth associated with expanding mineral sand operations in the area. The city is also experiencing growth associated with the “Nightwatchmen” trends identified in previous reports. The city has strong education, business services and health infrastructure for a town of its size.

Its ability to attract and retain the required skilled workers for the new mining industry as well as its key social institutions partly rely on the success of providing attractive residential options. Many of these options are located on the outskirts of the city and in a number of places on the exchange list presented above.

So how can the coverage of broadband improve?

*Only through a well co-ordinated strategic assessment of the infrastructure requirements.*

Even without such co-ordination a number of other policies will assist.

In time the communities of Cavendish, Penshurst, Branxholme and Glenthompson can expect to receive xDSL services as a result of the Victorian government’s “optic fibre” to schools policy. The policy seeks to promote the deployment of high grade broadband (assumed to be up to 8 Mbps) to all Victorian primary schools. For this to occur, the following technological innovations would likely be required.

- Where the school is located within one to two kilometres of the local exchange the installation of ADSL or ADSL2 DSLAM would allow dedicated services to be provided across copper to the school.
- On the basis of the xDSL services installed in the local exchanges the schools are likely to receive SDSL services which would assist with the delivery of real-time video conferencing.



- ❑ Where the school is a significant distance from the exchange or where the quality of service from the exchange was not appropriate, an FTTN solution to a closer point would be required.

While the Victorian policy has perhaps been oversold as “fibre to the school”, where it actually is a fibre to the local exchange policy, it is nonetheless a great example of moving to “deep fibre” in Australia.

Under the scheme, Telstra will upgrade 700 exchanges, 600 of them in regional Victoria, to handle very high-speed broadband traffic. Part of Victoria's wider Telecommunications Purchasing and Management Strategy (TPAMS), the SmartONE project will provide 4 Mb fibre links to all government schools in the state within four years.

The example provided by the Victorian policy is used as a basis for pricing a “future proof” telecommunications scenario in Section 6.3.

Apart from the schools program there will remain a significant number of exchanges without broadband, servicing a relatively small number of people. At this stage we need to make sure that the telecommunications authorities and Telstra can be co-ordinated both internally and externally to find a solution. Simply providing satellite to all who can afford it in this area is not the best solution. After all, most if not all the population lives within 50 km of a major regional city.

Coordinating infrastructure provision is the key. Telstra through its separate mobile, broadband, wireless and copper businesses will have four different ways to assess this region on the basis of their infrastructure solution. However the optimal solution is likely to require a combination but not duplication of possible services. For instance consider the following.

- ❑ The Victoria Valley, making use of the natural terrain could be serviced by fibre-optic deployed on power lines joining together a small series of local area wireless base stations positioned north-south through the Valley.
- ❑ This could remove the need for the small exchanges and the entire copper systems to the small number of homes in the area. The cost saving in terms of maintenance of the copper lines could be used to fund the wireless options. At the same time, as an incentive, the mobile network could be improved.
- ❑ Further to the south the Mount Rouse and other extinct volcanoes could be used to site a more extensive wireless local loop (WLL). By connecting significant fibre capacity to the central locations, the full capacity of wireless systems to offer dedicated high bandwidth services could be included. Clients for such services would include the range of agricultural service business and government research stations in the area.
- ❑ The high cost of maintaining copper connections in this region, not to speak of others with similar terrain, present a significant ongoing cost to Telstra, mandated by its Universal Service Obligation. There are obvious savings in a strategic solution that not only reduces the cost of operations, but increases the values of services.
- ❑ By extending fibre optic on key routes that connect the major towns, as part of the Optic fibre to the schools program, there is also a range of households who could be assisted by the deployment of cabinet based broadband infrastructure at various points on its path.

The example above is designed purely for exposition of the types of solutions possible when strategic parameters of success are applied.

## 6.4 The cost of extending ADSL coverage

The results of the ADSL coverage analysis in Chapter 5 along with the development of the economic cost of the current infrastructure solution highlights the importance of the credo developed in Chapter 4.

*“Copper is our friend, it could already deliver **much** better broadband than we currently get, but it does depend on our distance from fibre-optic connected DSL equipment and the number of people demanding the services. **Wherever people congregate in sufficient numbers VDSL should be able to deliver Australia with world competitive technology.** Old technologies sometimes block our access but can and should always be fixed.”*

The element of the credo which notes that “Old technologies sometimes block our access but can and should always be fixed” is a vital element of our broadband future. Maintaining access prices for Telstra and rewarding investment in an appropriate manner could ensure that the broadband blocking issues are resolved.

It is clear from the FTTN analysis that in the long run it will be vital for as many Australians as possible to be as close as possible to “fibre-optic connected DSL equipment”. In regional Australia, in most cases, the FTTN solutions will be at the exchange, although, as the Peshurst/Hamilton example has shown, this may involve the rationalisation of exchanges.

**Table 6.8 Current ADSL enabled exchanges by state**

State	ADSL enabled exchanges	Total exchanges	Percentage of area covered	Percentage of population covered
Victoria	450	1,089	10.3	91.6
Queensland	377	927	3.3	87.8
New South Wales	578	1,565	3.6	92.3
Tasmania	66	203	2.9	77.8
Western Australia	162	647	0.9	88.2
Northern Territory	13	47	0.1	57.1
Australian Capital Territory	17	21	99.9	99.4
South Australia	110	515	0.9	88.5
<b>Australia total</b>	<b>1,773</b>	<b>5,014</b>	<b>1.9</b>	<b>90.0</b>

The cost of connecting the remaining exchanges in each state is estimated using an algorithm that considers the following:-

- area of the state covered by ADSL, along with the area of the state remaining;
- number of exchanges covered and number of exchanges remaining;
- the correlated position of settlements, that is, the fact that a single settlement will tend to occur close to others;
- the estimate fibre per exchange required in kms is only an estimate; and
- the estimated price of \$10,677 per km is based upon a Department of Education Science and Training (DEST) study “Innovative Bandwidth Arrangements”, Appendix 3: Cost-benefit Analysis of Fibre Optic Investment by the Commission Scolaire des Affluent, which is based on a Canadian Study.

**Table 6.9 The cost structure of extending ADSL coverage**

State	Remaining exchanges	Estimated fibre per exchange, km	Kms of fibre to be installed	Cost @ \$10,677 per km, \$m
Victoria	639	10	6,326	68
Queensland	550	29	15,895	170
New South Wales	987	18	17,401	186
Tasmania	137	17	2,356	25
Western Australia	485	46	22,310	238
Northern Territory	34	195	6,630	71
Australian Capital Territory	4	7	28	0.3
South Australia	405	31	12,377	132
<b>Australia total</b>	<b>3,241</b>	<b>26</b>	<b>83,323</b>	<b>890</b>

The total cost of the fibre-optic solution is anticipated to be less than \$1 billion. Many exchanges will not require a fibre-optic solution as they could be either re-routed through other exchanges. In the case of very isolated exchanges and their connected households unlikely to be serviced by xDSL technology, satellite solutions are likely to remain the most viable solution.

Once the fibre-optic connections to the exchanges have been established, there are many possibilities as to the manner in which the majority of households in the region are serviced. As noted in this chapter, solutions should include VDSL, ADSL variants, a WLL in dispersed regions and a range of DSL extension technologies such as *expandsl* or other mini-MUX systems to expand the coverage.

To determine the cost we have chosen to utilise an estimate based on a long-term maximum likely market penetration of 68 per cent. Fixed costs per exchanges for xDSL slots are assumed to be \$140,000. This is a very conservative estimate appropriate for either a substantially larger capacity than would be required, or an appropriate allowance for the incremental development over the medium-term.

The conservatism of the estimates employed are borne out by the comparison of the \$90 million cost allocated to the “optic fibre to the school’s” program which will install fibre solutions to at least 70 per cent of the remaining exchanges in Victoria. The future proofing elements of this analysis include costings with significant allowances for the deployment of growth capacity and backhaul capacity.

The estimates also allow for a number of wireless local loops to be established in a region that has high copper maintenance costs, and/or a large number of exchanges.

The timetable for spending the \$937 million would not need to coincide with the deployment of the optic-fibre itself. The vital element in the planning of such an investment would be to co-ordinate the various technology solutions.

**Table 6.10 Cost of installing broadband technologies on remaining exchanges**

State	Remaining exchanges	Long-term DSLAM ports required, millions	Cost of xDSL infrastructure, \$m	Total cost of future proofing, \$m
Victoria	639	0.101	189	256
Queensland	550	0.114	190	359
New South Wales	987	0.126	263	448
Tasmania	137	0.026	45	70
Western Australia	485	0.056	124	362
Northern Territory	34	0.023	27	98
Australian Capital Territory	4	0.001	1	1
South Australia	405	0.044	100	232
<b>Australia Total</b>	<b>3,241</b>	<b>0.491</b>	<b>937</b>	<b>1,827</b>

One of the remaining contingencies that must be allowed for in the infrastructure development costs are those associated with housing and laying down the optic fibre. Allowances for the laying of optic fibre in trenches and the associated right of way costs for completing this task were included in the original \$10,677 per km price. However this price assumed a significant amount of the fibre-optic was bundled in power lines, which is cheaper than burying fibre.

It is likely that no further allowance will need to be made, especially considering that private and corporatised electricity owners in Australia will be grateful for the opportunity to help fund ongoing maintenance of power lines through the inclusion of fibre optics. However for reasons of conservatism the following tables allows for an increased amount of fibre-optic fires being trenched.

**Table 6.11 Future proofing costs by state**

State	Infrastructure cost of future proofing, \$m	Kms of fibre to be installed	Percentage underground	Additional optic fibre installation costs @	Total cost, \$m
Victoria	256	6,326	62.4	138	395
Queensland	359	15,895	35.7	199	558
New South Wales	448	17,401	49.8	303	752
Tasmania	70	2,356	50.4	42	112
Western Australia	362	22,310	18.9	148	510
Northern Territory	98	6,630	6.0	14	112
Australian Capital Territory	1	28	68.6	1	2
South Australia	232	12,377	33.9	147	379
<b>Australia total</b>	<b>1,827</b>	<b>83,323</b>		<b>991</b>	<b>2,818</b>

The total cost of future proofing the remaining areas of Australia is likely to be as low as \$2.8 billion, or to round up \$3 billion. This amount does not include the long-run maintenance costs of running such a system, and as such would assume that the market for such products was well developed and that the marginal cost inherent in the system could be met with appropriate revenues. From the analysis of Chapter 5, this could at least gain the nation an internal rate of return of 20 per cent per annum in terms of increased gross product over 20 years.

The challenge facing governments is this:-

1. first, to ensure the telecommunications infrastructure is available in regional Australia, as determined by the national interest; and
2. secondly, the market conduct, in terms of the determinants of the use of the infrastructure provided, is efficient.

That is, all the productivity enhancing potential from the telecommunications infrastructure can be realised. A wide combination of policies are likely to be required to achieve this.

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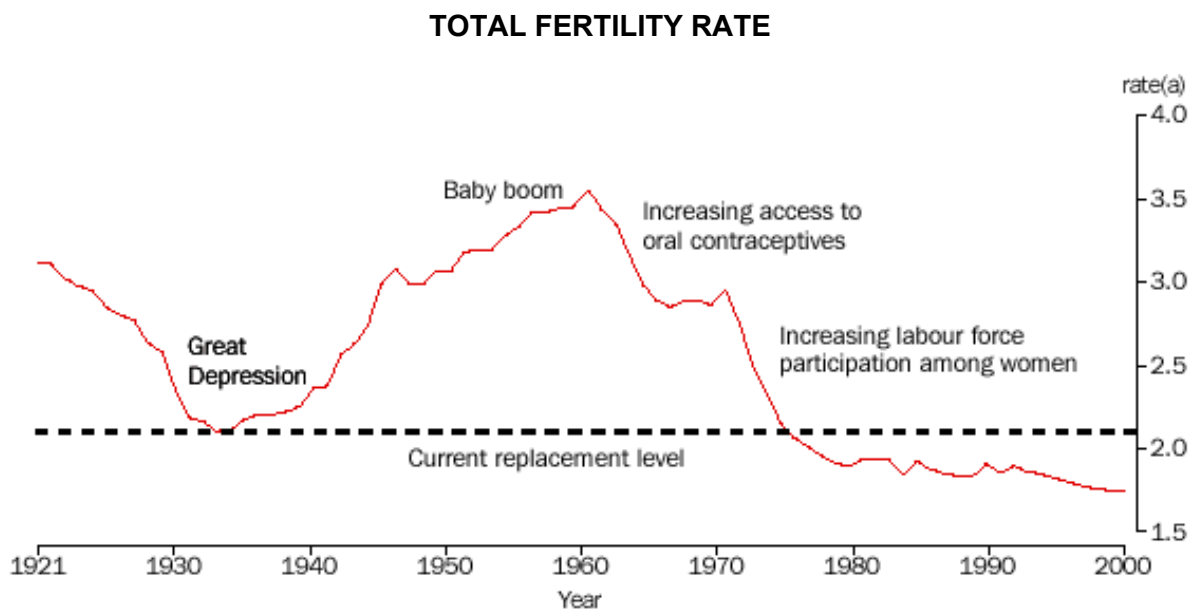
## 7. Baby bounce and fertility in Australia over the last decade

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### 7.1 Introduction

As discussed previously in Chapter 5, there are distinct regional differences for population sustainability. One of the key variables in sustaining or growing a regions population is its fertility rate. This chapter discusses what may be a new phenomenon in the population cycle. The long continued trend of falling fertility rates has altered; we have experienced a 'baby bounce'.

Over the course of the 20<sup>th</sup> century, Australian fertility reflected changing social and economic conditions. During the Great Depression of the 1930s fertility was relatively low. This bottomed-out in 1934 when the average fell to 2.1 babies per woman. At the height of the 'baby boom' in 1961, the average peaked at 3.5 babies per woman. Since then, fertility has declined. It fell significantly during the early 1960s and again during the 1970s, and reached replacement levels of 2.1 babies per woman in 1976. In the 1980's, the total fertility rate stabilised, before resuming a more gradual decline during the 1990's. The 2000 fertility rates of 1.7 babies per woman are the lowest on record.<sup>5</sup>



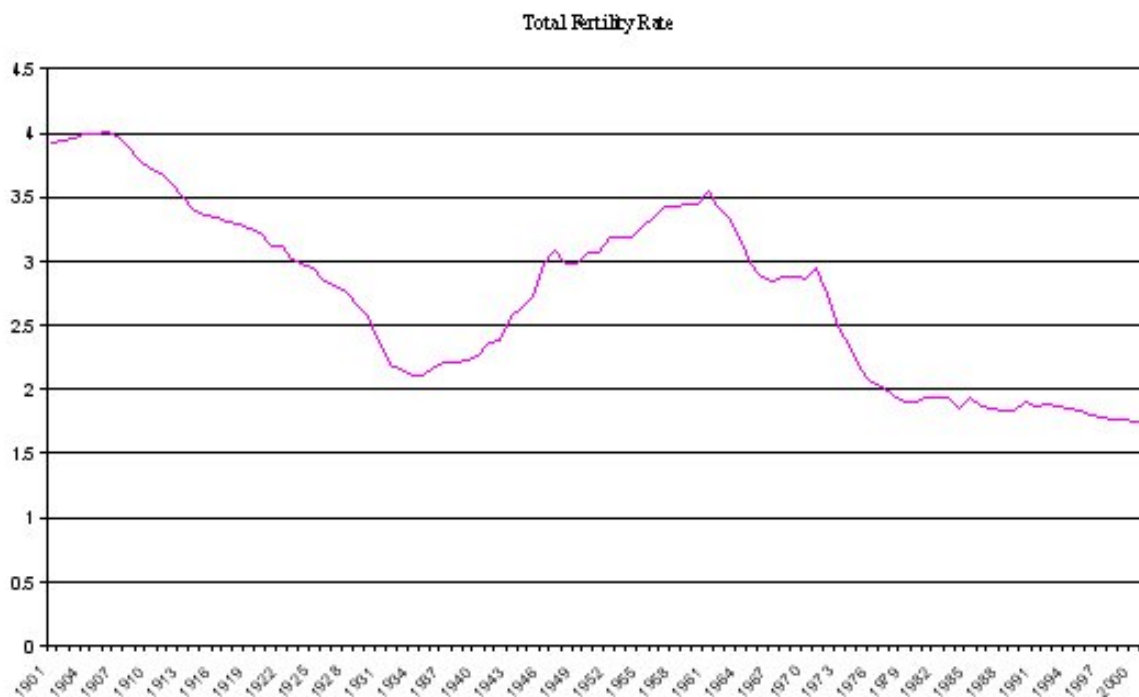
Note: (a) Babies per woman.

Source: Births, Australia, 2000 (ABS Cat. no. 3301.0).

Explanations of fertility decline have centred around the far-reaching social and technological changes that have occurred in Australia, as in other developed countries, since the mid-20<sup>th</sup> century.

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<sup>5</sup> <http://www.abs.gov.au/Ausstats/abs@.nsf/0/d57dc522cdacb011ca256bcd008272ed?OpenDocument>.



Source: Australian Bureau of Statistics, Year Book Australia (Catalogue no. 1301.0) 2003, p. 125.

## 7.2 The baby boom, 1935 - 1961

The increase in the fertility rate between 1935 and 1961 included the post-World War II baby boom. Some of the key reasons for the baby boom include:-

- Birth catch-up – births were postponed during the Great Depression and World War II;
- The marriage boom – included a reduction in the average age at first marriage of women and an increase in the proportion of women marrying. More than three-quarters of the 'baby boom' has been attributed to the 'marriage boom';
- Net international migration – the effects of the post-war acceleration in net international migration which was highly selective of young adults; and
- Medical advancements – reduced involuntary childlessness due to increased knowledge of sub-fecundity and medical treatment of it.<sup>6</sup>

## 7.3 The baby bust, 1961 onwards

The reasons for the decline in the fertility rate from 1961 down to current levels include:-

- Contraceptive pill – introduction of the oral contraceptive pill in 1961;
- Abortion – availability of abortion, effectively on request, following a reinterpretation of abortion law in 1971. This had a particular impact on young women's fertility when combined with increasing job insecurity; and

<sup>6</sup> <http://www.aph.gov.au/library/pubs/CIB/2003-04/04cib01.htm>

- Increased workforce participation for women – Women increased their participation in the labour force from 37 per cent in 1971 to 55 per cent in 2001.<sup>7</sup>

The current low level of fertility in Australia is a result of increasing proportions of women remaining childless and couples restricting their family size to one or two children. Both trends are related to the fact that partnering and childbearing are occurring at later ages than in the past, reducing opportunities to have children and limiting the likelihood of larger families. The median age of Australian mothers at first pregnancy (of the current relationship) resulting in a live birth has risen from 24 years in 1975 to 29 years in 2000.<sup>8</sup>

## **7.4 The international experience**

In the last 20 years the USA and Sweden have experienced baby bounces although also followed by subsequent falls.

In the USA the fertility rate went from 1.8 in 1980-1985 to 2.1 in 1990-1995. The increase has been attributed to the very large inflow of migrants from Mexico. The relatively high level of fertility in the USA also reflects high teenage fertility and access to cheap child care arising from the wage structure and probably also illegal immigration.

In Sweden, the fertility rate went from 1.7 in 1980-1985 to 2.0 in 1990-1995 associated with provision of day care for small children and paid paternal leave.<sup>9</sup>

## **7.5 Baby bounce: What has happened over the last 10 years?**

### **7.5.1 National experience**

In 1996, there were just over 250,000 children aged below one year old in Australia. In 2004, this figure was only marginally lower, however in both 2002 and 2003, the number fell below 250,000.

South Australia had the largest net change between 1996 and 2004, although this difference is less than 2,000. The highlighted cells in the table below show the lowest number of children aged below one for each state in the five years displayed for each state. The years 2002 and 2003 are most common for the minimum with Victoria the only state not to record its lowest total in either of these years, however Victoria recorded almost the same result for each of the three years 2001 through to 2003.

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<sup>7</sup> *ibid.*

<sup>8</sup> *ibid.*

<sup>9</sup> *ibid.*



	1996	2001	2002	2003	2004
NSW	86,856	87,254	83,272	84,097	86,349
VIC	61,182	60,037	60,215	60,188	62,208
QLD	47,942	49,383	47,740	47,521	48,965
SA	19,123	17,644	17,545	17,286	17,443
WA	25,286	24,792	23,860	23,726	25,173
TAS	6,688	6,180	5,838	5,769	5,805
NT	3,698	3,670	3,647	3,720	3,692
ACT	4,463	4,040	3,976	4,012	4,204
<b>TOTAL</b>	<b>255,238</b>	<b>253,000</b>	<b>246,093</b>	<b>246,319</b>	<b>253,839</b>

More important however is the proportion of the total population aged below one year old. South Australia clearly has the lowest proportion with this age category falling from 1.28 per cent of the population in 1996 to a low of 1.13 per cent in 2003. On the other hand, the Northern Territory has by far the highest proportion of below one year olds with over 1.8 per cent of the population in this age category. This is more than half a percent higher than the next highest state, the ACT. These results are due to the high indigenous population who on average have far more children than the national average. This is discussed in more depth later.

Once again, the majority of the lowest results have occurred in 2003. Only Tasmania experienced its lowest proportion in 2004.

	1996	2001	2002	2003	2004
NSW	1.35	1.33	1.26	1.26	1.28
VIC	1.31	1.25	1.24	1.22	1.25
QLD	1.37	1.36	1.29	1.25	1.26
SA	1.28	1.17	1.16	1.13	1.14
WA	1.37	1.30	1.24	1.22	1.27
TAS	1.42	1.31	1.24	1.21	1.20
NT	1.92	1.86	1.84	1.87	1.85
ACT	1.43	1.27	1.24	1.24	1.30
<b>TOTAL</b>	<b>1.35</b>	<b>1.30</b>	<b>1.25</b>	<b>1.24</b>	<b>1.26</b>

### **7.5.2 The Northern Territory experience – skewed results**

The Northern Territory has by far the highest proportion of 0 year olds of all the states and territories. This is due to the unique population dynamics of the Northern Territory. The table below shows that nearly one-quarter of the Northern Territory population consists of indigenous Australians. This is compared to a national average of just over two percent and Western Australia, the state with the second highest proportion of indigenous Australians, which has less than 3.5 per cent. Due to a range of social and historical issues, the indigenous population on average have about twice as many children as non-indigenous. It is due to this population dynamic that the Northern Territory clearly exceeds the proportions of the other states, and as such skews the results this research.

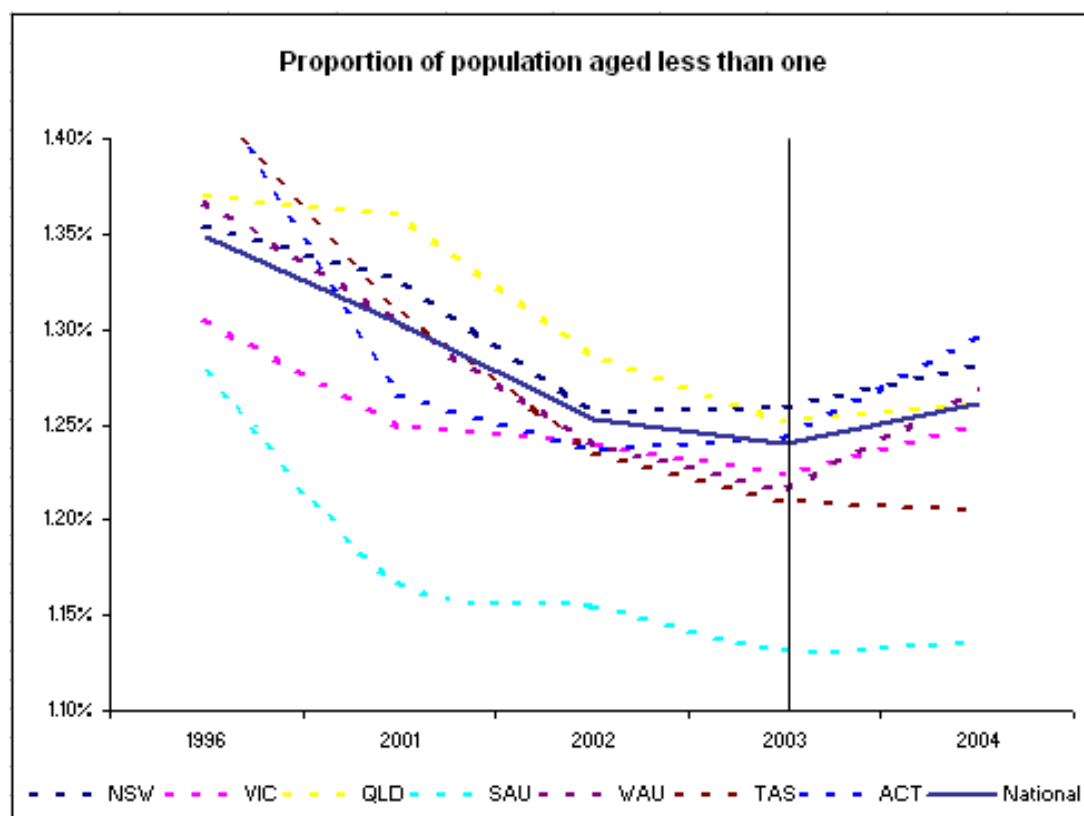
**Table 7.3 Indigenous Australian as proportion of total population**

	Per cent
NSW	1.88
VIC	0.54
QLD	3.09
SA	1.60
WA	3.45
TAS	3.16
NT	24.11
ACT	1.15
<b>TOTAL</b>	<b>2.16</b>

### 7.5.3 We may have bottomed out!

The graph below shows the proportion of the population aged less than one year old for Australia and each of the states (except the Northern Territory). The trend across the country is clear. Nearly all states experienced their lowest share of those aged less than one year old in 2003. The trend since 1996 has been consistently downwards until 2003 however in 2004, the trend changed and the proportion of the population aged in this age bracket began to turn upward.

It may seem premature to say the momentum has swung and that it is likely that the trend experienced in the last 12 months will continue, however, there is no denying the fact that over the past decade, this is the first time such a distinct upward trend has appeared.



#### **7.5.4 Regional experience: The last decade**

Table 7.4 shows the proportion and growth of those aged less than one over the last decade. Comparison between the proportions of the population aged below one in 1996 is made to the proportion in 2004 to ascertain whether this age cohort has grown at the same rate as the rest of the population. Between 1996 and 2004, only 10 of the 64 regions had higher growth in this age cohort than their total population.

##### ***Top ten regions***

As mentioned previously, only ten regions had higher growth in the less than one year old age cohort compared to their overall population. With the exception of NT Lingiari, which is ranked number two, and covers a large remote area with a number of aboriginal communities, all the regions in the top 10 can be characterised as Metropolitan regions. The Sydney metro regions dominate the top ten with five of them in the top ten. Two Melbourne regions, one Brisbane, one Perth metro region and one Northern Territory region round out the top ten. Those regions that are just outside the top 10 are also metro regions with three Melbourne metro regions and an Adelaide metro region ranking 11 to 14.

##### ***Why over the last decade have metro regions' population aged below one grown faster than non-metro regions?***

As discussed previously, the population dynamics that we currently face are the result of a range of historical outcomes and social issues. As fertility rates have continued to fall Australia-wide, and the baby-boomer bubble has dominated the population distribution, metropolitan regions have been the only regions to grow their young population at the same pace as the rest of the population. The regions who haven't been able to grow their younger population at the same rate as their total population have suffered the effects of the ageing population and the social change that has seen the average number of children women are likely to bear fall significantly.

One of the key reasons the metropolitan regions have been able to grow their younger population (in terms of the proportion) is that these are the regions that already have the lowest share of the population aged below one. In 1996, aside from NT Lingiari and Sydney Mid West, all the regions in the top ten had a lower proportion of those aged less than one than the national average. By 2004, Sydney South and Perth Central had a higher proportion than the national average and the other regions had closed the gap considerably. One of the major issues faced by those contemplating having children is the opportunity cost associated with such a decision. As such, the decision to have children can be delayed and in some circumstances, may not be revisited. Therefore, the bounce in these regions may be due to the fact that the delay of having children in the past has finally caught up.

**Table 7.4 SOR regions, growth in 0 year olds 1996-2004**

Rank	SOR Region	% Growth pop 1996- 2004	% Growth <1 y.o. 1996-2004	% Pop <1 y.o. 1996	% Pop <1 y.o. 2004	Difference 1996-2004
1	Global Sydney	4.0	15.4	1.06	1.18	0.12
2	NT Lingiari	1.2	6.0	1.99	2.09	0.10
3	Sydney Outer North	7.2	16.4	1.10	1.19	0.09
4	Sydney Inner West	5.6	14.3	1.14	1.23	0.09
5	Brisbane City	11.1	19.2	1.16	1.25	0.08
6	Melbourne South	2.2	9.4	1.15	1.23	0.08
7	Melbourne Inner	10.0	18.5	1.00	1.07	0.08
8	Perth Central	4.7	9.2	1.10	1.15	0.05
9	Sydney South	3.6	6.4	1.27	1.31	0.03
10	Sydney Mid West	5.2	5.7	1.56	1.56	0.01
11	Melbourne East	1.8	1.9	1.12	1.12	0.00
12	Melbourne West	11.9	10.7	1.44	1.42	-0.02
13	Melbourne North	4.7	3.3	1.39	1.37	-0.02
14	Adelaide Central	2.1	-0.6	1.01	0.98	-0.03
15	QLD Sunshine Coast	18.3	12.7	1.14	1.09	-0.05
16	Perth Outer North	10.0	2.7	1.40	1.30	-0.09
17	VIC Barwon	8.3	0.4	1.27	1.17	-0.09
18	Melbourne Westport	11.1	3.5	1.44	1.34	-0.10
19	QLD Gold Coast	15.6	6.9	1.33	1.23	-0.10
20	Perth Outer South	8.0	-0.1	1.36	1.26	-0.10
21	Brisbane North	14.8	6.3	1.42	1.32	-0.11
22	VIC Loddon	6.2	-4.2	1.29	1.17	-0.13
23	ACT	3.8	-5.8	1.43	1.30	-0.13
24	Adelaide Plains	3.4	-6.8	1.35	1.22	-0.13
25	NSW Illawarra	6.6	-5.9	1.32	1.16	-0.15
26	TAS Hobart-South	3.1	-8.7	1.36	1.21	-0.16
27	Sydney Outer West	3.0	-7.4	1.61	1.44	-0.16
28	QLD Agricultural SW	7.0	-5.2	1.44	1.27	-0.16
29	Sydney Outer South West	7.1	-3.5	1.69	1.52	-0.17
30	WA Peel-South West	15.0	0.8	1.35	1.18	-0.17
31	VIC Ovens-Hume	4.7	-8.4	1.39	1.21	-0.17
32	NSW Hunter	5.5	-8.3	1.32	1.15	-0.17
33	NSW Richmond-Tweed	6.4	-9.3	1.21	1.03	-0.18
34	WA Pilbara-Kimberly	6.2	-3.9	1.91	1.73	-0.18
35	QLD Fitzroy	3.7	-8.4	1.57	1.38	-0.18
36	NSW Central West	2.6	-10.7	1.44	1.25	-0.19
37	VC Goulburn	6.8	-7.6	1.40	1.21	-0.19
38	NSW Central Coast	7.4	-7.5	1.38	1.19	-0.19
39	Adelaide Outer	4.7	-10.8	1.32	1.12	-0.19
40	Darwin	5.3	-5.9	1.86	1.66	-0.20
41	NSW South-East	8.8	-7.4	1.32	1.12	-0.20
42	QLD Mackay	6.1	-8.1	1.55	1.34	-0.21

**Table 7.4 SOR regions, growth in 0 year olds 1996-2004 (continued)**

Rank	SOR Region	% Growth pop 1996- 2004	% Growth <1 y.o. 1996-2004	% Pop <1 y.o. 1996	% Pop <1 y.o. 2004	Difference 1996-2004
43	VIC Gippsland	3.2	-12.8	1.35	1.14	-0.21
44	SA Murraylands	0.1	-15.0	1.41	1.19	-0.21
45	VIC West	0.5	-15.4	1.41	1.19	-0.22
46	VIC Central Highlands	5.7	-11.4	1.39	1.16	-0.22
47	QLD Far North	6.4	-8.8	1.58	1.36	-0.23
48	SA Eyre and Yorke	-1.3	-17.4	1.44	1.20	-0.23
49	NSW Murrumbidgee	2.0	-13.2	1.58	1.34	-0.24
50	WA Wheatbelt-Great Southern	1.1	-14.8	1.51	1.27	-0.24
51	SA South East	-0.8	-16.6	1.51	1.27	-0.24
52	VIC Mallee-Wimmera	1.0	-16.3	1.43	1.18	-0.24
53	QLD North	8.7	-9.0	1.52	1.27	-0.25
54	TAS North West	-0.2	-18.1	1.45	1.19	-0.26
55	NSW North	0.5	-17.7	1.48	1.21	-0.27
56	NSW Mid North Coast	6.9	-16.4	1.22	0.96	-0.27
57	NSW Murray	2.4	-16.2	1.47	1.20	-0.27
58	QLD West Moreton	6.1	-11.2	1.68	1.41	-0.27
59	TAS North	2.6	-16.6	1.49	1.21	-0.28
60	QLD Wide Bay-Burnett	7.5	-13.9	1.40	1.12	-0.28
61	WA Gascoyne-Goldfields	-1.0	-18.5	1.79	1.48	-0.32
62	QLD Pastoral	1.6	-18.1	1.74	1.40	-0.34
63	NSW Far and North West	-0.7	-22.0	1.65	1.30	-0.36
64	QLD North West	0.6	-17.0	2.05	1.69	-0.36
		<b>6.4</b>	<b>-0.5</b>	<b>1.35</b>	<b>1.26</b>	<b>-0.09</b>

### ***Bottom ten regions***

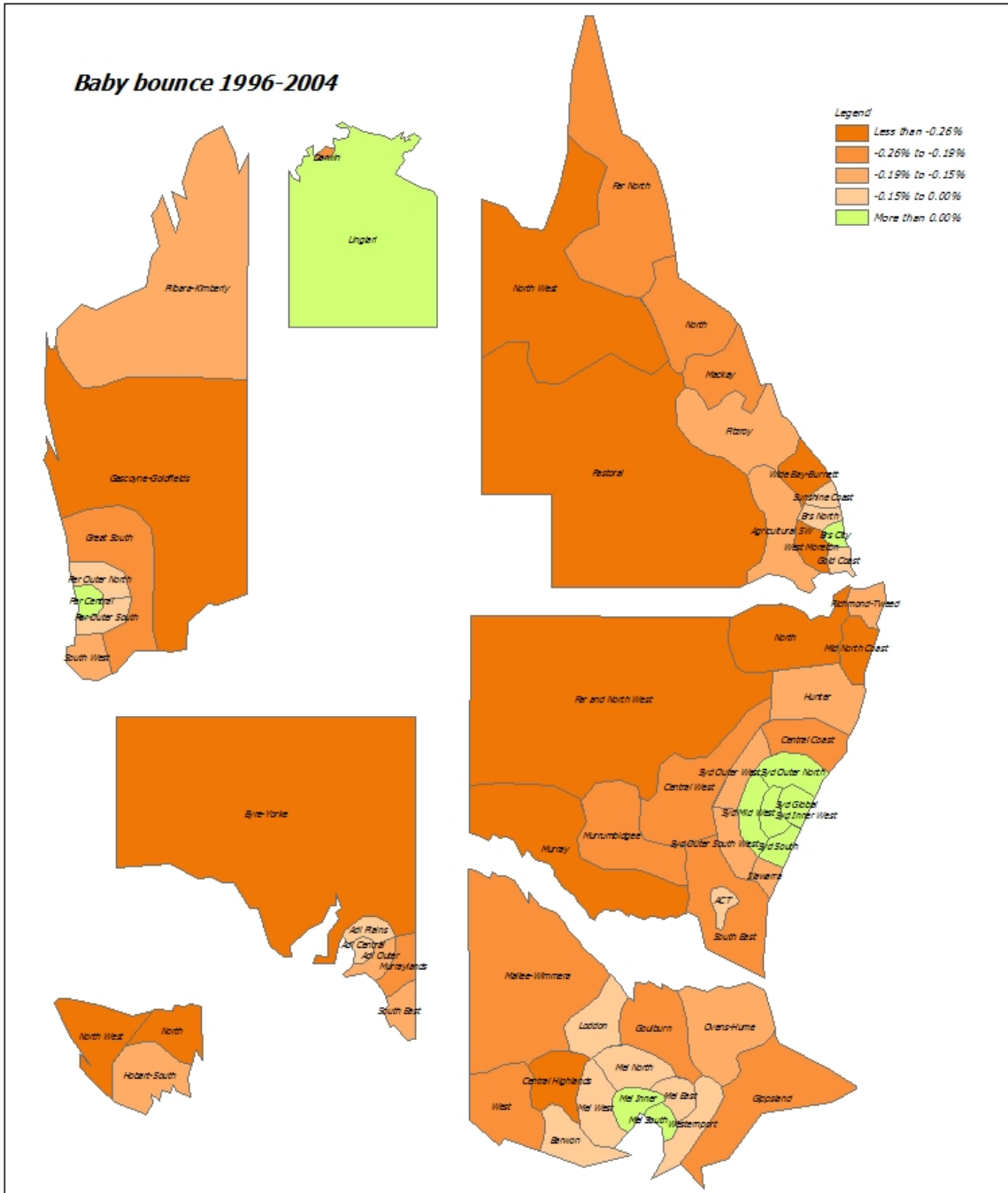
The 10 regions which have experienced the greatest fall in the share of their population of the less than one age cohort include four NSW regions, four Queensland regions, one Western Australian and one Tasmanian region. Significantly, these regions are substantial distances from capital cities.

Despite now being ranked ninth lowest in terms of baby bounce, the NSW Mid North Coast is the region that has the lowest proportion of its population consisting of those aged below one. It is the only region that has less than one per cent of its population in this age cohort.

The 2003 *State of the Regions* report, devised an indicator that measured a regions' demographic stress. This indicator effectively measures which regions are more likely to have stress put upon them by having a disproportionately high number of non-working population compared to working-age population (aged 15 to 55) as well as taking into account the out-migration from the region.

Not surprisingly, five of the bottom ten regions also ranked in the bottom ten for the demographic stress indicator. These regions are clearly at the most risk in the future in terms of being able to grow both their population and their economic base.

**Baby bounce 1996-2004**



## **7.6 The upturn: Are there distinct regions that have bounced in the last 12 months?**

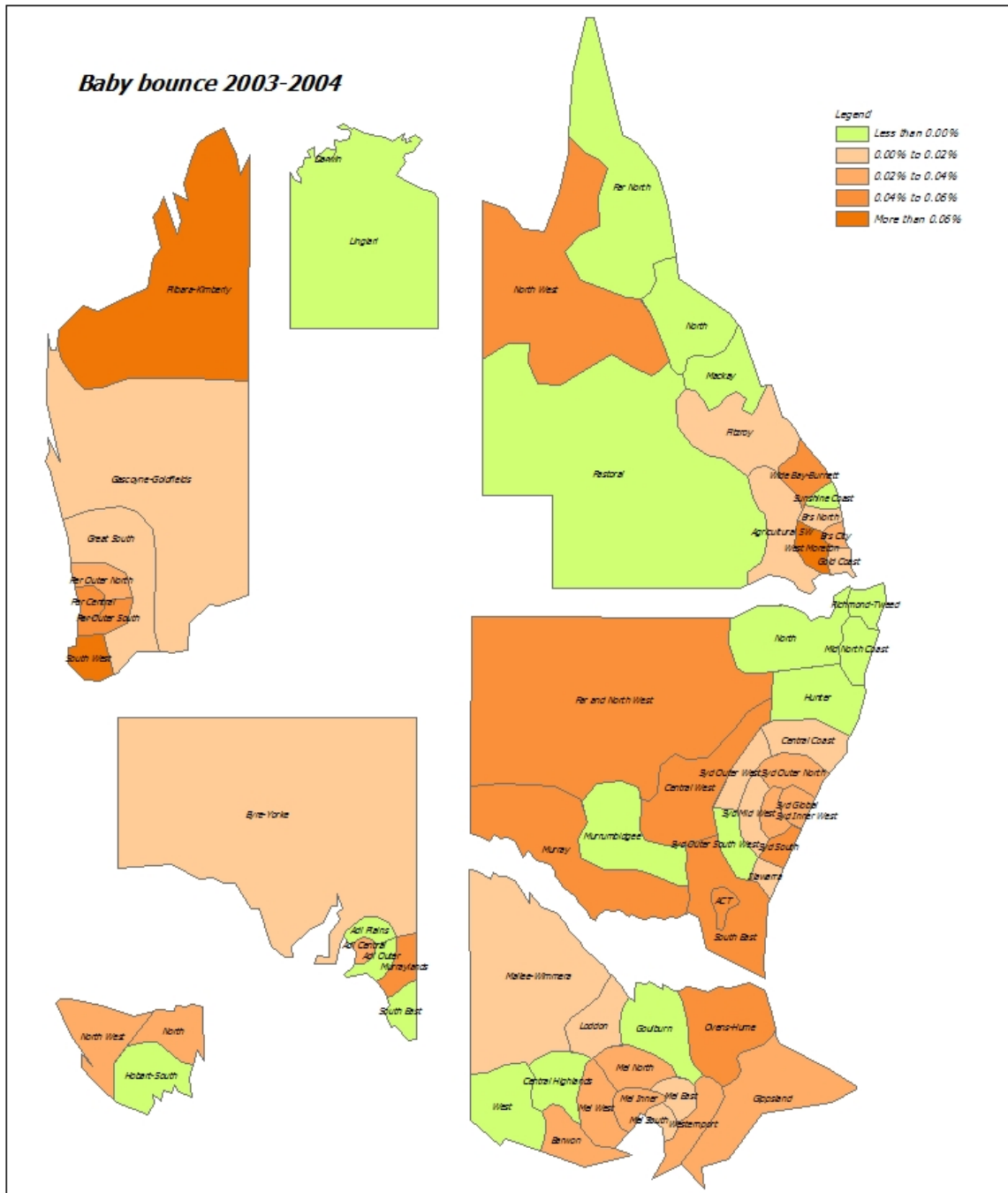
At the state and national level, the trends are clear. However at the more micro level, are there regions that have experienced this upturn at an even greater rate? The table below outlines the “baby bounce” that regions have experienced between 2003 and 2004. As mentioned previously, this is the first time for a decade that such a trend has been experienced.

Of the 64 SOR regions, only 18 experienced a decrease of 0 year olds as a proportion of their population. This differs significantly to the results from 1996 to 2004 where 43 regions experienced a decrease in this proportion.

The top ten regions that have bounced most significantly are from a range of states. These regions may be attractive to young families, particularly immigrants, who are searching for affordable housing in liveable regions and having access to a reasonably strong labour market. The majority, however are below the national average and as such have caught up slightly. Both the experience over the last 12 months and the last decade show that there is a convergence to the national average. Those that are below the national average have tended to increase towards the average while those above the average have tended to decrease.

The bottom ten regions include five Queensland regions. This is not surprising as it is a state that has experienced less of a bounce than others. The convergence pattern can be seen here again with most of these regions having higher proportions of 0 year olds in their population than the state average.

**Baby bounce 2003-2004**





**Table 7.5 SOR regions, growth in 0 year olds 2003-2004**

Rank	SOR region	% Growth pop 2003-2004	% Growth <1 y.o. 2003-2004	% Pop <1 y.o. 2003	% Pop <1 y.o. 2004	Difference 2003-2004
1	WA Pilbara-Kimberly	1.37	11.43	1.58	1.73	0.16
2	WA Peel-South West	3.16	11.14	1.10	1.18	0.08
3	QLD West Moreton	0.89	6.90	1.33	1.41	0.08
4	Perth Central	1.16	7.46	1.08	1.15	0.07
5	QLD North West	-0.09	3.79	1.63	1.69	0.06
6	NSW South-East	1.89	7.89	1.06	1.12	0.06
7	Perth Outer South	1.89	7.01	1.20	1.26	0.06
8	SA Murraylands	-0.05	5.15	1.14	1.19	0.06
9	NSW Murray	0.38	5.35	1.14	1.20	0.06
10	ACT	0.43	4.79	1.24	1.30	0.05
11	VIC Ovens-Hume	0.77	5.45	1.16	1.21	0.05
12	QLD Wide Bay-Burnett	1.68	6.71	1.07	1.12	0.05
13	NSW Far and North West	-0.23	3.74	1.25	1.30	0.05
14	Sydney South	0.17	3.75	1.26	1.31	0.05
15	NSW Central West	0.36	4.11	1.21	1.25	0.05
16	Melbourne Westport	2.17	5.50	1.30	1.34	0.04
17	Sydney Outer North	1.46	4.92	1.15	1.19	0.04
18	Sydney Inner West	0.98	4.28	1.19	1.23	0.04
19	Global Sydney	0.68	3.90	1.14	1.18	0.04
20	Adelaide Central	0.34	4.20	0.95	0.98	0.04
21	Melbourne North	0.84	3.54	1.34	1.37	0.04
22	Melbourne West	2.59	5.21	1.39	1.42	0.04
23	Melbourne Inner	2.32	5.70	1.04	1.07	0.03
24	TAS North West	0.44	3.23	1.15	1.19	0.03
25	Brisbane City	2.31	4.96	1.21	1.25	0.03
26	VIC Barwon	1.63	4.13	1.15	1.17	0.03
27	TAS North	1.07	3.44	1.19	1.21	0.03
28	VIC Gippsland	0.75	3.13	1.12	1.14	0.03
29	QLD Fitzroy	0.97	2.79	1.36	1.38	0.02
30	Sydney Mid West	0.92	2.43	1.54	1.56	0.02
31	Melbourne South	0.23	2.11	1.21	1.23	0.02
32	NSW Illawarra	1.23	3.18	1.14	1.16	0.02
33	NSW Central Coast	1.14	2.97	1.17	1.19	0.02
34	QLD Gold Coast	3.13	4.92	1.21	1.23	0.02
35	Perth Outer North	2.23	3.74	1.28	1.30	0.02
36	VIC Loddon	1.32	2.90	1.15	1.17	0.02
37	Sydney Outer West	0.30	1.40	1.43	1.44	0.02
38	WA Wheatbelt-Great Southern	0.21	1.45	1.26	1.27	0.02
39	Brisbane North	3.09	3.93	1.30	1.32	0.01
40	QLD Agricultural SW	1.66	2.46	1.26	1.27	0.01
41	WA Gascoyne-Goldfields	-0.23	0.41	1.47	1.48	0.01
42	VIC Mallee-Wimmera	0.13	0.90	1.17	1.18	0.01

**Table 7.5 SOR regions, growth in 0 year olds 2003-2004 (continued)**

Rank	SOR region	% Growth pop 2003-2004	% Growth <1 y.o. 2003-2004	% Pop <1 y.o. 2003	% Pop <1 y.o. 2004	Difference 2003-2004
43	VIC Central Highlands	1.18	1.80	1.16	1.16	0.01
44	Melbourne East	0.07	0.59	1.12	1.12	0.01
45	SA Eyre and Yorke	-0.28	0.05	1.20	1.20	0.00
46	NSW Hunter	0.94	0.97	1.15	1.15	0.00
47	NSW Murrumbidgee	0.29	0.15	1.35	1.34	-0.00
48	Adelaide Plains	0.85	0.47	1.22	1.22	-0.00
49	NSW Mid North Coast	1.38	0.70	0.96	0.96	-0.01
50	NSW North	0.02	-0.59	1.22	1.21	-0.01
51	NT Lingiari	0.06	-0.32	2.09	2.09	-0.01
52	VC Goulburn	1.37	0.66	1.22	1.21	-0.01
53	NSW Richmond-Tweed	1.06	0.07	1.04	1.03	-0.01
54	VIC West	0.25	-0.66	1.20	1.19	-0.01
55	QLD Sunshine Coast	3.52	2.42	1.10	1.09	-0.01
56	Adelaide Outer	0.92	-0.61	1.14	1.12	-0.02
57	QLD Far North	1.11	-0.67	1.38	1.36	-0.02
58	Sydney Outer South West	1.14	-0.86	1.55	1.52	-0.03
59	Darwin	0.73	-1.20	1.69	1.66	-0.03
60	TAS Hobart-South	1.22	-2.01	1.25	1.21	-0.04
61	QLD Mackay	1.07	-2.61	1.39	1.34	-0.05
62	SA South East	0.09	-3.96	1.32	1.27	-0.05
63	QLD North	1.87	-7.44	1.40	1.27	-0.13
64	QLD Pastoral	0.65	-7.81	1.53	1.40	-0.13
	<b>National average</b>	<b>1.27</b>	<b>3.05</b>	<b>1.24</b>	<b>1.26</b>	<b>0.02</b>

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## 8. Population sustainability

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### 8.1 Introduction

The term sustainability is used in many current systems and reporting frameworks. In many respects it is a modern buzz-word. At its simplest, however, sustainability can be seen to be:-

*“A state or process which can be maintained indefinitely”*

With respect to population at a regional level this would refer to a population which, based on the critical demographic inputs of births, deaths and migration, would be likely to be maintained at current or higher levels.

This definition of “population sustainability” cannot be directly transferred to the broader definition of sustainability which is often said to include triple bottom line concepts of economic, social and environmental sustainability.

For many regions experiencing significant and sustained population growth, these additional facets of sustainability will be considered far more important than the fact that population itself is likely to be maintained. However, there are a large number of other regions for which the components of population change, births deaths and migration are pointing to a much less secure population size which in turn places significant pressure on local economies and service provision.

### 8.2 An indicator of sustainability

Based on analysis completed over the past five years the following measures combined at the local government area level build a picture of population sustainability.

- Pace of growth of aged population: % p.a. growth in population over 55 (negative).
- Level of ageing: Share of population aged under 55 in 2001.
- Consistency of population growth: % of years since 1995 in which the ABS Estimated Resident Population (ERP) has increased.
- Effective fertility rate in 2004: Number of one year olds or younger as % of population.
- Baby bounce: Change in effective fertility between 2003 and 2004.
- Locality dominance: Share of LGA population contained in the largest locality.
- Family Attraction: Net migration of 0 to 14 yrs olds 1996 to 2001.
- Aged Attraction: In migration of 55 plus year olds as a percentage of population.
- Aged employment: Share of over 55's employed, 2001 Census.
- Demographic Stress: A US government measure first introduced in the report in 2003 which is based on the total levels of out-migration and growth rate in the 15 to 55 year old cohort.

In this year's report we have combined scores for each of the measures in a weighted average and refer to this as our Population Sustainability Score.

## 8.2.1 The impact of migration patterns, *State of the Regions 2003*

In the 2003 *State of the Regions* report we provided important analysis of the impact of migration patterns on Australian regions. Based on this work we have included a number of measures relating to migration in our analysis of population sustainability. The following section introduces some of the results from the 2003 report.

The results of the unemployment analysis at the regional level can be directly related to the net migration patterns of the various age groups at the same level. National Economics has been aware for a number of years that there is a type of dual motivation system functioning in Australia with regard to migration and employment opportunities. In general, Australians are likely to move away from areas of high unemployment to ones of low unemployment as one would expect. This is especially the case with the movement of rural people to the dispersed metropolitan areas. However, the second motivation is the lifestyle motivation which prompts people to move to regions with considerably higher levels of unemployment, an example of this move is from the dispersed metropolitan regions to the lifestyle regions on the coast of Australia.

Table 8.1 shows the results of a regression of the NIEIR regional corrected unemployment rate on the net migration patterns of the three age groups, less than 25, 25 to 54 and 55 plus.

	Coefficient, impact of a 1 percentage point change	T-statistic
Net internal migration 0-24 years, % of pop	0.20	1.23
Net internal migration 25-54 years, % of pop	-1.10	-3.38
Net internal migration 55+ years, % of pop	0.88	3.50
% share of population over 70 years	3.49	4.22
Ratio of over 70 years to over 55 years	-1.93	-5.17

The regression results clearly point towards a relationship between migration patterns differentiated by age and regional unemployment patterns. For every 1 percentage point of net internal migration of 25-54 year olds, a region is likely to have 1.10 percentage points lower unemployment. Of course, this does not suggest a causal relationship between receiving higher levels of migration to an area and a falling level of unemployment; in fact it is highly likely that the opposite applies and that due to employment opportunities 25-54 year olds move to the area. Regardless, this is a very strong trend which should be heeded by all in local government and economic development, that is, unless you can attract people aged 25-54 you are likely to be building an economy with less employment. For every one percentage point of net internal migration of over 55 year olds one can expect a 0.88 percentage points higher unemployment.

This is a very severe result and highlights the enormous structural problems created on our lifestyle coastlines and especially in Northern NSW. For instance with a net internal migration of over 55's of 6.4 per cent, the Richmond-Tweed region has 5.6 percentage points of unemployment that can be attributed to this migration.

The complex relationship between the share of people over 70 and the ratio of over 70's to over 55's needs elaboration. Put simply, for every year the over 70's share of total population increases by one percentage point, when that rise is accompanied by a proportionately similar rise in over 55's, the unemployment rate could be expected to be 3.49 percentage points higher. This sounds like an enormous impact considering that the over 70's are not part of the labour force, are not competing for

jobs, and cannot be measured as unemployed. Without noting the economic consequences the assumption would be that the unemployment rate would stay the same or fall. It does not, however, because the impact of over 70's, have a material impact in the average level of consumption, average level of demand and average level of investment in the community, each of which falls when the proportion of over 70's rises. These trends, therefore, result in a smaller economy which is less able to create employment opportunities.

The most important impact of the relationships identified is that they will continue to increase the gap between unemployment levels in the creative metropolitan areas and the other regions, especially the lifestyle regions. Rather than current migration and ageing patterns not contributing to any hoped reduction in regional differences, current patterns (let alone any accelerating of these patterns) will enhance the regional differences further.

### **8.3 Components of the measure**

The ten indicators used in the construction of the population sustainability score are presented in this section. The derivation and context for each is detailed. In Appendix 1 of this report, the scores and ranks for all of the 64 SOR regions is summarised. This chapter presents analysis of those results and expands the focus to include commentary of the sustainability of single local government areas with the broader regions used in the report.

#### **8.3.1 Indicator explanation**

##### ***Measure 1 – Pace of growth of aged population***

This indicator measures the per annum growth in the population aged over 55 as a share of the total population. A region with high growth in its aged population will in general face poorer economic outcomes. The evidence for the impacts of ageing growth was presented in the previous section. This is the only indicator that can be considered negative, that is, the higher the region scores for this indicator, the worse off it is.

##### ***Measure 2 – Level of ageing***

Based on 2001 Census data, this indicator used is the share of the population that is aged below 55. The flipside, of course, to the level of population under 55 is the level over 55 and this is seen as presenting population sustainability pressures. The pressure relates not only to the economic costs associated with service provision, but also the smaller pool of people for whom new children are likely to be produced.

Regions that have a high proportion of their population aged below 55 typically have better economic outcomes, as witnessed in the range of reports since 1998. Most of the advantage lay in the strength of the labour force and its concurrent impacts on income and service provision. These regions have both a greater ability to grow their population and a higher proportion of workforce participation, meaning that economic activity can be driven from within and is less reliant on outside influences.

### ***Measure 3 – Consistency of population growth***

This indicator measures the consistency of population growth since 1995. The indicator is based on the annual ABS Estimated Regional Population (ERP) data series and is measured by calculating the number of years since 1995 that the annual population estimate has increased. For example, if a region's population has grown in 5 of the 11 years, then the region would score of 45 (45 per cent).

The context for this measure is clear. Those regions which have been consistently able to have stable or growing populations in the past are likely to do so in the future subject to the other measures discussed.

### ***Measure 4 – Effective fertility rate in 2004***

This indicator uses the share of the population aged less than one year old as a proxy for the fertility rate. This is based on ABS ERP data for 2004. In terms of population growth and sustainability, this indicator is important as some regions are more appealing to young families than others, and as such are likely to experience growth into the future

Fertility, or the effective birth rate, is a principal component of the population change formula and this measure is included to reflect this.

### ***Measure 5 – Baby Bounce***

As discussed in Chapter 7 of this report, the majority of Australian regions are for the first time this millennium experiencing an upturn in the share on their population that are aged less than one year old. This indicator uses the share of the population aged below one as a proxy for the change in effective fertility rates by comparing the proportions between 1996 and 2004.

This differs slightly to Chapter 7 where proportions were compared between 2003 and 2004. The use of the 1996 to 2004 values highlighting the long-term trends in the fertility, and is especially important in understanding the places in the city which are experiencing gentrification and those rural areas hardest hit by declines in the levels of young families.

### ***Measure 6 – Locality Dominance***

Evidence suggests that over and above issues such as distance from major centres, strength or otherwise in local primary production, and population growth rates, the size of major centres within a region is a determinant of population sustainability.

For a region which has a number of smaller centres, the capacity for any particular town to develop regional locational advantage is limited. Without such advantage regional services tend to fragment, which reduces the general attractiveness of a region. It is this trend which has led to the success of the major regional cities identified in the 2003 *State of the Regions* Nightwatchmen analysis.

The measure used is defined as the share of population the largest urban locality within an LGA represents. For metropolitan areas the share is determined on the basis of contiguous suburban centres, with the majority of metropolitan capital cities having a score of 100 per cent.

### ***Measure 7 – Family Attraction***

This indicator measures a region's attractiveness to families. To estimate this, the net migration of 0 to 14 year olds between 1996 and 2001 is used.

Regions that are likely to attract a high number (net) of those aged below 15 are likely to be places that are attractive to families in terms of liveability, opportunity and future prospects.

This measure is perhaps the most important gauge of population sustainability in rural and regional areas. Generic issues of ageing of the population and the impacts of the baby boom can be put aside for the sake of argument. Regions which are likely to hold on or prosper will present a total economic and social package which can appeal to people who require employment, services and lifestyle.

Part of the problem for those who have lived in a region for a long time is that their perspective of the relative merits of a place is skewed by experience and the strength of entrenched social contacts. There is no reason to under-value these connections, however, new populations whether they be born in an area or have moved there, must build new connections, and understand value based on current or perceived future circumstances.

Regions which have proven to be able to generate net inflows of under 15's will have demonstrated on a range of levels the capacity to provide appropriate current or future value. For those who are already living in a particular place the evaluation of the future is always far more complicated.

### ***Measure 8 – Aged Attraction***

This indicator is calculated by estimating the proportion of in-migration of those aged over 55 to the total population.

Similar to the previous measure of migration of younger people there is merit in terms of population sustainability in being able to attract older migrants, all other things considered. That is, given the levels of current ageing, current employment of older people and other measures used in this section it would be better from a population sustainability perspective to be able to attract rather repulse older migrants.

Regions which are attractive to those aged over 55, typically coastal regions, have experienced significant influx of those aged over 55. Of course for many of these regions, but certainly not all, the costs can be measured by low employment and economic growth.

As outlined previously in this chapter, in-migration of this age cohort has significant impacts on employment rates and economic activity.

### ***Measure 9 – Aged Employment***

Based on 2001 Census data, this indicator measures the proportion of the population aged over 55 that is currently employed.

In 2005, being retired at the age of 55 is beginning to once again be seen as a luxury that few will be able to afford in the coming years. Many including the Federal Treasurer, Peter Costello, have begun to broach the issue of increased workforce participation amongst older Australians. This is likely to be not only necessary for national productivity but also for personal income security as the social security based benefits become less and less viable. For a region which is currently able to grow by attracting older Australian's and hence maintain population, it is likely that the same region will need to be offering higher levels of employment to the migrants than ever before.

Unfortunately many of our retirement regions have the least capacity to furnish such employment. National Economics believes that in the medium-term regions without demonstrated ability in employing older people will become less and less attractive.

### **Measure 10 – Demographic stress**

As produced in the 2003 the demographic stress indicator is a truly powerful measure of population sustainability.

This indicator is based on one preferred by the United States Department of Commerce in their evaluations of regional population dynamics. Their measure is calculated in the following manner:-

$$\left( \frac{-OUTM_{rt}}{POP_{rt}} \cdot \frac{POP_{rt} - POP_{r,t-1}}{POP_{r,t-1}} \right)$$

Where:-

- $OUTM_{rt}$  = level of out-migration in region  $r$  in period  $t$ ;  
 $POP_{rt}$  = level of population in region  $r$  in period  $t$ .

The higher the indicator value (that is, the lower the negative values), the lower the level of out-migration and the higher the level of population growth and, therefore, the less likely the region will be subject to economic distress. Conversely, the larger the negative values of the indicator the higher the level of out-migration and the lower the level of population increase. Given the discussion above, it follows that the greater the likelihood of economic distress in terms of future economic performance relative to state/national benchmarks.

The indicator was modified in 2003 to include an ageing element. The demographic stress variable used to capture ageing as well modifies the variable to be:-

$$\left( \frac{-OUTM_i}{POP_{rt}} \right) \cdot \left[ \left( \frac{POP_{rt}^{15-55} - POP_{r,t-1}^{15-55}}{POP_{r,t-1}^{15-55}} \right) \right]$$

If population aged 15–55 is growing as fast as population growth, then the indicator values will be the same as the United States Department of Commerce preferred indicator.

If, however, the rate of population growth 15 to 55 is slower than the overall regional population growth rate, then the value of the distress indicator will be worse than the United States Department of Commerce preferred indicator. This is as it should be, since it would indicate that the population is ageing relative to the overall population growth rate.

Conversely, a high rate of population growth 15 to 55 can more than offset low population growth rates and high out-migration on future economic performance. Such a region would have low levels of economic distress from the perspective of the demographic indicator.

This is not a net figure, a region with high out-migration may also have had high in-migration and net no change.



## ***Measure 11 – Overall Score***

The overall score is based on the results of the ten indicators. Each indicator value is standardised to a score out of 100 with the highest performing region receiving a score of 100 and the lowest performing region receiving a score of 0. These scores are then multiplied by a weight which allows for the more important of the indicators to reflect an accurate overall score. The highest performing region received a score of 90 while the lowest performing regions received a score of 19.

The weights for each of the variables broadly reflect the following order or importance:-

- demographic stress;
- consistency of population growth;
- family attraction;
- pace of growth of aged population (negative);
- effective fertility rate in 2004;
- baby bounce;
- level of ageing;
- aged employment;
- aged attraction; and
- locality dominance.

The combination of aged measures in employment, attraction and level of ageing combine to a level of importance far higher than the list above would otherwise suggest.

## **8.4 Indicator results – SOR regions**

The tables below outline the best and worst performing regions of the 64 *State of the Regions* (SOR) regions. Each indicator shows the performance of the top ten and bottom ten regions.

### ***Measure 1: Pace of growth of aged population: % p.a. growth in population over 55 (negative).***

Region	Score	Rank
Global Sydney	21.8	1
WA Pilbara-Kimberly	15.0	2
QLD Sunshine Coast	14.3	3
WA Peel-South West	13.8	4
Darwin	13.8	5
QLD Gold Coast	11.9	6
Perth Outer North	9.6	7
Melbourne Inner	8.9	8
NSW Central Coast	8.4	9
Brisbane City	8.0	10

The regions with the highest level of aged population growth occur in two places which would not ordinarily be seen as being particularly old. The Pilbara-Kimberley region is one which is become a niche retirement and holiday location, however the high rate of growth is principally defined by the low base levels which existed in 1996. This is unfortunately largely due to the poor life expectancy levels amongst aboriginal communities which we would all hope are improving.

In the Global Sydney region the influx of aged people in new housing options along with generally strong levels of population growth contribute to this result.

The remaining members of the top ten include many of Australia's lifestyle regions such as QLD Sunshine Coast, WA Peel-South West and QLD Gold Coast.

In the long run as outlined above those regions with the highest rates of ageing growth will have the lowest capacity to sustain population levels all other things considered. Therefore whilst the high score for Global Sydney may not be a problem given the strong growth in youth, the ability to attract families and the recent 'baby bounce', other regions in the top ten face sustainability pressures exacerbated by the rate of ageing.

Region	Score	Rank
VIC West	-1.3	55
NSW North	-2.0	56
SA Murraylands	-2.0	57
SA South East	-2.1	58
TAS Hobart-South	-2.1	59
QLD Far North	-2.5	60
TAS North	-3.4	61
SA Eyre and Yorke	-3.9	62
TAS North West	-6.7	63
QLD North West	-8.6	64

The bottom ten regions in terms of population growth amongst older include a range of rural and regional areas. For many, the negative rates of ageing growth reflect low or negative population growth across the board. However, for places such as TAS Hobart-South the measure is likely to be consistent with a strong population story which will not suffer from the generic costs associated with service provision that may strike lifestyle regions in New South Wales and Queensland.

***Measure 2: Level of ageing: Share of population aged below 55 in 2001.***

The top four regions for this indicator share a common theme; their results are skewed due to their high proportion of indigenous Australians. As discussed in Chapter 7, the indigenous population have a distinct characteristic which means that regions that have a high indigenous population have skewed results in a range of population measures.

For this indicator, it is due to the fact that the indigenous population of Australia have higher fertility rates and lower life expectancy than non-indigenous Australians, resulting in higher proportions of the population aged below 55.

The other regions are a mix of outer suburban regions and outback regions which typically attract those of working age due to their remoteness. That is, only a small proportion of the population would choose to live there without employment.

The outlier amongst these two trends (or perhaps not depending on personal taste) is the ACT. The region has the capacity to attract youth and families through strong employment, and exceptional services including education. However, for many the ACT is not their place of birth nor may be considered their long-term location. As such many move to other areas of Australia once the principle reason for migration no longer holds them. In terms of population sustainability, subject to the continued capacity to attract people, the ACT will have a higher sustainability score.

**Table 8.4 Top 10: Share of population aged below 55 in 2001**

Region	Score	Rank
NT Lingiari	90.9	1
WA Pilbara-Kimberly	90.3	2
QLD North West	88.2	3
Darwin	87.5	4
Sydney Outer South West	84.2	5
WA Gascoyne-Goldfields	83.4	6
Sydney Outer West	82.6	7
ACT	82.3	8
QLD Far North	81.6	9
QLD Mackay	81.4	10

The regions with the lowest proportion of their population aged below 55 are the ‘retirement regions’ on the east coast. The regions along the New South Wales coast and north of Brisbane have the highest proportions of over 55’s. The New South Wales Mid North Coast and Queensland’s Sunshine Coast had over 30 per cent of their population aged over 55 in 2001. The ageing population trend has exacerbated since 2001.

**Table 8.5 Bottom 10: Share of population aged below 55 in 2001**

Region	Score	Rank
WA Peel-South West	72.7	55
VIC Gippsland	72.6	56
NSW Illawarra	72.5	57
NSW South-East	71.8	58
Adelaide Central	71.4	59
QLD Wide Bay-Burnett	70.6	60
NSW Central Coast	70.2	61
NSW Richmond-Tweed	70.1	62
QLD Sunshine Coast	68.4	63
NSW Mid North Coast	68.0	64

On the NSW Mid North Coast the proportion of the population aged over 55 is already 32 per cent. Given the rapid ageing of this population they are expected to continue to lead the way in Australia in understanding the impact of ageing communities.

**Measure 3: Consistency of population growth: % of years since 1995 in which ABS ERP has increased.**

The table below shows the regions that have grown most consistently since 1995.

At the SOR level, as with all of the measures, this score is a weighed average of all of the local government areas included in a region. As such, the entire region may well have grown each and every year, and in fact most do. However, at the level of the local government area, basically the unit at which we live, the population growth will not have been so consistent. We need, however, to address this issue at the local level, for at its logical extreme, Australia's population will clearly continue to grow in the long-term but that says little for the sustainability of the places in which we live.

The four regions that rank number one have grown their population every year since 1995. Two of these regions, NSW Central Coast and QLD Sunshine Coast, are also ranked in the bottom four regions in terms of their share of population aged below 55. The growth in the over 55 cohort in these regions has been very strong. Brisbane City and the Gold Coast have had continually strong population growth over the last decade as the South East Queensland region has attracted a mix of retirees, those of working age and young families. However this result is somewhat compromised by the exceptionally large local government populations in these two regions. Notwithstanding, were such analysis to be completed for a smaller region, the result would likely be the same in these regions.

In the NSW Central Coast, each of the local government areas have grown in each of the years.

Region	Score	Rank
NSW Central Coast	100	1
QLD Gold Coast	100	1
QLD Sunshine Coast	100	1
Brisbane City	100	1
NSW Illawarra	97	5
VIC Barwon	96	6
NSW Hunter	95	7
Sydney Outer North	94	8
QLD Wide Bay-Burnett	93	9
Brisbane North	93	10

The regions that have suffered the least consistent population growth over the last ten years are all non-metropolitan regions. Ominously for the Apple Isle, two Tasmanian regions are ranked in the bottom ten for this indicator. Also, three South Australian regions are ranked in the bottom ten. Past *State of the Regions* reports, have demonstrated that regions that have a stagnant or declining population typically have poorer economic outcomes.

**Table 8.7 Bottom 10: % years since 1995 that population has increased**

Region	Score	Rank
SA South East	59	55
TAS North	58	56
VIC West	55	57
NSW Far and North West	54	58
SA Murraylands	51	59
QLD Pastoral	42	60
TAS North West	39	61
QLD North West	39	62
SA Eyre and Yorke	38	63
NSW North	37	64

NSW North is the inland area, which include, many of New South Wales' old regional cities such as Tamworth, Armidale and Moree. For all the local government areas in NSW North, on average only 37 per cent of the years have seen growth.

**Measure 4: *Effective fertility rate in 2004: Number of one year olds or younger as % of population.***

Regions that have a high proportion of indigenous people are ranked highest for this indicator. As explained previously, the indigenous population has far higher fertility rates than the non-indigenous population.

**Table 8.8 Top 10: Proportion of population aged <1 year old**

Region	Score	Rank
NT Lingiari	2.11	1
WA Pilbara-Kimberly	1.73	2
QLD North West	1.72	3
Darwin	1.66	4
Sydney Mid West	1.56	5
Sydney Outer South West	1.52	6
WA Gascoyne-Goldfields	1.48	7
Sydney Outer West	1.44	8
Melbourne West	1.42	9
QLD West Moreton	1.41	10

These tables have been discussed in greater depth in Chapter 7. The regions that rank the lowest for this indicator are a mix of the retirement regions where the total number of older people reduces the effective fertility rate, and the inner city regions. Two regions have less than one per cent levels of effective fertility and these are Adelaide Central and the NSW Mid North Coast.

**Table 8.9 Bottom 10: Proportion of population aged <1 year old**

Region	Score	Rank
VIC Gippsland	1.14	55
Adelaide Outer	1.12	56
Melbourne East	1.12	57
QLD Wide Bay-Burnett	1.12	58
NSW South-East	1.12	59
QLD Sunshine Coast	1.09	60
Melbourne Inner	1.08	61
NSW Richmond-Tweed	1.03	62
Adelaide Central	0.98	63
NSW Mid North Coast	0.96	64

**Measure 5: Baby bounce: Change in effective fertility between 2003 and 2004.**

Over the last decade, the regions that have bounced the most (increased their share of those aged less than one) have been the metropolitan regions with the exception of NT Lingiari. As discussed in greater depth in Chapter 7 of this report, the majority of these regions are catching up to state and national averages after lagging behind for many years.

On the other hand, those regions that have experienced the biggest decline in their share of this age cohort are predominantly those above state and national averages. There is a significant convergence towards the average with those above the average converging downwards while those below the average converging upwards. A number of the regions in the bottom ten are also retiree destinations and as such fertility in these regions is not surprisingly decreasing.

**Table 8.10 Top 10: Change in effective fertility (per cent)**

Region	Score	Rank
Global Sydney	0.20	1
NT Lingiari	0.12	2
Sydney Outer North	0.10	3
Melbourne Inner	0.09	4
Brisbane City	0.08	5
Sydney Inner West	0.08	6
Melbourne South	0.08	7
Perth Central	0.05	8
Sydney South	0.03	9
Sydney Mid West	0.00	10

**Table 8.11 Bottom 10: Change in effective fertility (per cent)**

Region	Score	Rank
VIC Mallee-Wimmera	-0.24	55
WA Gascoyne-Goldfields	-0.24	56
NSW Murray	-0.25	57
NSW North	-0.26	58
NSW Mid North Coast	-0.26	59
QLD North West	-0.26	60
QLD Wide Bay-Burnett	-0.26	61
TAS North	-0.27	62
QLD West Moreton	-0.27	63
NSW Far and North West	-0.34	64

**Measure 6: *Locality dominance: Share of LGA population contained in the largest locality.***

The top ten for this indicator could extend to a top 18 since the top 18 regions are solely contained in the largest locality in the region. As such, all metropolitan regions in each state's capital city rank equal first.

**Table 8.12 Top 10: Share of LGA contained in largest locality**

Region	Score	Rank
NSW Central Coast	100	1
Global Sydney	100	1
Sydney Inner West	100	1
Sydney Outer North	100	1
Sydney Mid West	100	1
Sydney South	100	1
Melbourne East	100	1
Melbourne Inner	100	1
Melbourne North	100	1
Melbourne South	100	1

The regions ranked in the bottom 10 for this indicator lack a central, dominant township. The VIC Gippsland region which ranks 64 out of the 64 regions typifies this. The region covers an enormous area covering relatively long distances in the south-east corner of Victoria. The region has a number of major towns such as Bairnsdale, Sale, Traralgon, Morwell and Warragul but has no one dominant locality. As such, the spread of population throughout the region results in the region scoring lower than any region in Australia.

Work undertaken by National Economics in this region confirms the region has difficulty in generating the type of regional city outcomes which have been experienced in other areas of Victoria in particular. The lack of focus in a particular place rather than the region of Gippsland as a whole presents ongoing competitive pressures which have not delivered positive outcomes.

**Table 8.13 Bottom 10: Share of LGA contained in largest locality**

Region	Score	Rank
WA Wheatbelt-Great Southern	56	55
VIC West	53	56
NSW South-East	51	57
NSW Richmond-Tweed	51	58
VIC Mallee-Wimmera	50	59
SA Murraylands	45	60
NSW Mid North Coast	45	61
VC Goulburn	38	62
NT Lingiari	37	63
VIC Gippsland	28	64

**Measure 7: Family attraction: Net migration of 0 to 14 yrs olds 1996 to 2001.**

The regions that attracted the most 0 to 14 year olds since 1996 have been metropolitan regions. No one state dominates this with the top 5 regions being the inner city regions of five different states. This is a very important story in the growth of city regions, it is not only their capacity to attract youth aged 16 to 24 when undertaking lifestyle moves or education related migration, the cities have become far more viable places for families. This was evident in the baby bounce data in 2003/04 which is directly related to the migration of families shown in these tables in the period 1996 to 2001. If you can generate the young family migration it is likely that improvements in effective fertility will follow.

**Table 8.14 Top 10: Migration 1996 to 2001, 0 to 14 year olds**

Region	Score	Rank
Melbourne Inner	11.6	1
Global Sydney	10.2	2
Brisbane City	7.3	3
Perth Central	6.7	4
Darwin	5.6	5
QLD Gold Coast	5.6	6
Sydney Inner West	5.3	7
Adelaide Central	4.3	8
Sydney Outer North	4.2	9
QLD North	3.8	10

On the other hand, the regions that have lost the most 0 to 14 year olds are from rural and regional areas with far lower employment prospects than the metropolitan regions. As such, it is not surprising that these regions are less likely to attract young families.

As highlighted in the definition and context section of this chapter, National Economics believes that for rural and regional communities with the poorest results for this indicator, significant efforts need to be applied in the area of family based migration. National Economics does not suggest that there is an easy solution to the problem of limited employment opportunities, however what is clear is that making sure that the employment opportunities that do exist can be exploited by younger families.



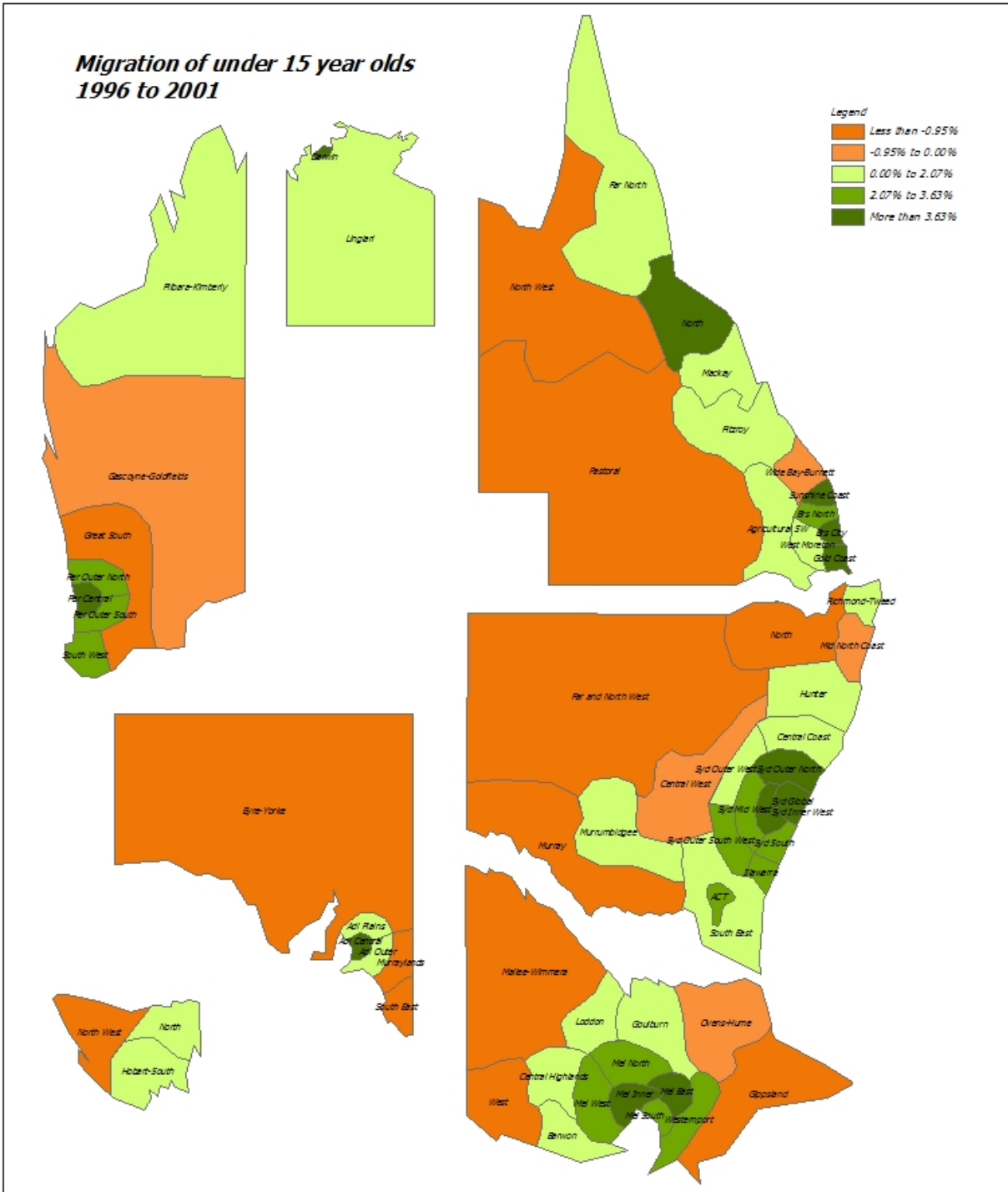
For many regions the stark reality is that they do not present a viable lifestyle option to such people. Concentrating efforts of council on issues such as liveability, the viability of public transport connections to larger cities, and the diversity of the regions in general, is likely to assist. The results of the survey in Chapter 2 highlight the large gap between the economic objective of regions and their capacity to make the hard allocative decisions which are likely to begin to counter the results presented in the table below.

For regions such as the QLD Pastoral areas the NSW Far and North West and QLD North West, the trends away from family based employment have been long lasting and likely irreversible. In these areas the consequences of such migration will have already been well understood. However in places such as TAS North-West, WA Wheatbelt-Great Southern, VIC Mallee-Wimmera and the VIC West, the social and economic implications shown below are much more recent, and are likely to be related to significant ongoing structural change.

For these place the concept that in general most of the local government areas are no longer viable places for families to move, extends the general malaise experienced to new levels. They have become accustomed to the movement away of older tertiary aged youth, but the sense that many will return at some point to start families has been central to their optimism. Regions with significant negative net movements of zero to 14 years olds dent such optimism and reduce the population sustainability of the regions.

For many of these regions the Nightwatchmen effects of the major regional centres remain the shining light.

<b>Table 8.15 Bottom 10: Migration 1996 to 2001, 0 to 14 year olds</b>		
Region	Score	Rank
NSW North	-1.1	55
SA South East	-1.4	56
VIC West	-1.4	57
VIC Mallee-Wimmera	-1.7	58
WA Wheatbelt-Great Southern	-2.0	59
QLD North West	-2.3	60
SA Eyre and Yorke	-2.3	61
NSW Far and North West	-2.4	62
TAS North West	-2.6	63
QLD Pastoral	-3.9	64



**Measure 8: Aged attraction: In migration of 55 plus year olds as a percentage of population.**

The regions that have seen the greatest in-migration of over 55's are predominantly along the north coast of New South Wales and the Queensland coast. Interestingly, the top five regions that have attracted the highest proportion of over 55's are also the five regions who have the highest proportion of over 55's. That is, these regions have continued to age at a faster rate than any other region from a base that already has more people aged over 55. There are significant long-term issues for regions that are likely to have over half their population aged over 55 in the future.

It is important to bear in mind that strong age migration in the absence of other sustaining indicators is likely to be negative.

Region	Score	Rank
QLD Sunshine Coast	8.5	1
NSW Central Coast	7.3	2
NSW Mid North Coast	7.1	3
QLD Wide Bay-Burnett	7.0	4
NSW Richmond-Tweed	6.7	5
WA Peel-South West	6.6	6
NSW South-East	6.3	7
Global Sydney	6.2	8
Brisbane North	5.8	9
ACT	5.6	10

On the other hand, there is an interesting mix of regions that have had far lower in-migration of over 55's. Again, the indigenous populations and the remoteness of regions are contributing factors to this list however, Brisbane City, which is ranked number 63 out of 64 for this indicator, is one of few metropolitan regions that has attracted a low proportion of over 55's. This is probably due to the other Queensland regions that are more likely to attract those heading in to retirement as well as Brisbane's vibrancy and attractiveness to the younger population due to its strong employment prospects coupled with its positive lifestyle outcomes.

Region	Score	Rank
VIC Mallee-Wimmera	3.5	55
WA Pilbara-Kimberly	3.4	56
Melbourne West	3.4	57
SA South East	3.3	58
QLD North West	3.2	59
Darwin	3.1	60
Melbourne North	3.1	61
NSW Murrumbidgee	3.0	62
Brisbane City	3.0	63
NT Lingiari	2.6	64

**Measure 9: Aged employment: Share of over 55's employed, 2001 Census.**

The regions that have had the highest proportion of over 55's in their population, and the regions that have had the highest in-migration of this age cohort, have the lowest proportion within that age group that are employed. This is predominantly due to the fact that these regions are considered as attractive 'retirement' regions and the majority within this age bracket no longer wish to participate in the work force.

This is the enormous dilemma of lifestyle regions:-

1. will they be able to provide viable employment opportunities; and
2. will the general population be large enough to provide a labour force which can service the requirements of a population with significant service needs?

Those with the highest proportion of employed over 55's are a mixed of high employment city regions and those with a strong rural employment base.

Region	Score	Rank
QLD Pastoral	37.6	1
Sydney Outer North	36.2	2
Darwin	35.8	3
QLD North West	35.7	4
WA Wheatbelt-Great Southern	34.4	5
WA Gascoyne-Goldfields	33.4	6
Global Sydney	32.8	7
ACT	32.5	8
WA Pilbara-Kimberly	32.2	9
NT Lingiari	32.1	10

The lowest levels of employment include a range of older industrial areas which have undergone structural change such as Adelaide Plains and NSW Hunter along with retirement regions such as QLD Wide Bay-Burnett and NSW Richmond-Tweed.

Region	Score	Rank
TAS North West	21.3	55
VIC Barwon	21.0	56
QLD Wide Bay-Burnett	20.3	57
NSW Richmond-Tweed	19.2	58
NSW Hunter	18.9	59
QLD Sunshine Coast	18.7	60
NSW Illawarra	18.4	61
Adelaide Plains	18.1	62
NSW Mid North Coast	17.1	63
NSW Central Coast	17.0	64

**Measure 10: Demographic stress: A US government measure first introduced in the report in 2003 which is based on the total levels of out-migration and growth rate in the 15 to 55 year old cohort.**

As defined earlier, this measure is a combination of population growth and out-migration. The top ten regions for this indicator are an interesting mix of retirement regions, indigenous dominated regions and metropolitan regions. These regions have all experienced population growth coupled with low levels of out-migration.

The important point to note with QLD Sunshine Coast and WA Peel-South West is that whilst these regions also attract a large range of older people they still have comparatively low levels of out-migration amongst the working age. This is the best scenario to be in for the older people moving there along with those relying on employment in general. The age-migration is not accompanied by a reducing attractiveness of the region for workers.

Region	Score	Rank
QLD Sunshine Coast	62	1
WA Peel-South West	60	2
WA Pilbara-Kimberly	58	3
Perth Outer North	50	4
Melbourne Inner	50	5
QLD Gold Coast	33	6
Sydney Inner West	32	7
Brisbane North	32	8
NSW Central Coast	31	9
Sydney Outer South West	30	10

The bottom ten regions are the most likely to suffer population sustainability issues into the future. Five of the bottom ten regions are in Tasmania or South Australia. The other regions are non-metropolitan regions that have had out-migration and limited population growth. Included amongst them are VIC West which was previously highlighted in terms of capacity to attract young families.

Region	Score	Rank
TAS Hobart-South	-3	55
SA Murraylands	-3	56
VIC West	-6	57
NSW North	-6	58
TAS North	-11	59
SA Eyre and Yorke	-13	60
QLD Far North	-15	61
WA Gascoyne-Goldfields	-19	62
TAS North West	-29	63
QLD North West	-58	64

### **Overall Score: Combination of all indicators**

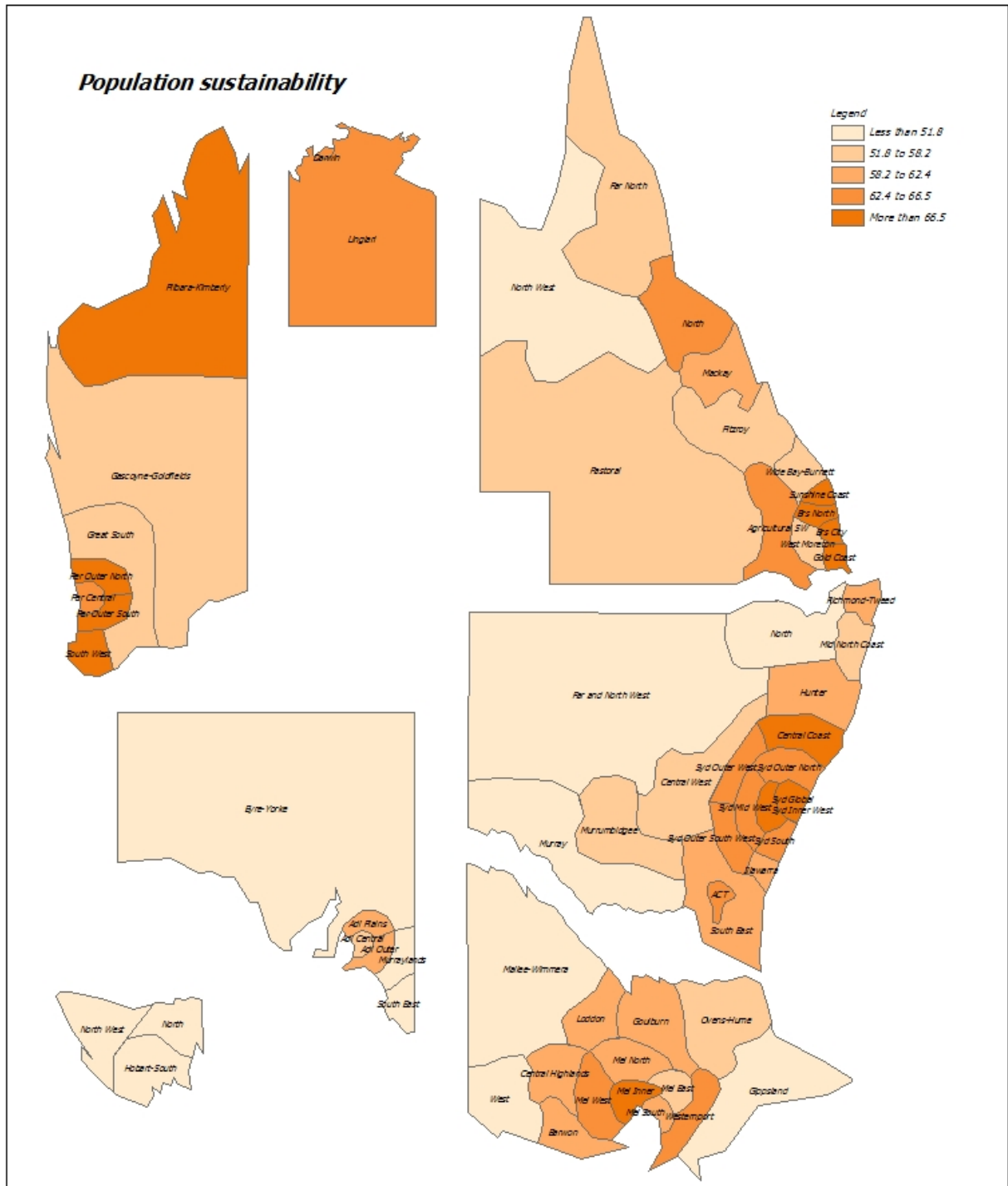
The top three regions for overall population sustainability are lifestyle regions which are experienced a mix of in-migration and continued population growth. Aside from the WA Pilbara Kimberly region, the remaining regions in the top 10 are metropolitan regions. It is these regions that into the future are most likely to sustain, and more likely grow their populations. This score is based on the results on the previous ten indicators discussed.

Region	Score	Rank
QLD Sunshine Coast	74.8	1
QLD Gold Coast	73.1	2
WA Peel-South West	70.8	3
Melbourne Inner	70.8	4
Perth Outer North	70.8	5
Brisbane North	70.3	6
WA Pilbara-Kimberly	69.9	7
Global Sydney	69.9	8
Brisbane City	69.8	9
NSW Central Coast	69.6	10

At the other end of spectrum the bottom twelve regions or those with scores less than 50 are the regions that are most likely to struggle to retain their current populations. All of the regions are non-metro regions reflect general population trends. All of non-metro South Australia is included in the bottom 12. along with all of the Tasmanian regions. Six of the top twelve regions are in South Australia or Tasmania. These regions typically have low in-migration, low fertility, an older than average population and fewer dominant localities.

Region	Score	Rank
TAS Hobart-South	49.8	53
VIC Mallee-Wimmera	48.7	54
VIC Gippsland	48.2	55
SA South East	47.1	56
NSW Far and North West	46.6	57
TAS North	45.8	58
SA Murraylands	45.0	59
VIC West	44.7	60
NSW North	43.4	61
QLD North West	40.2	62
SA Eyre and Yorke	39.4	63
TAS North West	35.2	64

As the map below clearly demonstrates, the regions most likely to be unsustainable are inland regions, and non-metropolitan regions in South Australia and Tasmania. Interestingly, the further away a region is from a metropolitan region, the lower the likelihood of sustaining and growing current populations.



## 8.5 Indicator results – Local Government Areas (LGAs)

The tables below outline the best and worst performing regions of the 628 Local Government Areas (LGAs). For a range of selected indicators the performance of the top fifteen and bottom fifteen regions are shown. The results presented at the LGA level can be skewed due the small population of some areas.

For many of the indicators, the *State of the Regions* report in other years has already provided information and analysis. As such only a small selection of indicators is detailed at the LGA level.

### ***Measure 7: Family attraction: Net migration of 0 to 14 year olds 1996 to 2001***

The capital city LGAs, and inner metropolitan regions, dominate for this indicator. Net migration of those aged under 15, and therefore young families, to these regions has been more abundant than elsewhere. The reason for this high ranking is two-fold. First, in 1996, very few children (those aged less than 15) lived in the city. The high influx of people into these regions over the next five years consisted of a large proportion of those in this age cohort. In fact, in the LGAs of Melbourne, Sydney and Perth, about one-quarter of the population is as a result of in-migration from those aged below 15.

The population sustainability of these regions has risen significantly. Young families are now far more likely to locate themselves in inner city regions. Whether this is a supply-led outcome or a mind shift, these regions are reaping the rewards of these significant movements.

Region	Score	Rank
Melbourne (C)	25.8	1
Sydney (C)	24.9	2
Perth (C)	24.5	3
Adelaide (C)	16.1	4
Upper Gascoyne (S)	15.9	5
Subiaco (C)	12.7	6
Wiluna (S)	12.7	7
Palmerston (C)	12.2	8
South Sydney (C)	12.1	9
South Perth (C)	11.9	10

The regions outlined in the table below are facing severe population sustainability issues, everything else held equal. These regions have small populations, are all long distances from major cities, and have seen a large (relative) number of those aged less than 15 leave during the period.



**Table 8.25 Bottom 10: Family attraction**

Region	Score	Rank
Nungarin (S)	-14.5	619
Cue (S)	-14.8	620
Carnamah (S)	-15.1	621
Dumbleyung (S)	-15.1	622
Urana (A)	-15.2	623
Dundas (S)	-15.7	624
Trayning (S)	-16.2	625
Kent (S)	-17.7	626
Jerilderie (A)	-19.5	627
Isisford (S)	-19.6	628

**Measure 10: Demographic stress: A US government measure first introduced in the report in 2003 which is based on the total levels of out-migration and growth rate in the 15 to 55 year old cohort.**

Regions that have experienced high levels of out-migration yet have been able to grow their population of 15 to 55 year olds are in an excellent position to grow, or at least sustain their population into the future. The LGAs below are in this very position. Exmouth, which is situated half way up the Western Australian Coast (and nearby Shark Bay which ranks fourth for this indicator), has moderate out-migration but very high growth in the population growth in those aged 15 to 55. As such, the out-migration is more likely to have occurred in those aged over 55, which from a population sustainability perspective, can be seen as positive.

Regions with high levels of out-migration, such as Boulia (located in the south-west corner of Queensland, near the Northern Territory border) yet with the ability to still grow its population, also have excellent prospects in terms of population sustainability.

**Table 8.26 Top 15: Demographic stress**

Region	State	Score	Rank
Exmouth (S)	WA	213	1
Roxby Downs (M)	SA	204	2
Boulia (S)	QLD	178	3
Shark Bay (S)	WA	170	4
Cloncurry (S)	QLD	162	5
Melbourne (C)	VIC	150	6
Broome (S)	WA	142	7
Isisford (S)	QLD	141	8
Gingin (S)	WA	136	9
Palmerston (C)	NT	134	10
Perth (C)	WA	129	11
Wyndham-East Kimberley (S)	WA	126	12
Millmerran (S)	QLD	119	13
Derby-West Kimberley (S)	WA	119	14
Wanneroo (C)	WA	110	15

A number of Western Australian LGA's are under extreme pressure to sustain their population according to this indicator. These regions not only have high out-migration, but the share of their population aged between 15 and 55 has fallen significantly. The continued likelihood of out-migration coupled with a strong decline in the working age population points to an inability to sustain current population levels. The economic and social issues that these regions are likely to face as the workforce continues to shrink further, exacerbate the problem.

**Table 8.27 Bottom 15: Demographic stress**

Region	State	Score	Rank
Burke (S)	QLD	-200	614
Koorda (S)	WA	-201	615
Ashburton (S)	WA	-219	616
Jabiru (T)	NT	-231	617
Torres (S)	QLD	-244	618
Sandstone (S)	WA	-260	619
Carnamah (S)	WA	-264	620
Trayning (S)	WA	-279	621
Duaringa (S)	QLD	-319	622
Yilgarn (S)	WA	-342	623
Cue (S)	WA	-387	624
Coolgardie (S)	WA	-395	625
Dundas (S)	WA	-404	626
Leonora (S)	WA	-444	627
Meekatharra (S)	WA	-474	628

**Overall Score: Combination of all indicators**

The table below details the LGAs with the best prospects of sustaining their current population levels. Not surprisingly, the majority are metropolitan regions where employment prospects for young people are stronger, amenities and service provision are plentiful and future prospects are on a whole better than average. A number of Perth metropolitan regions rank in the top 15 LGAs in Australia, as do some of the Sydney metropolitan regions.

These regions have an enviable mix of in-migration, relatively low levels of ageing, growth in fertility rates, higher than average levels of employment and strong locality dominance.

**Table 8.28 Top 15: Combination of all indicators**

Region	State	Score	Rank
Sydney (C)	NSW	93.5	1
Palmerston (C)	NT	89.9	2
Roxby Downs (M)	SA	89.3	3
Camden (A)	NSW	86.5	4
Wanneroo (C)	WA	85.2	5
Liverpool (C)	NSW	84.7	6
Melton (S)	VIC	84.6	7
Melbourne (C)	VIC	83.4	8
Dardanup (S)	WA	83.4	9
Perth (C)	WA	83.4	10
Broome (S)	WA	83.3	11
Swan (C)	WA	81.9	12
Cloncurry (S)	QLD	81.2	13
Casey (C)	VIC	80.7	14
Capel (S)	WA	80.5	15

The regions that rank in the bottom 15 regions in Australia have the exact opposite of those in the top 15. Out-migration is a significant concern, attracting young families, who in turn will have children is unlikely, employment options are weak and the majority are a long way from a major centre. These regions also have major concerns due to a shrinking workforce which means that those that decide to stay in the region are put at extra risk through no fault of their own. That is, as each person leaves the region, the likelihood of sustaining the current population levels decreases exponentially.

**Table 8.29 Bottom 15: Combination of all indicators**

Region	State	Score	Rank
Hinchinbrook (S)	QLD	21.5	614
Cue (S)	WA	21.5	615
Perenjori (S)	WA	21.3	616
Quilpie (S)	QLD	21.0	617
Kulin (S)	WA	20.8	618
Northern Areas (DC)	SA	20.8	619
Mount Marshall (S)	WA	20.7	620
Urana (A)	NSW	20.1	621
Buloke (S)	VIC	19.2	622
Central Highlands (M)	TAS	19.1	623
West Arthur (S)	WA	18.5	624
Monto (S)	QLD	18.1	625
Bombala (A)	NSW	17.4	626
Kent (S)	WA	15.8	627
West Coast (M)	TAS	15.1	628

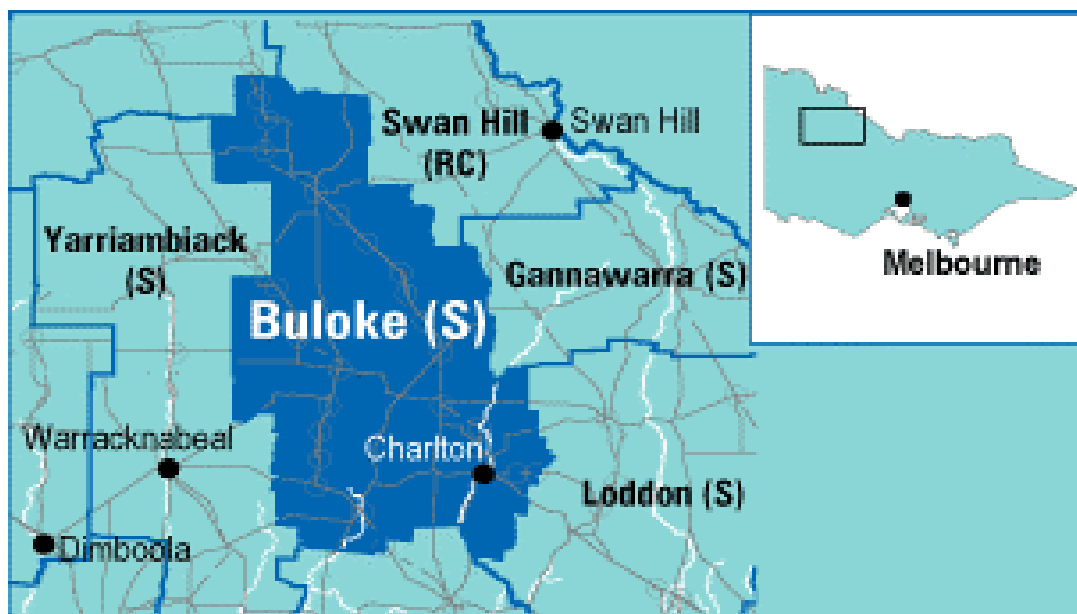
## 8.6 Case study – Buloke

The Shire of Buloke is in Victoria's Mallee-Wimmera region. It includes a range of small towns and was highlighted last year as a case study into the Mallee-Wimmera pipeline.

The region was highlighted as ranking of 622<sup>nd</sup> out of a possible 628 local government areas. The individual scores for each of the indicators is provided in a table below.

The Shire of Buloke was formed by the amalgamation of the former Shires of Donald, Charlton, Birchip and Wycheproof. It has no dominant urban centre, but instead contains five towns of approximately equal size. These are the namesake towns of each of the former Shires, plus Sea Lake, which was the second town within the former Shire of Wycheproof.

Each town is declining in population. The reduction in average household size that has occurred across Australia will have meant the number of households has stayed reasonably constant; however the underlying population is falling quite rapidly. This is not consistent with general trends in regional cities, but is consistent with towns of this size in agricultural areas. Buloke's historical inheritance of five towns, each with substantial infrastructure, has resulted in its urban population being larger than is now justified by the towns' role as rural service centres. The five towns have added to their economic base in two ways.

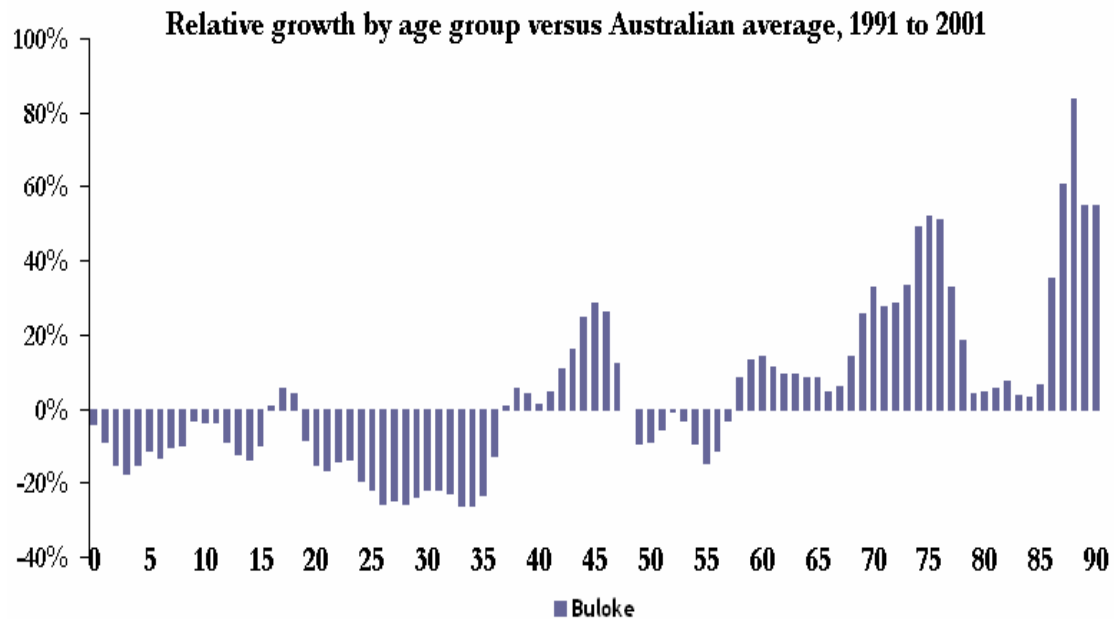


**Table 8.30 Buloke – Indicator performance**

Indicator	Score	Rank	Percentile
% per annum growth in pop aged over 55 (negative)	-11.7	570	9.2
Share of pop aged under 55 in 2001	69.4	568	9.6
% years since 1995 which population has increased	11.1	588	6.4
Effective fertility – % 0 year olds (per cent of pop)	0.84	583	6.9
Baby bounce – change in fertility 1996-04	-0.41	515	18.0
Share of LGA population contained in largest locality	18.9	550	12.4
Net migration of 0 to 14 year olds (1996-01)	-7.4	576	8.3
In migration of 55+ year olds (per cent of pop)	3.4	499	20.5
Share of 55+ year olds employed (2001)	34.1	207	67.0
Demographic stress	-52.4	543	13.5
<b>Overall score</b>	<b>19.2</b>	<b>622</b>	<b>0.6</b>

House prices are low relative to the metropolitan area, the provincial cities and the coastal retirement areas. This has two effects. A home-owner in one of the five towns is not in a commanding position to trade up into the metropolitan area or along the coast, and townspeople therefore tend to retire locally. It is also possible for people from the metropolitan area and provincial cities to trade down into one of the five towns with cash to spare. To be successful in this they have to be prepared for small-town life, but it only requires a small flow of retirement migration to keep the better houses in each town full.

To maintain the five towns as retirement centres requires maintenance of service levels, particularly the health services. These health services are staffed, in the main, by married women. The towns are not attractive to the young and single, but many be attractive to couples who appreciate good basic services and low house prices.



In the graph above the change age distribution within the Shire is shown in comparison to national averages. The shire is losing ground in the key 20 to 35 year age range. All of the older age groups, except the 50 to 55 range, which was hard hit by WWII in this area, is growing at substantially high rates. These rates of growth are faster than a coastal retirement community. That is, whilst the Shire does not have the strong migration growth in this cohort, the relative decline of other age groups results in an effective ageing rate far in excess of the rest of Australia.

From a migration demand perspective the towns have been hard hit by the centralisation of banking and similar services. A spell in a country town was often a desirable career move for employees in such industries while their children were young. The withdrawal of such families from the towns has reduced cohort size through the schools. As against this, distance learning techniques are developing, and are helping to maintain the quality of education available.

Since 1996 there has been approximately 140 children aged under 15 years in 2001 move with their families to the shire. However at the same time more than 300 children of similar ages have left. This outcome is very different to the migration patterns of youth approaching school completion age or just after (Current 20-24 year olds represent less than 25 per cent their cohort in 1991, that is, 75 per cent of 10-14 year olds in 1991 have left). These “education / employment / experience” movements are expected, and in the long run the education received and connections made are the basis for future farm productivity and success of these youth in the broader economy.

As noted in previous sections of this chapter the lack of capacity to attract young families is of significant concern.

However the loss of school age children, an outcome related more closely to the employment prospects of their families, highlights how important maintaining non-farm employment is to town and shire viability. Increased productivity in council services, justified on the basis of farm income will accelerate the loss of employment in towns, and hence school aged children.

In addition to the lack of employment, another cause for concern in retaining couples with children in the population is the limited range of extra-curricular activities. Football is no longer enough.

Though the Shire is still noted for its high level of volunteering and for the way in which local institutions, particularly the hospitals, have been built with capital raised in the community, the reduction in the commercial strength of the towns and the much more businesslike approach to farming adopted by the current generation on the land has not been conducive to continued donations to the upgrading of the hospitals and schools. It could be that the Shire is approaching a threshold where continued service provision is at risk.

The population sustainability issues are clear in a place such as Buloke, but are writ large in many areas of Australia as previously highlighted.

## **8.7 Conclusions**

Building specific programs to address (but not necessarily fix or turn around) such population sustainability issues is vital. Managing the negative social, economic and potentially environmental impacts of the loss of population sustainability is required on a large scale; as noted at the beginning of the chapter a region can struggle for sustainability if the perceptions of the residents are no longer consistent with perceptions or expectations of those likely to sustain the region in the future. In such circumstances, understanding that we must help regions with sustainability concerns, should produce viable widespread social programs which offer palliative type care to these regions.

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## **9. Net migration, population and ageing trends: 1996-2008**

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This section has been a regular feature of *State of the Regions* reports since the 2003 report. The analysis of the body of the chapter is at the regional grouping level. However, Tables 9.10 to 9.18 contain the detail for the individual SOR regions.

The population by age has been updated to June 2004. The 2004 to 2008 data is a projection based input on current and projected dwelling commencement activity.

### **9.1 State-by-state population trends: 1996-2008**

Table 9.1 shows interstate annual net migration trends between 1996 and 2004. The most striking change between the two historical sub-periods is the doubling of net interstate migration out of New South Wales. The average annual net outflow of population from New South Wales doubled over the 2001-2004 period, compared to the 1996-2001 period. The main reason for this was the high prices for housing in Sydney compared to other state capitals.

The bulk of the increased outflow from New South Wales went to Queensland where house prices were, at least in the early years of the decade, well below Sydney levels. Over the last couple of years Brisbane house prices have significantly closed the gap with Sydney. As a result, the outflow of interstate migrants from New South Wales to Queensland would be expected to fall.

As can be seen from Table 9.1, a fall in the level of net interstate migration out of New South Wales is expected for the 2004-2008 period, compared to the recent past. However, the fall is relatively small, from -29,000 over the 2001-2004 period to -25,000 over the projection period. The reason for the small fall is that over the next few years Queensland, Western Australia and the Northern Territory are going to drive Australia's economic growth. These states will grow in excess of an average of between 4 and 6 per cent over the next four years. These growth rates will, in turn, be driven by strong rates of resource development. The national average will be around 3 per cent, which means that the southern states will grow at an average of 2.5 per cent.

The higher rate of employment creation in the northern and western states will be a strong attractor for migrants, whether interstate or overseas sourced migrants.

Accordingly, from Table 9.1, Queensland's net interstate migration level over the projection period will be higher than the 1996-2001 period, while Western Australia will have a 4,000 increase in net interstate migration over the projection period compared to the recent past.

### **9.2 International migration**

The level of net international migration will be increased over the projection period, compared to the recent past. This will be mainly driven by the recent decision of the federal government to increase the level of skill migration by 20,000 per annum in the light of current skill shortages. Queensland and Western Australia will attract an increased share of these migrants compared to historical outcomes. This will either be directly or indirectly, with the migrants initially coming to New South Wales or Victoria and then travelling interstate.

### 9.3 State population growth rates

Provided the planned increase in international migration is realised over the projection period, Australia's overall population growth rate should be maintained at the recent trend rate of 1.2 per cent per annum. The major change will be an acceleration in the Western Australian population growth rate.

### 9.4 SOR major regional grouping: net migration flows

Table 9.4 shows the yearly average net migration flows between the major SOR regions by age group for the sub-periods between 1996 and 2006.

The major trend in the table is the propensity of the rural and provincial major regions to steadily reduce the rate of loss of those aged between 0 and 24 and increase their capture of those aged 25 and over.

There are many factors driving this outcome, including:-

- the increasing cost of education forcing the young to attend provincial institutions rather than travel to the capital cities;
- the high cost of city accommodation encouraging the shift to areas within commuting distance;
- potential sea changes (that is, those in the 25 to 54 age group) turning inland for higher levels of community based living and/or because suitable coastal sites have become unaffordable, especially sites in the lifestyle regions; and
- retirees following the same track and for the same reasons as the potential sea changers in the working age population.

Given the nature of the drivers of Australian economic growth over the next few years, it is not surprising, from Table 9.4, that resource based regions increase their rate of net inflows of people in the working age range by 3,000 per annum, compared to the outcome of the more recent past. From Appendix 9A, the Queensland Mackay region (coal expansion) and the Pilbara (oil and gas) are two regions which drive this trend.

One noteworthy feature of the trend of the recent past has been the slowdown in growth in Sydney's Outer West and South West. The impact of the recent fall off in New South Wales population growth fell disproportionately on these regions. This is reflected in the fall off in net migration of those in the 25 to 54 age range into the dispersed metro regions of an annual average of 20,100 over the 1996 to 2001 period to 8,800 over the 2001 to 2004 period. The easing off of interstate migration to Queensland and the increase in international migration will see a recovery of net migration into the dispersed metro regions over the next four years. However, the 1996 to 2001 level of net migration into this region is unlikely to be reached.

A summary of the projections follows.

For the lifestyle regions the level of migrant inflows over the next four years is projected to be a little below the level of recent trends. This is the result of a projected small trend away from lifestyle regions by lifestyle changers and return towards attractive provincial areas.

The decline of Australia's traditional manufacturing areas has opened opportunities for redevelopment of prime sites for housing and commercial development. This is reflected in the high level of net migration into production zone regions over the next four years.



## 9.5 SOR major regional group: population growth rates

What is noteworthy from Table 9.6 is the convergence of population growth rates between major SOR regions. Over the 1996 to 2001 period, the rural regions had the lowest population growth rate of 0.4 per cent per annum. This growth rate doubled over the 2001 to 2004 period, and is projected to increase again to 1.0 per cent per annum over the 2004 to 2008 period. This will take the population growth of the rural and provincial groups to just under the national average. The resource-based regions also had a below national average growth rate over the 1996 to 2004 period. This is projected to increase to 1.5 per cent over the projection period, or well above the national average.

Conversely, lifestyle and dispersed metro regions, which were above the national average over the historical period, experience a decline in growth rates over the projection period. However, the lifestyle group still maintains a healthy margin in growth outcomes over the projection period compared to the other regional groups. The projected population growth rate for the lifestyle major group is 1.8 per cent per annum over the projection period, compared to 2.2 per cent from 1996 to 2004.

The production zone population increase remains at the national average over the projection period and this is projected to be the case over the 2004 to 2008 period. In terms of the scale of the increase in population, the production zone is the most important. Currently the production zone major region is absorbing 66,000 additional population per annum and this is projected to increase to 68,000 per annum over the projection period.

## 9.6 SOR major regions: age structure of population

Tables 9.7 to 9.9 show the changes in the age structure of the population. The lifestyle region is projected to increase its share of population of those aged 55 and over by 6 percentage points between 1996 and 2006. This region, for each of the benchmark years between 1996 and 2008, has had the highest share of population aged 55 and over. The share is increasing by 0.5 percentage points per year. By 2008 this will reach 28.5 per cent, compared to 22.5 per cent in 1996. Close behind is the rural region with 27.7 per cent of its population aged 55 and over by 2008.

By 2008 the resource-based region will have the lowest share of population aged 55 and over. This share is projected to be 21.4 per cent.

From Table 9.8, the core metro region has the highest share of population in the working age range. This is 46 per cent in 2004, rising to 46.7 per cent in 2008. The lifestyle and rural regions have the lowest share of population in the working age range of 25 to 54. Both regions have shares under 40 per cent.

The data for average ages by region in Table 9.5 reflects these trends. By 2008 the average age for the lifestyle region will be greater than 40 years.

## 9.7 Conclusion

The overall impression is one of convergence occurring between major regions, at least in terms of population growth. This is to be expected. One regional grouping cannot expect to maintain a relative superiority in population growth for a long period of time. Continued high population growth will:-

- place upward pressure on relative land and accommodation costs;
- reduce quality of life by placing excessive pressure on infrastructure; and
- crowd out trade exposed employment (manufacturing, etc.).

This will create the opportunities for previously lagging regions to capture increasing shares of migration flows and to accelerate their population growth rates.

It should be noted, of course, that only some sub-regions within the broad groupings will have the capacity to capture these migration flows. The characteristics of those successful sub-regions are analysed in Chapter 8.

<b>Table 9.1</b>	<b>State net interstate migration ('000) – average annual levels between benchmark years</b>		
	1996-2001	2001-2004	2004-2008
New South Wales	-13	-29	-25
Victoria	1	1	1
Queensland	19	36	27
South Australia	-3	-2	-4
Western Australia	1	-2	2
Tasmania	-3	-2	-2
Northern Territory	-3	1	1
Australian Capital Territory	0	-3	-1

<b>Table 9.2</b>	<b>State net international migration ('000) – average annual levels between benchmark years</b>		
	1996-2001	2001-2004	2004-2008
New South Wales	43	42	46
Victoria	25	27	35
Queensland	15	24	26
South Australia	3	4	6
Western Australia	14	16	22
Tasmania	0	1	1
Northern Territory	1	1	1
Australian Capital Territory	0	1	0
Australia	101	115	137

<b>Table 9.3</b>	<b>State average annual population growth rates (per cent per annum) – average annual levels between benchmark years</b>		
	1996-2001	2001-2004	2004-2008
New South Wales	1.2	0.8	0.9
Victoria	1.1	1.1	1.1
Queensland	1.5	2.2	2.0
South Australia	0.5	0.5	0.4
Western Australia	1.5	1.4	1.9
Tasmania	-0.1	0.7	0.7
Northern Territory	1.4	0.4	1.4
Australian Capital Territory	0.7	0.5	0.4
Australia	1.1	1.2	1.2

	1996-2001	2001-2004	2004-2008
<b>Age range 0-24</b>			
Rural	-13.1	-5.0	-2.7
Core Metro	30.3	36.7	26.3
Resourced-based	-1.6	-0.8	-0.3
Dispersed Metro	13.5	10.6	13.4
Production Zone	9.1	14.7	12.7
Lifestyle	6.3	8.0	5.7
<b>Age range 25-54</b>			
Rural	4.3	9.6	15.2
Core Metro	0.3	-3.8	9.9
Resourced-based	1.3	1.0	4.1
Dispersed Metro	20.1	8.8	17.2
Production Zone	14.3	12.5	18.3
Lifestyle	15.1	17.7	15.6
<b>Age range 55 and over</b>			
Rural	-2	3	6
Core Metro	-8	-1	-4
Resourced-based	-1	0	0
Dispersed Metro	-4	-2	-4
Production Zone	-2	-1	0
Lifestyle	5	7	6

	1996	2001	2004	2008	Change 1996-2006
Rural	36.0	37.5	38.4	39.7	3.7
Core Metro	37.5	38.0	38.4	38.9	1.4
Resourced-based	32.7	34.2	35.2	36.6	3.9
Dispersed Metro	36.1	37.2	37.8	38.7	2.6
Production Zone	35.6	36.7	37.3	38.2	2.7
Lifestyle	37.0	38.4	39.1	40.4	3.4

<b>Table 9.6</b>	<b>SOR major regional groups – total annual average population change</b>		
	1996-2001	2001-2004	2004-2008
<b>Average annual growth rates (per cent)</b>			
Rural	0.4	0.8	1.0
Core Metro	1.1	1.3	1.3
Resourced-based	0.9	1.0	1.5
Dispersed Metro	1.3	1.0	1.1
Production Zone	1.2	1.2	1.2
Lifestyle	2.2	2.3	1.8
<b>Average annual change ('000)</b>			
Rural	15.5	27.0	37.0
Core Metro	36.8	49.0	50.6
Resourced-based	6.8	7.7	11.4
Dispersed Metro	58.2	46.1	53.8
Production Zone	60.9	66.3	67.8
Lifestyle	35.4	40.5	34.0

<b>Table 9.7</b>	<b>SOR major regional groups – share of population aged 0 to 24 (per cent)</b>			
	1996	2001	2004	2008
Rural	36.9	35.0	34.1	32.8
Core Metro	32.8	31.5	31.3	29.6
Resourced-based	40.6	38.4	37.2	35.5
Dispersed Metro	36.1	34.5	34.0	33.0
Production Zone	36.5	34.9	34.4	33.1
Lifestyle	35.2	33.6	32.8	31.6

<b>Table 9.8</b>	<b>SOR major regional groups – share of population aged 25 to 54 (per cent)</b>			
	1996	2001	2004	2008
Rural	41.9	41.5	40.5	39.5
Core Metro	46.1	46.9	46.0	46.7
Resourced-based	44.1	44.4	43.6	43.1
Dispersed Metro	44.0	43.8	42.7	42.1
Production Zone	43.6	43.8	43.1	42.8
Lifestyle	42.2	41.8	40.9	39.9

<b>Table 9.9</b>	<b>SOR major regional groups – share of population aged 55 and over (per cent)</b>			
	1996	2001	2004	2008
Rural	21.3	23.5	25.3	27.7
Core Metro	21.1	21.7	22.7	23.7
Resourced-based	15.3	17.2	19.1	21.4
Dispersed Metro	19.9	21.6	23.2	24.9
Production Zone	19.9	21.3	22.5	24.1
Lifestyle	22.5	24.6	26.3	28.5

**Table 9.10 SOR regional groups – net annual migration flows aged 0 to 24 ('000)**

	1996-2001	2001-2004	2004-2008
NSW Central West	-0.6	-0.7	-0.4
NSW Far and North West	-0.9	-1.1	-0.7
NSW Hunter	0.6	0.3	1.0
NSW Illawarra	0.5	0.0	0.3
NSW Murrumbidgee	-0.5	-0.6	-0.3
NSW Murray	-0.5	-0.3	-0.2
NSW Mid North Coast	-0.7	-0.3	-0.3
NSW North	-0.8	-1.0	-0.6
NSW Richmond-Tweed	-0.1	-0.2	0.0
NSW South-East	-0.2	-0.2	0.2
NSW Central Coast	0.4	-0.1	-0.1
Global Sydney	7.0	9.4	4.7
Sydney Inner West	1.4	1.6	1.0
Sydney Outer North	3.6	2.7	2.5
Sydney Outer South West	-0.1	-0.3	0.0
Sydney Outer West	-0.4	-1.2	-0.7
Sydney Mid West	3.3	1.3	1.5
Sydney South	1.6	0.9	1.1
Melbourne East	3.7	1.5	2.4
VIC Gippsland	-1.3	-0.6	-0.6
VIC Barwon	0.2	0.7	0.5
VC Goulburn	-0.4	-0.2	-0.2
Melbourne Inner	5.0	7.1	3.6
VIC Loddon	-0.1	0.0	0.1
VIC Mallee-Wimmera	-0.6	-0.5	-0.4
Melbourne North	1.8	1.9	1.6
VIC Ovens-Hume	-0.3	-0.1	-0.3
Melbourne South	0.9	0.7	0.5
Melbourne West	1.7	4.9	4.2
VIC West	-0.5	-0.3	-0.4
Melbourne Westport	1.2	3.2	1.6
VIC Central Highlands	0.0	0.1	0.3
QLD Pastoral	-0.2	-0.2	-0.3
QLD Agricultural SW	0.1	0.6	0.2
QLD Far North	-1.8	0.6	1.4
QLD Fitzroy	-0.6	0.1	-0.2
QLD Mackay	-0.3	0.2	0.4
QLD North West	-0.6	-0.2	-0.2
QLD North	0.4	1.3	1.3
QLD Wide Bay-Burnett	-1.0	0.4	0.3
QLD West Moreton	-0.7	0.7	0.9
QLD Gold Coast	5.8	6.7	4.8
QLD Sunshine Coast	1.4	2.0	0.9

**Table 9.10 SOR regional groups – net annual migration flows aged 0 to 24 ('000) – continued**

	1996-2001	2001-2004	2004-2008
Brisbane North	0.8	2.6	2.0
Brisbane City	10.3	10.7	10.0
Adelaide Central	2.2	2.0	2.2
SA Eyre and Yorke	-1.2	-0.9	-0.8
SA Murraylands	-0.3	-0.3	-0.3
Adelaide Plains	0.6	1.5	1.1
SA South East	-0.3	-0.2	-0.2
Adelaide Outer	-0.2	-0.2	-0.3
WA Pilbara-Kimberly	0.0	-0.1	0.0
WA Gascoyne-Goldfields	-0.8	-0.9	-0.8
WA Wheatbelt-Great Southern	-0.8	-1.1	-0.9
WA Peel-South West	0.7	1.0	1.6
Perth Central	3.5	4.2	3.4
Perth Outer North	1.4	1.4	2.7
Perth Outer South	1.7	2.5	3.2
TAS Hobart-South	-0.4	0.1	0.2
TAS North West	-0.9	-0.3	-0.5
TAS North	-0.6	0.1	0.0
Darwin	0.4	0.1	0.6
NT Lingiari	-0.2	-0.5	-0.4
ACT	0.7	1.4	0.6

**Table 9.11 SOR regional groups – net annual migration flows aged 25 to 54 ('000)**

	1996-2001	2001-2004	2004-2008
NSW Central West	0.3	0.3	0.4
NSW Far and North West	0.0	-0.2	0.2
NSW Hunter	1.9	1.6	1.9
NSW Illawarra	1.6	0.8	1.0
NSW Murrumbidgee	-0.1	-0.2	0.0
NSW Murray	0.2	0.1	0.3
NSW Mid North Coast	2.2	2.3	2.7
NSW North	0.0	-0.2	0.0
NSW Richmond-Tweed	1.7	1.6	1.7
NSW South-East	1.5	1.5	1.6
NSW Central Coast	2.4	1.1	1.2
Global Sydney	0.1	-0.6	3.2
Sydney Inner West	0.8	-0.5	1.0
Sydney Outer North	4.0	2.2	2.4
Sydney Outer South West	1.0	0.2	0.5
Sydney Outer West	0.6	-1.0	-0.4
Sydney Mid West	3.1	-2.2	0.3
Sydney South	1.6	-0.1	0.8
Melbourne East	0.2	-3.4	-0.6
VIC Gippsland	0.7	1.1	1.2
VIC Barwon	1.3	1.5	1.5
VC Goulburn	1.1	1.2	1.3
Melbourne Inner	-1.2	-3.1	1.3
VIC Loddon	0.9	1.0	1.0
VIC Mallee-Wimmera	0.4	0.2	0.5
Melbourne North	0.3	-0.6	1.7
VIC Ovens-Hume	0.3	0.5	0.3
Melbourne South	1.1	-0.4	0.7
Melbourne West	2.5	4.8	6.5
VIC West	0.1	0.1	0.2
Melbourne Westport	3.8	5.5	3.9
VIC Central Highlands	0.4	0.7	0.5
QLD Pastoral	0.0	-0.2	-0.1
QLD Agricultural SW	0.6	0.6	0.9
QLD Far North	-1.4	1.0	2.1
QLD Fitzroy	-0.4	0.5	0.4
QLD Mackay	0.2	0.7	1.4
QLD North West	-0.7	-0.3	-0.2
QLD North	-0.3	0.5	1.0
QLD Wide Bay-Burnett	1.1	2.2	2.6
QLD West Moreton	-0.2	1.1	1.5
QLD Gold Coast	6.3	7.9	6.1
QLD Sunshine Coast	3.5	4.4	3.5

<b>Table 9.11</b>	<b>SOR regional groups – net annual migration flows aged 25 to 54 ('000) – continued</b>		
	1996-2001	2001-2004	2004-2008
Brisbane North	2.2	4.6	3.8
Brisbane City	2.4	3.3	5.0
Adelaide Central	-0.2	-0.7	-0.9
SA Eyre and Yorke	0.0	-0.2	0.1
SA Murraylands	0.1	0.0	0.1
Adelaide Plains	0.1	0.1	0.0
SA South East	0.0	-0.1	0.1
Adelaide Outer	1.4	0.7	0.7
WA Pilbara-Kimberly	0.5	0.0	0.7
WA Gascoyne-Goldfields	-0.4	-0.8	-0.1
WA Wheatbelt-Great Southern	0.4	-0.1	0.6
WA Peel-South West	2.5	2.6	3.7
Perth Central	-1.0	-1.1	0.7
Perth Outer North	3.5	2.9	4.8
Perth Outer South	2.1	2.1	3.3
TAS Hobart-South	-0.3	0.5	-0.2
TAS North West	-0.3	0.1	0.1
TAS North	-0.2	0.3	0.3
Darwin	0.6	-0.3	0.6
NT Lingiari	-0.3	-0.8	-0.3
ACT	-0.9	-1.2	-0.8



**Table 9.12 SOR regional groups – net annual migration flows aged 55 and over ('000)**

	1996-2001	2001-2004	2004-2008
NSW Central West	0.0	0.0	0.3
NSW Far and North West	-0.3	-0.2	0.0
NSW Hunter	1.0	0.6	1.4
NSW Illawarra	1.0	0.7	0.8
NSW Murrumbidgee	-0.1	-0.1	0.0
NSW Murray	0.0	0.1	0.1
NSW Mid North Coast	1.2	1.4	1.7
NSW North	-0.2	-0.1	0.1
NSW Richmond-Tweed	0.8	0.6	1.1
NSW South-East	0.4	0.5	0.6
NSW Central Coast	1.1	0.8	0.6
Global Sydney	-1.9	0.1	-1.0
Sydney Inner West	-0.8	-0.7	-0.6
Sydney Outer North	-2.0	-1.4	-2.4
Sydney Outer South West	-0.2	-0.3	0.0
Sydney Outer West	-0.6	-0.6	-0.5
Sydney Mid West	-3.3	-2.4	-3.5
Sydney South	-1.0	-0.8	-1.3
Melbourne East	-1.4	-1.2	-2.7
VIC Gippsland	0.6	0.7	1.1
VIC Barwon	0.4	0.5	0.5
VC Goulburn	0.3	0.2	0.4
Melbourne Inner	-0.8	-0.3	-0.4
VIC Loddon	0.2	0.3	0.4
VIC Mallee-Wimmera	-0.1	0.0	0.1
Melbourne North	-1.1	-0.8	-0.8
VIC Ovens-Hume	0.2	0.1	0.1
Melbourne South	-0.9	-0.5	-1.2
Melbourne West	-0.6	-0.1	0.2
VIC West	0.0	0.0	0.0
Melbourne Westport	0.8	1.0	0.9
VIC Central Highlands	0.1	0.1	0.2
QLD Pastoral	-0.2	0.0	-0.1
QLD Agricultural SW	-0.1	0.3	0.3
QLD Far North	-1.1	0.0	0.2
QLD Fitzroy	-0.4	-0.1	-0.2
QLD Mackay	-0.3	0.0	0.1
QLD North West	-0.5	-0.1	-0.2
QLD North	-0.7	0.1	0.0
QLD Wide Bay-Burnett	0.6	1.2	1.8
QLD West Moreton	-0.1	0.1	0.5
QLD Gold Coast	1.1	2.5	0.9
QLD Sunshine Coast	1.5	2.0	1.1

**Table 9.12 SOR regional groups – net annual migration flows aged 55 and over ('000) – continued**

	1996-2001	2001-2004	2004-2008
Brisbane North	0.6	1.1	1.3
Brisbane City	-2.2	0.7	-1.6
Adelaide Central	0.1	0.2	0.2
SA Eyre and Yorke	-0.3	-0.1	0.1
SA Murraylands	-0.1	0.0	0.0
Adelaide Plains	-0.7	-0.2	-0.2
SA South East	-0.2	0.0	0.0
Adelaide Outer	0.2	0.3	0.6
WA Pilbara-Kimberly	-0.5	-0.2	-0.4
WA Gascoyne-Goldfields	-0.4	-0.2	-0.2
WA Wheatbelt-Great Southern	0.0	0.1	0.1
WA Peel-South West	1.0	1.3	1.6
Perth Central	-0.7	-0.1	-0.4
Perth Outer North	0.0	0.3	0.9
Perth Outer South	-0.2	0.2	0.4
TAS Hobart-South	-0.1	0.4	0.5
TAS North West	-0.1	0.2	0.2
TAS North	-0.1	0.2	0.5
Darwin	-0.2	-0.2	0.0
NT Lingiari	-0.3	-0.2	-0.4
ACT	-0.8	-0.5	-0.5

**Table 9.13 SOR regional groups – average annual population growth (per cent)**

	1996-2001	2001-2004	2004-2008
NSW Central West	0.6	0.3	0.7
NSW Far and North West	0.2	-0.4	0.2
NSW Hunter	1.2	0.8	1.1
NSW Illawarra	1.4	0.8	0.9
NSW Murrumbidgee	0.4	0.1	0.4
NSW Murray	0.4	0.4	0.6
NSW Mid North Coast	1.3	1.3	1.4
NSW North	0.2	-0.2	0.2
NSW Richmond-Tweed	1.5	1.1	1.4
NSW South-East	1.5	1.3	1.5
NSW Central Coast	1.8	0.9	0.8
Global Sydney	1.1	1.7	1.4
Sydney Inner West	1.0	0.7	1.1
Sydney Outer North	1.3	1.0	0.9
Sydney Outer South West	1.6	1.0	1.3
Sydney Outer West	1.0	0.1	0.4
Sydney Mid West	1.3	0.8	0.8
Sydney South	1.0	0.6	0.7
Melbourne East	0.7	0.0	0.2
VIC Gippsland	0.5	0.8	1.0
VIC Barwon	1.2	1.5	1.3
VC Goulburn	1.2	1.2	1.2
Melbourne Inner	1.3	1.7	1.9
VIC Loddon	1.2	1.2	1.2
VIC Mallee-Wimmera	0.3	0.2	0.4
Melbourne North	0.9	0.8	1.0
VIC Ovens-Hume	0.9	1.0	0.6
Melbourne South	0.6	0.3	0.3
Melbourne West	1.6	2.6	2.6
VIC West	0.1	0.2	0.2
Melbourne Westport	1.6	2.0	1.5
VIC Central Highlands	1.0	1.1	1.1
QLD Pastoral	0.2	-0.3	-0.1
QLD Agricultural SW	1.0	1.3	1.2
QLD Far North	-0.9	1.6	2.4
QLD Fitzroy	0.3	1.1	0.8
QLD Mackay	0.8	1.6	2.3
QLD North West	-2.8	-0.4	0.1
QLD North	0.7	1.7	1.8
QLD Wide Bay-Burnett	0.9	1.9	2.2
QLD West Moreton	0.6	1.9	2.4
QLD Gold Coast	2.6	2.8	2.0
QLD Sunshine Coast	3.3	3.6	2.3

**Table 9.13 SOR regional groups – average annual population growth (per cent) – continued**

	1996-2001	2001-2004	2004-2008
Brisbane North	2.2	3.5	2.9
Brisbane City	1.7	2.2	2.0
Adelaide Central	0.5	0.3	0.4
SA Eyre and Yorke	-0.2	-0.3	0.0
SA Murraylands	0.1	0.0	-0.1
Adelaide Plains	0.5	0.8	0.6
SA South East	0.0	0.2	0.2
Adelaide Outer	1.1	0.8	0.7
WA Pilbara-Kimberly	1.7	0.9	1.8
WA Gascoyne-Goldfields	0.0	-0.6	0.1
WA Wheatbelt-Great Southern	0.7	-0.2	0.5
WA Peel-South West	3.0	2.9	3.4
Perth Central	0.7	1.0	1.2
Perth Outer North	2.2	1.9	2.5
Perth Outer South	1.6	1.6	1.9
TAS Hobart-South	0.1	0.8	0.8
TAS North West	-0.6	0.3	0.3
TAS North	-0.1	0.9	1.0
Darwin	2.1	0.8	2.3
NT Lingiari	0.7	-0.2	0.3
ACT	0.7	0.5	0.4

**Table 9.14 SOR regional groups – average annual population growth (per cent)**

	1996-2001	2001-2004	2004-2008
NSW Central West	1.0	0.5	1.2
NSW Far and North West	0.3	-0.5	0.3
NSW Hunter	6.8	5.1	6.5
NSW Illawarra	5.4	3.4	3.6
NSW Murrumbidgee	0.7	0.2	0.6
NSW Murray	0.5	0.4	0.7
NSW Mid North Coast	3.6	3.8	4.2
NSW North	0.4	-0.4	0.4
NSW Richmond-Tweed	3.2	2.5	3.1
NSW South-East	2.8	2.5	3.2
NSW Central Coast	5.2	2.8	2.6
Global Sydney	7.2	12.1	10.2
Sydney Inner West	2.2	1.7	2.6
Sydney Outer North	8.0	6.7	5.8
Sydney Outer South West	3.6	2.3	3.2
Sydney Outer West	3.1	0.3	1.3
Sydney Mid West	15.7	10.2	11.0
Sydney South	4.4	2.5	3.1
Melbourne East	5.7	0.2	1.9
VIC Gippsland	1.3	2.1	2.4
VIC Barwon	3.0	3.8	3.6
VC Goulburn	2.3	2.3	2.4
Melbourne Inner	3.7	5.0	5.8
VIC Loddon	1.9	2.1	2.2
VIC Mallee-Wimmera	0.5	0.2	0.6
Melbourne North	6.3	6.0	7.6
VIC Ovens-Hume	0.8	0.9	0.6
Melbourne South	1.9	1.0	1.0
Melbourne West	8.4	14.9	16.2
VIC West	0.1	0.2	0.2
Melbourne Westport	11.7	15.7	11.9
VIC Central Highlands	1.3	1.5	1.6
QLD Pastoral	0.1	-0.1	0.0
QLD Agricultural SW	2.1	2.7	2.7
QLD Far North	-2.0	3.6	5.9
QLD Fitzroy	0.5	2.1	1.6
QLD Mackay	1.0	2.0	3.1
QLD North West	-1.1	-0.1	0.0
QLD North	1.3	3.6	3.9
QLD Wide Bay-Burnett	2.1	4.7	5.6
QLD West Moreton	1.0	3.5	4.6
QLD Gold Coast	18.5	22.4	17.1
QLD Sunshine Coast	7.3	9.3	6.4

<b>Table 9.14</b>	<b>SOR regional groups – average annual population growth (per cent) – continued</b>		
	1996-2001	2001-2004	2004-2008
Brisbane North	6.0	10.6	9.7
Brisbane City	14.4	20.1	19.3
Adelaide Central	1.8	1.3	1.4
SA Eyre and Yorke	-0.4	-0.5	0.0
SA Murraylands	0.1	0.0	-0.1
Adelaide Plains	2.6	3.7	2.9
SA South East	0.0	0.2	0.1
Adelaide Outer	3.8	2.9	2.6
WA Pilbara-Kimberly	1.0	0.6	1.3
WA Gascoyne-Goldfields	0.0	-0.7	0.1
WA Wheatbelt-Great Southern	0.9	-0.3	0.7
WA Peel-South West	5.7	6.2	8.0
Perth Central	2.7	4.4	5.4
Perth Outer North	8.8	8.4	12.0
Perth Outer South	7.8	8.5	10.6
TAS Hobart-South	0.3	1.9	1.8
TAS North West	-0.7	0.4	0.3
TAS North	-0.1	1.2	1.3
Darwin	2.1	0.9	2.6
NT Lingiari	0.6	-0.2	0.3
ACT	2.2	1.6	1.5

**Table 9.15 SOR regional groups – average age (years)**

	1996	2001	2004	2008	Change 1996-2006
NSW Central West	36.1	37.5	38.4	39.8	3.6
NSW Far and North West	35.9	37.1	38.3	39.6	3.7
NSW Hunter	37.2	38.5	39.3	40.5	3.3
NSW Illawarra	37.0	38.4	39.3	40.5	3.6
NSW Murrumbidgee	35.3	36.5	37.4	38.5	3.2
NSW Murray	36.8	38.3	39.2	40.5	3.7
NSW Mid North Coast	38.9	40.5	41.5	43.3	4.4
NSW North	36.2	37.6	38.7	40.0	3.8
NSW Richmond-Tweed	38.2	39.9	40.8	42.3	4.0
NSW South-East	37.4	39.0	40.0	41.3	3.9
NSW Central Coast	38.5	39.4	40.1	41.0	2.5
Global Sydney	38.4	38.7	38.9	39.2	0.8
Sydney Inner West	38.7	38.8	38.9	39.3	0.6
Sydney Outer North	37.7	38.2	38.5	38.8	1.2
Sydney Outer South West	31.0	32.7	33.7	35.1	4.2
Sydney Outer West	32.8	34.3	35.2	36.4	3.6
Sydney Mid West	34.6	35.3	35.9	36.6	2.0
Sydney South	37.8	38.3	38.7	39.0	1.2
Melbourne East	37.5	38.6	39.3	39.9	2.4
VIC Gippsland	36.8	38.9	40.0	41.8	5.0
VIC Barwon	37.2	38.6	39.3	40.4	3.2
VC Goulburn	36.6	38.0	38.8	40.2	3.5
Melbourne Inner	37.7	37.8	37.7	38.3	0.7
VIC Loddon	36.7	38.2	39.0	40.4	3.7
VIC Mallee-Wimmera	37.8	38.8	39.7	40.9	3.1
Melbourne North	35.4	36.5	37.1	38.0	2.5
VIC Ovens-Hume	36.0	37.8	38.7	40.2	4.2
Melbourne South	39.6	40.0	40.3	40.5	0.9
Melbourne West	34.6	35.8	36.1	37.0	2.4
VIC West	37.2	38.5	39.3	40.7	3.5
Melbourne Westport	34.7	36.2	36.8	38.1	3.4
VIC Central Highlands	36.3	37.6	38.4	39.7	3.4
QLD Pastoral	34.7	35.3	36.5	37.6	3.0
QLD Agricultural SW	35.9	36.8	37.5	38.5	2.6
QLD Far North	33.4	35.1	36.0	36.9	3.5
QLD Fitzroy	33.7	35.1	35.9	37.1	3.3
QLD Mackay	33.5	35.0	35.9	37.2	3.7
QLD North West	30.7	31.4	32.4	32.9	2.2
QLD North	34.1	35.0	35.7	36.7	2.6
QLD Wide Bay-Burnett	37.5	39.4	40.3	41.8	4.3
QLD West Moreton	33.5	35.1	35.8	37.0	3.4
QLD Gold Coast	35.4	36.6	37.3	38.3	2.9
QLD Sunshine Coast	38.2	39.6	40.3	41.5	3.3

**Table 9.15 SOR regional groups – average age (years) – continued**

	1996	2001	2004	2008	Change 1996-2006
Brisbane North	34.5	36.1	36.6	37.9	3.3
Brisbane City	37.0	37.2	37.5	37.7	0.7
Adelaide Central	40.4	41.3	41.7	42.3	1.9
SA Eyre and Yorke	36.9	38.5	39.5	41.0	4.1
SA Murraylands	37.3	38.7	39.6	40.9	3.6
Adelaide Plains	37.3	38.3	38.8	39.7	2.4
SA South East	36.0	37.3	38.0	39.3	3.3
Adelaide Outer	35.2	37.2	38.3	39.8	4.6
WA Pilbara-Kimberly	29.2	29.8	30.9	32.1	2.8
WA Gascoyne-Goldfields	32.1	33.8	35.1	36.7	4.5
WA Wheatbelt-Great Southern	35.1	37.1	38.6	40.4	5.2
WA Peel-South West	35.6	37.4	38.4	39.9	4.3
Perth Central	38.6	39.2	39.6	40.1	1.5
Perth Outer North	33.4	35.0	35.9	37.3	3.9
Perth Outer South	34.6	36.0	36.8	37.9	3.4
TAS Hobart-South	36.4	38.0	38.8	39.6	3.2
TAS North West	36.0	38.0	39.1	40.4	4.3
TAS North	36.6	38.2	38.9	40.1	3.5
Darwin	30.7	32.2	33.1	34.2	3.5
NT Lingiari	27.9	29.2	30.1	30.8	2.9
ACT	33.3	35.2	36.0	37.4	4.1



**Table 9.16 SOR regional groups – population share aged 0 to 24 (per cent)**

	1996	2001	2004	2008
NSW Central West	37.5	35.7	34.8	33.5
NSW Far and North West	36.6	35.5	34.3	33.0
NSW Hunter	35.3	33.7	33.0	31.7
NSW Illawarra	35.7	33.8	33.1	32.0
NSW Murrumbidgee	38.6	37.1	36.1	35.0
NSW Murray	36.1	34.4	33.5	32.4
NSW Mid North Coast	33.7	32.1	31.1	29.5
NSW North	37.2	35.6	34.5	33.3
NSW Richmond-Tweed	34.4	32.4	31.6	30.3
NSW South-East	34.3	32.5	31.4	30.6
NSW Central Coast	33.9	33.0	32.6	31.8
Global Sydney	29.0	28.0	28.0	25.7
Sydney Inner West	29.1	28.3	28.4	27.0
Sydney Outer North	34.4	33.3	33.2	33.1
Sydney Outer South West	43.9	41.2	40.1	38.3
Sydney Outer West	40.6	38.5	37.5	35.9
Sydney Mid West	37.4	36.2	35.7	34.7
Sydney South	33.1	32.2	31.9	31.4
Melbourne East	34.2	32.5	32.1	31.0
VIC Gippsland	36.1	33.6	32.4	30.7
VIC Barwon	35.6	33.4	32.8	31.4
VC Goulburn	35.9	34.4	33.5	32.3
Melbourne Inner	28.8	27.8	28.8	24.0
VIC Loddon	36.6	34.6	33.7	32.2
VIC Mallee-Wimmera	34.5	33.7	32.9	31.9
Melbourne North	35.9	34.4	33.9	32.4
VIC Ovens-Hume	36.7	34.6	33.7	32.2
Melbourne South	30.7	29.9	30.1	29.6
Melbourne West	37.0	35.0	34.5	33.0
VIC West	35.8	34.2	33.7	32.4
Melbourne Westport	37.7	35.9	35.2	33.8
VIC Central Highlands	37.3	35.4	34.5	33.0
QLD Pastoral	37.8	36.7	35.7	33.7
QLD Agricultural SW	38.3	36.7	36.3	35.0
QLD Far North	38.9	36.3	35.4	34.5
QLD Fitzroy	39.8	38.0	37.3	36.0
QLD Mackay	38.7	36.7	35.7	34.0
QLD North West	43.4	41.2	40.2	39.4
QLD North	39.6	37.8	37.2	35.6
QLD Wide Bay-Burnett	35.2	33.0	32.2	30.6
QLD West Moreton	40.2	38.2	37.6	36.2
QLD Gold Coast	37.0	35.4	34.7	33.4
QLD Sunshine Coast	33.3	31.7	31.1	29.9

<b>Table 9.16</b>	<b>SOR regional groups – population share aged 0 to 24 (per cent) – continued</b>			
	1996	2001	2004	2008
Brisbane North	38.5	36.5	35.8	34.6
Brisbane City	34.9	33.9	33.6	32.5
Adelaide Central	30.7	29.4	29.4	28.9
SA Eyre and Yorke	34.8	33.1	32.5	31.0
SA Murraylands	34.2	32.7	32.1	30.9
Adelaide Plains	34.1	32.8	32.6	31.5
SA South East	35.7	34.4	34.0	32.6
Adelaide Outer	36.7	34.4	33.5	31.9
WA Pilbara-Kimberly	43.5	41.9	40.2	37.9
WA Gascoyne-Goldfields	40.3	37.5	36.3	34.3
WA Wheatbelt-Great Southern	37.0	34.5	33.0	30.8
WA Peel-South West	36.9	34.7	33.7	32.1
Perth Central	32.4	30.9	30.9	29.2
Perth Outer North	39.3	37.0	36.1	34.6
Perth Outer South	38.6	36.7	35.9	34.4
TAS Hobart-South	36.3	34.2	33.6	33.5
TAS North West	36.5	34.0	33.2	31.9
TAS North	36.3	34.0	33.4	32.5
Darwin	40.3	38.2	37.4	36.2
NT Lingiari	48.0	45.5	44.5	43.0
ACT	39.4	36.5	35.6	33.4

**Table 9.17 SOR regional groups – population share aged 25 to 54 (per cent)**

	1996	2001	2004	2008
NSW Central West	40.6	40.3	39.5	38.2
NSW Far and North West	41.6	41.0	40.2	38.9
NSW Hunter	41.5	41.1	40.3	39.3
NSW Illawarra	40.9	40.7	39.7	38.8
NSW Murrumbidgee	40.8	40.7	40.0	39.2
NSW Murray	41.2	40.5	39.5	38.3
NSW Mid North Coast	38.9	38.3	37.3	36.0
NSW North	40.9	40.1	39.1	37.8
NSW Richmond-Tweed	40.0	40.2	39.4	37.8
NSW South-East	42.2	41.4	40.5	38.8
NSW Central Coast	39.7	39.8	38.9	38.2
Global Sydney	49.4	50.3	49.6	51.4
Sydney Inner West	48.4	49.6	49.0	49.8
Sydney Outer North	43.8	43.7	42.7	42.2
Sydney Outer South West	44.3	44.6	43.5	42.4
Sydney Outer West	44.9	45.0	43.9	42.7
Sydney Mid West	44.5	45.1	44.4	44.4
Sydney South	44.0	44.4	43.7	43.7
Melbourne East	43.8	43.5	42.3	42.3
VIC Gippsland	41.0	40.4	39.2	37.6
VIC Barwon	41.3	41.8	41.1	40.4
VC Goulburn	41.6	41.1	40.4	39.3
Melbourne Inner	51.4	52.7	51.4	55.8
VIC Loddon	41.2	41.2	40.4	39.1
VIC Mallee-Wimmera	40.4	40.0	39.2	38.4
Melbourne North	44.7	45.1	44.5	44.7
VIC Ovens-Hume	42.5	41.8	40.9	39.6
Melbourne South	43.7	44.4	43.3	43.3
Melbourne West	45.4	46.3	46.0	46.1
VIC West	40.6	40.4	39.4	38.2
Melbourne Westport	44.1	43.7	43.0	42.2
VIC Central Highlands	40.9	41.2	40.6	39.7
QLD Pastoral	43.8	44.1	42.9	42.7
QLD Agricultural SW	40.6	40.6	39.6	39.1
QLD Far North	45.3	45.5	44.7	43.8
QLD Fitzroy	43.3	42.9	42.1	41.4
QLD Mackay	45.8	45.6	44.8	44.3
QLD North West	44.9	46.0	45.3	44.9
QLD North	43.1	43.7	42.8	42.8
QLD Wide Bay-Burnett	40.5	39.2	38.0	36.9
QLD West Moreton	43.4	42.6	41.8	40.9
QLD Gold Coast	44.4	43.8	42.7	42.1
QLD Sunshine Coast	41.8	41.3	40.4	39.8

**Table 9.17 SOR regional groups – population share aged 25 to 54 (per cent) – continued**

	1996	2001	2004	2008
Brisbane North	44.1	43.1	42.2	41.0
Brisbane City	44.3	45.3	44.6	45.4
Adelaide Central	42.3	42.5	41.4	40.4
SA Eyre and Yorke	42.3	41.4	40.0	38.7
SA Murraylands	42.6	41.9	40.4	39.1
Adelaide Plains	42.8	43.2	42.4	42.0
SA South East	43.8	43.4	42.1	40.9
Adelaide Outer	45.4	44.3	42.5	40.5
WA Pilbara-Kimberly	47.1	49.6	50.1	51.3
WA Gascoyne-Goldfields	45.7	46.5	45.6	44.6
WA Wheatbelt-Great Southern	43.8	43.2	42.0	40.5
WA Peel-South West	42.6	42.2	41.2	40.4
Perth Central	44.0	45.0	44.0	44.6
Perth Outer North	45.9	45.8	44.6	43.4
Perth Outer South	43.8	43.5	42.4	41.8
TAS Hobart-South	42.5	42.3	41.0	38.6
TAS North West	42.4	41.6	40.3	38.6
TAS North	41.7	41.7	40.6	38.7
Darwin	51.0	50.5	49.1	47.4
NT Lingiari	44.3	45.5	44.9	45.0
ACT	46.5	46.4	45.1	44.6

**Table 9.18 SOR regional groups – population share aged 25 to 45 (per cent)**

	1996	2001	2004	2008	Change 1996-2004
NSW Central West	21.8	24.0	25.8	28.3	6.5
NSW Far and North West	21.8	23.5	25.5	28.1	6.3
NSW Hunter	23.2	25.2	26.7	29.0	5.8
NSW Illawarra	23.4	25.5	27.2	29.3	5.9
NSW Murrumbidgee	20.6	22.3	23.8	25.8	5.2
NSW Murray	22.7	25.1	27.0	29.3	6.6
NSW Mid North Coast	27.3	29.6	31.6	34.4	7.1
NSW North	21.9	24.3	26.4	28.9	7.0
NSW Richmond-Tweed	25.6	27.3	29.0	31.9	6.3
NSW South-East	23.6	26.1	28.0	30.6	7.0
NSW Central Coast	26.4	27.2	28.5	30.1	3.7
Global Sydney	21.6	21.7	22.4	22.9	1.4
Sydney Inner West	22.5	22.1	22.6	23.2	0.7
Sydney Outer North	21.8	23.0	24.1	24.7	3.0
Sydney Outer South West	11.8	14.2	16.4	19.4	7.5
Sydney Outer West	14.5	16.5	18.6	21.4	6.9
Sydney Mid West	18.1	18.7	19.8	20.9	2.8
Sydney South	22.8	23.4	24.3	24.9	2.1
Melbourne East	22.1	24.0	25.6	26.7	4.7
VIC Gippsland	22.9	26.1	28.4	31.8	8.8
VIC Barwon	23.1	24.8	26.2	28.2	5.1
VC Goulburn	22.5	24.5	26.0	28.4	5.9
Melbourne Inner	19.8	19.4	19.9	20.2	0.4
VIC Loddon	22.3	24.2	25.9	28.7	6.4
VIC Mallee-Wimmera	25.1	26.3	27.8	29.7	4.6
Melbourne North	19.4	20.5	21.6	22.9	3.5
VIC Ovens-Hume	20.7	23.5	25.3	28.2	7.5
Melbourne South	25.7	25.7	26.6	27.1	1.4
Melbourne West	17.6	18.8	19.5	20.9	3.3
VIC West	23.6	25.4	27.0	29.4	5.8
Melbourne Westport	18.2	20.4	21.8	24.0	5.8
VIC Central Highlands	21.7	23.4	24.8	27.2	5.5
QLD Pastoral	18.4	19.2	21.4	23.6	5.1
QLD Agricultural SW	21.1	22.7	24.1	25.9	4.8
QLD Far North	15.7	18.2	19.9	21.6	5.9
QLD Fitzroy	16.9	19.1	20.5	22.6	5.7
QLD Mackay	15.5	17.7	19.5	21.7	6.3
QLD North West	11.8	12.8	14.5	15.6	3.9
QLD North	17.3	18.5	20.0	21.5	4.2
QLD Wide Bay-Burnett	24.3	27.8	29.8	32.6	8.3
QLD West Moreton	16.4	19.2	20.7	22.9	6.5
QLD Gold Coast	18.7	20.8	22.6	24.5	5.8
QLD Sunshine Coast	25.0	27.0	28.5	30.3	5.4

**Table 9.18 SOR regional groups – population share aged 25 to 45 (per cent) – continued**

	1996	2001	2004	2008	Change 1996-2004
Brisbane North	17.4	20.4	22.0	24.4	6.9
Brisbane City	20.9	20.9	21.8	22.2	1.3
Adelaide Central	27.0	28.0	29.2	30.7	3.7
SA Eyre and Yorke	22.9	25.5	27.5	30.3	7.4
SA Murraylands	23.2	25.4	27.5	30.0	6.8
Adelaide Plains	23.0	24.0	25.0	26.5	3.4
SA South East	20.4	22.2	23.9	26.5	6.1
Adelaide Outer	17.9	21.3	24.0	27.6	9.7
WA Pilbara-Kimberly	9.4	8.5	9.7	10.8	1.4
WA Gascoyne-Goldfields	14.0	16.0	18.1	21.1	7.1
WA Wheatbelt-Great Southern	19.1	22.3	25.0	28.7	9.5
WA Peel-South West	20.5	23.0	25.1	27.5	7.0
Perth Central	23.6	24.2	25.1	26.2	2.6
Perth Outer North	14.8	17.2	19.3	22.0	7.2
Perth Outer South	17.5	19.8	21.7	23.8	6.3
TAS Hobart-South	21.2	23.5	25.3	28.0	6.8
TAS North West	21.1	24.4	26.5	29.5	8.4
TAS North	22.0	24.3	26.0	28.8	6.8
Darwin	8.7	11.4	13.5	16.4	7.7
NT Lingiari	7.7	9.1	10.6	12.1	4.3
ACT	14.1	17.1	19.3	22.0	7.9

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## 10. Unemployment statistics and social change

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During the post-war period Australia was governed by men who had experienced the Depression of the 1930s, and who accordingly gave great weight to full employment. The priority, and to a very large extent the achievement, was that all family breadwinners should have full-time jobs paying at least the minimum wage. By and large social security was limited to people who were not expected to be in the workforce: age pensioners, widows and invalids. Unemployment benefits were available, but job availability was so high that there was very little need for them. People were either full-time workers, or family dependants of full-time workers, or full-time pensioners. In addition, a few people retired on government or private superannuation.

Against this background, the unemployment rate was a very important social indicator. It measured the level of success in maintaining full employment. Any rise was viewed with alarm. A great many citizens had unpleasant memories of what it was like to be unemployed (or what it was like to have unemployed parents), and a rise in the rate was taken as a sign that the economy was slipping back into the 1930s.

Since the 1970s Australia has lost the memory of mass unemployment. Other priorities – low inflation, economic efficiency – have pushed full employment out of the list of government targets. The labour market has also changed, with the entry of married women and with a major increase in the proportion of part-time jobs. In the process there has come to be a considerable overlap between social security and wage incomes: the combination of social security receipt and part-time work has gone from being rare to being common.

Despite the changing times we still use the unemployment rate as the primary indicator of what's wrong with the labour market. What's more, Commonwealth agencies like the ABS and the Department of Employment, Education and Training (DEET) continue to measure the unemployment rate as though we were still in the 1960s. In past *State of the Regions* reports National Economics has, however, abandoned the traditional definition in favour of its own measure of the unemployment rate. In this Chapter we explore the history of the measurement of unemployment, and consider the relationship between the DEET and National Economics definitions. Though the approach is statistical, it serves to document five decades of change in the labour market. The second half of the Chapter documents the current relationship between unemployment and social security take-up, and the consequences for measures of labour-market malfunction.

### 10.1 NIEIR and other measures of unemployment

From 2000 the *State of the Regions* reports have taken as their basic measure of the state of regional labour markets the 'NIEIR unemployment rate' (National Institute of Economic and Industry Research – "National Economics"), derived from Centrelink data and basically an estimate of the proportion of the workforce who would have been receiving unemployment benefit (Newstart) had eligibility conditions remained constant as they were early in 1991. Beginning in 1991, a series of changes in eligibility conditions for the various social security payments allowed groups of recipients to be shifted from Newstart to other social security payments. The NIEIR unemployment rate is constructed by estimating the number of recipients receiving alternative benefits and adding them back to those receiving Newstart.

A second measure, named Structural Unemployment, is based on an estimate of the number of social security recipients of workforce age who are unlikely to move from Social Security to paid work.

A third measure is long-term unemployment, calculated by Centrelink and based on the number of people who have been receiving Newstart and related benefits (such as part-time work under the Community Development Employment Program) for more than twelve months.

All of these Centrelink-derived measures diverge from the 'official' unemployment rate published by the ABS and Commonwealth agencies more generally. The NIEIR measures have proved controversial for two reasons.

- ❑ Their national trend since 1991 has been less favourable than the official trend. In 1991 the unemployment rate by the NIEIR measures was less than the official rate, but ever since it has been more. Since 1996 both rates have trended down, but the improvement measured by National Economics has been slower.
- ❑ The NIEIR measures indicate much greater regional divergence than the official rates, with the state of the labour market assessed as very much worse than officially measured in the Northern Territory, South Australia and Tasmania and in many of the non-metropolitan regions in the other states, but is not much worse than officially measured in Sydney, Canberra, Melbourne, Brisbane and Perth.

These divergences are only possible because of fundamental differences in the construction of the official and Centrelink-based measures. As usual in statistics, the question arising is not whether one measure is right and the other wrong, but a question of usefulness. Both measures were originally designed for particular purposes against a particular historical background.

## 10.2 Measuring unemployment in the 1950s and 1960s

In a sense, the NIEIR measure is the older of the two. Unemployment benefit was first introduced as a means-tested, work-tested fortnightly payment in 1945, and has continued in this format to this day. The work test is the requirement that recipients actively seek work, while the means test denies payments to people who have income from other sources, or whose spouses receive income. In the post-war period memories of the depression of the 1930s were strong, and the Commonwealth government was committed to full employment. A measure was required to monitor this policy goal, and the Social Security system yielded two.

- ❑ Provided the work test was not harshly applied, take-up of unemployment benefit provided a measure of the number of breadwinners who were without a job and had no other alternative source of income.
- ❑ A slightly broader measure was the number of people registered as unemployed with the Commonwealth Employment Service (CES). In addition to unemployment benefit recipients, this covered job-seekers who were precluded from receiving unemployment benefit. The three main groups were breadwinners who were waiting for their benefit payments to begin (the Commonwealth imposed a waiting period on the assumption that people could survive for a while on their last pay), married women who failed the means test because their husbands were working, and people who were registered for a job upgrade.

The first of these measures reflected the original policy concern, that full-time work should be available to all breadwinners, defined as all males of workforce age plus single women. The second was more inclusive, and reflected the growing view that paid work should be available for all who desired it, and not merely for breadwinners. However, the measure came under criticism because married women who were seeking work had little incentive to register with the CES. There was also the problem of people registered with CES, not because they had no job but because they wanted a better job. The alternative to using CES data was a population survey.

The official unemployment rate as we know it was first measured by survey in 1964. There have been several revisions of methodology since, though the general concept of a survey to identify unemployed people has remained constant. So also has the strict survey definition of unemployment, which involves two tests:-

- ❑ an unemployed person must be actively searching for work; and



- he or she must not have been employed during the past fortnight. On this definition, people only have to be paid for an hour a fortnight to be considered employed. Unpaid helpers are also considered employed.

At the time when the survey measure of unemployment was first introduced, it reliably yielded higher estimates of the unemployed than the number on unemployment benefit. This was because the number of survey-unemployed people who were denied unemployment benefit due to the means test and waiting period considerably exceeded the number of unemployment beneficiaries who undertook the small amounts of work permitted by the means test, and who were not therefore unemployed according to the survey definition.

### **10.3 Unemployment and full employment**

Though their genesis is two decades apart, both unemployment benefit and the official unemployment measure date from the era of full employment, or, more precisely, the period when macroeconomic policy in Australia, as in the other wealthy countries, aimed to provide full-time jobs for all male breadwinners at wages high enough to support their wives and children, plus a supplementary supply of lower-paid full-time jobs for single juniors and women. Policy success resulted in a background of full, or nearly full, employment, in which unemployment benefit provided short-term assistance for job transitions (very few recipients received it for more than a month). The ready availability of jobs assisted with strict administration of the benefit – the work test was easily applied – and the uptake of benefit provided a fairly accurate measure of the number of breadwinners who were actively seeking work. It was accepted that there would always be frictional unemployment as workers changed jobs, but the alarm was raised as soon as the number of registered unemployed rose above the number of registered employment vacancies. Effectively, full employment was defined as equality between registered unemployed and registered vacancies.

The survey unemployment rate provided a check on the balance between registered unemployed and registered vacancies, since it counted as unemployed job-seekers who were denied benefit. With the availability of the survey rate from 1964 onwards, full employment came to be re-defined – again unofficially – in terms of a survey unemployment rate of around 2 per cent, and job vacancies statistics were de-emphasised. The ready availability of full-time work supported the assumption that there was no need to worry about part-time workers wanting to upgrade to full-time. Indeed, there were calls for more part-time jobs to suit working mothers. Easing the definitions in the survey, either of work search or of the hours one has to work to be considered employed, would not have changed the survey unemployment rate very much.

Full employment ended with a series of recessions of increasing severity, occurring in 1972, 1975, 1982 and 1991. Each recession produced a rise in the unemployment rate, followed either by stability at the new higher level, or by a gradual reduction. Economists were perplexed by stagflation – both unemployment and inflation rising at the same time – and many of them came to propose that previously unacceptable levels of unemployment were necessary to counter inflation. The Commonwealth quietly abandoned its commitment to full employment. Some economic rationalists would have gone further, and abandoned the concept of unemployment completely – their ideology contended that unemployment is always voluntary; that unemployed people are simply those who do not want to work at wages and conditions which employers can afford. However, experience during the recessions argued that unemployment can indeed be involuntary, and that it is a bad experience. Unemployment statistics continued to be collected, though with less certainty as to what to do about the tale of woe that they told.

The rise in the unemployment rate was only one of a number of inter-related changes caught up in the end of full employment.

- ❑ The job shortage was particularly severe for unskilled workers.
- ❑ It was also particularly severe in regions affected by industrial restructuring. People began to speak of structural unemployment: a mismatch between job vacancies and the skills and locations of unemployed workers.
- ❑ For many workers, particularly unskilled residents of unlucky regions, job search became a pointless occupation. Long-term unemployment, previously absent, became pervasive. It was recognised that it was much more difficult for a long-term unemployed person to return to work than for a worker who had been unemployed for no more than a few months.
- ❑ Except during recessions, job shortages for the unskilled and in unlucky regions co-existed with shortages of skilled labour in the lucky regions – often resulting in full-time workers working long hours.
- ❑ At the same time, the proportion of part-time and casual jobs increased, and hence the number of workers working short hours.
- ❑ Finally, married women's workforce participation increased to the point where very few stay-at-home housewives were to be found among women of prime working age.

One would have expected that changes in the labour market due to the end of full employment and the disappearance of the dependent spouse would have required a review of statistical concepts. However, such a review did not take place, perhaps because of the very wide range of views as to what had gone wrong.

In time of controversy, it is a good idea to change nothing. The survey definition of the unemployment rate accordingly remains close to what it was in 1964. The unemployment rate so calculated continues to be published. Despite the acceptance of higher rates of unemployment, with 5 per cent now commonly regarded as the lowest rate which does not threaten inflation, the generally high rate provides an indicator of the costs of the economic reforms of the past three decades. For this purpose – as a reminder of failure – it is as well that the definition is conservative. However, as an indicator of deficiencies in labour markets it has come under two major criticisms, both of which reflect its failure to respond to the changes since the end of full employment.

- ❑ It gives no indication of the 'hidden unemployed' – that is, the people who have dropped out of the labour market, or never entered it, due to the perceived futility of job search.
- ❑ The headline rate makes no allowance for under-employment, that is, people who would prefer to work longer hours. It is true that the ABS has responded to the trend towards casual and part-time work by asking part-time workers whether they want to work additional hours, but the resulting statistics have been presented as supplementary indicators which have had little effect on interpretations of the headline rate.

From the opposite point of view, the official unemployment rate can also be criticised for failure to respond to skill shortages.

A further, serious, deficiency from a *State of the Regions* point of view is that small area estimates for the ABS unemployment rate are available only at the Census, and then only as an approximation. (Census forms are self-completed, and inevitably simplify the series of questions required to pin down the official definition of unemployment). This provides the underlying rationale for National Economics' resort to Centrelink data to provide up-to-date regional estimates of unemployment. In so far as Newstart is the current incarnation of unemployment benefit, NIEIR's unemployment rate harkens back to the post-war period, and the concern that the labour market should provide work for breadwinners. However, unlike the survey definition of unemployment, the social security system has responded to the end of full employment. To understand the NIEIR measure it is necessary to describe these changes.

## 10.4 Social security and the end of full employment

As it developed against the background of male breadwinner full employment in the post-war period, the Australian social security system had three classes of payment. A simplified account is as follows.

- ❑ Pensions were intended for people who were not expected to work – old people, widows and invalids. They were means-tested on the joint income of husband and wife, but pensioners were allowed to receive small amounts of earned or asset income without having their pensions docked.
- ❑ Benefits were intended for people who were temporarily not at work. The main class was unemployment benefits, which were both work-tested (refuse a job offer and the benefit lapses) and strictly means-tested, including on the spouse's income.
- ❑ Child endowment and few other small family-related payments were not means-tested.

The obvious measure of unemployment under this system was the uptake of unemployment benefit – that is, people who were required to be looking for work as a condition of their benefit. However, under full employment the uptake of unemployment benefit was consistently less than unemployment measured by the survey definition, since the means test excluded all spouses of employed persons and nearly all unemployed people with assets other than an owner-occupied house. All of this changed with the end of full employment. It became increasingly difficult to apply the work test – it is not easy to require people to accept jobs that aren't there. In a process of fits and starts, the Commonwealth supplemented the work test with training requirements and work-for-the-dole – the work test became an activity test. Further, recognising that unemployed people were mostly unskilled and that the jobs available to them were mostly casual and often part-time, the Commonwealth eased the benefit means test. To encourage unemployment beneficiaries to accept casual work, it provided that they could remain on zero benefit while they were working, so avoiding the waiting period and allowing benefit to resume as soon as the casual work ended. As a result of these changes, it became possible to receive unemployment benefit (now re-named Newstart) while failing the statistician's test of unemployment by working more than an hour a fortnight, and/or by failing to search actively for work.

In addition to changing the eligibility conditions for Newstart, the Commonwealth changed benefit eligibility in two other ways.

- ❑ The eligibility conditions for invalid pension, now renamed Disability Support Payment, were eased. Disability no longer had a primarily medical definition, but took into account employability in relation to local labour market circumstances. This allowed the transfer of a large number of unemployed people (particularly middle-aged men) onto DSP.
- ❑ Newstart payments for people aged 55 and over, who were not unemployable within the DSP definition but still faced poor employment prospects, were transferred to a new benefit called Mature Age Allowance. This differed from Newstart in that it was not activity tested.

Several motives have been imputed for these changes.

- ❑ The obvious motive was compassionate: if people have become unemployable, the best that can be done is to give them a secure pension. In particular, shifting a recipient from Newstart to DSP involved an increase in the rate of payment.
- ❑ There was also a saving in administrative costs when claimants were shifted off activity-tested benefits. At the broader strategic level, treasuries calculated that it would be cheaper (at least in the short run) to pension people off than to pay the costs of realistic retraining.
- ❑ Governments may also have been sensitive to the complaints of small businesspeople sick of being hassled for jobs by Newstart recipients.
- ❑ Finally, a cynical motive has often been imputed. The changes shifted people out of the labour force, and so reduced the official unemployment rate.

Some of these changes involved acceptance of early retirement financed by social security. At the other end of the age range, the government wished to encourage training, and to avoid incentives to report as unemployed rather than participate in education. Newstart for young people was hence replaced with a Youth Allowance, paid at the same rate as student allowances. Student recipients of this allowance were excused from work search, and once again the statistician would not find them unemployed.

We can now see the provenance of NIEIR's definition of unemployment as used in the *State of the Regions* reports. It comprises the following.

- Newstart recipients, whether looking for work or excused from doing so, and whether or not they have small amounts of part-time work.
- An estimate of the recipients of Youth Allowance who, apart from the administrative changes of the 1990s, would have been on Newstart as distinct from a student-support payment.
- All Mature Age allowance recipients, this being a substitute for Newstart.
- An estimate of DSP recipients who would have been on Newstart apart from the broadening of eligibility conditions.

In other words, the NIEIR measure is uptake of unemployment benefits, with an attempt at a constant definition. It is essentially an estimate of the number of people who would have been on Newstart had the eligibility conditions remained constant.

It may be asked whether the government's intention to tighten eligibility criteria for DSP will change the measure. (It will be remembered that this was announced in the 2005 budget, then postponed.) It is indeed possible that attempts to activity-test DSP recipients would launch some of them into full-time employment, but the probability is low. To the extent that DSP recipients are unemployable, given local labour market conditions, it is more likely that they will be precipitated onto Mature Age Allowance or onto Newstart – the benefit to the Commonwealth being that these payments are at lower rates, hence a saving in social security costs. However, a change in the distribution of unemployed/unemployable people between DSP, Mature Age Allowance and Newstart will not affect the NIEIR measure.

On the other hand, an increase in the harshness with which the activity and means tests are administered, resulting in denial of benefits to people who in former times would have qualified, would result in a downward bias in the NIEIR measure. Reports from the welfare sector indicate that Centrelink has been 'breaching' people more enthusiastically than in the past, and that there is a significant group of no-income unemployed people dependant on soup kitchens for food and homeless persons' accommodation for shelter. Though the size of this group has been estimated several times in reports on homeless people, local-area information is not available except from the census. Following complaints by the welfare sector, there are not policy proposals to replace 'breaching' with 'suspension'. It remains whether this will lower, or possibly raise, the number of people not receiving income from any source other than welfare agencies.

A much more fundamental question is whether NIEIR's 'Newstart plus' measure adequately measures slack in today's labour markets. We can pursue this question by considering the interaction between the receipt of income from social security and the official measure of unemployment. This involves considering all social security sources, rather than just Newstart and its substitutes, and requires us to consider the consequences, not only to the fall in the availability of unskilled full-time work and the increased proportion of part-time jobs, but of the disappearance of the dependant spouse. In the process we will document a major social change: the virtual disappearance of women of workforce age who devote themselves to home duties full-time. This had major consequences for the social security system.

## 10.5 Social security and the dependant spouse

In the post-war period, the Commonwealth recognised that married women were not expected to work and provided a pension for widows, including divorcees. This pension was not extended to women who failed to marry. It was not available to never-married single parents. Social change undermined this widow's pension from two different directions.

- ❑ The increased workforce participation of married women undermined the assumption that a pension was justified by the absence of a male breadwinner.
- ❑ The distinction between married and not-married faded. The first effect of this, a reduction in the stigma attaching to single parenthood, allowed pensions to be extended to all single parents regardless of how they became so. The second, and more fundamental, effect was that it became harder to distinguish a single parent from a dual parent.

These combined changes caused a switch in pension rationale from the lack of a male breadwinner to the presence of costly children. In the process, the pension for widows without children lost legitimacy, and women who in former times would have received this payment are now mostly offered Mature Age Allowance. In so far as Mature Age Allowance is provided to people who, under constant definitions, would have been Widow's Pension recipients, the NIEIR measure over-estimates the number who would have been on unemployment benefit at constant definitions.

More important, the switch to children as a cost justifying social security payments allowed couples to claim that they also bore these costs. There had always been elements in the social security and income tax systems which recognised this, but they were expanded as the emphasis moved to children as a cost. The present position is that there is still a Parenting Payment that depends on the lack of a second parent in a family, but this is supplemented by relatively generous payments for children. Unlike the old Child Endowment and child tax deductions, these payments are means-tested. The combined effect of benefit withdrawal and the phasing-in of income tax places low-income families with children on particularly high effective marginal tax rates, but for our purposes this effect is incidental. The main effect is similar to the changes to unemployment benefits: Parenting Payment is now available to a mixture of people, some of whom are out of the workforce (by ABS definitions), some of whom are employed, and some of whom are unemployed. However, they all have children, and the means test ensures that they all have relatively low incomes.

## 10.6 The relationship between social security receipt and official unemployment

The current position is as follows.

- ❑ Unemployment is measured by a regular official survey that does not yield estimates at LGA level. The definition dates from the era of full employment, and excludes people who would rather be at work but are not actively seeking work, and also excludes people who would like to work longer hours.
- ❑ The social security system provides income support for most, but not all, people receiving low earned incomes (including those without access to any earned income).

There is an obvious relationship – beyond a certain level, earned income disqualifies one for social security – which requires further investigation to pin down the meaning of labour market measures based on Centrelink returns. Data from the Household Income Longitudinal Dynamic Analysis (HILDA) survey run by the University of Melbourne can be used to assess this relationship. The analysis is confined to people of workforce age, so Age Pension does not appear among the social security benefits available. The remaining pensions and benefits have been grouped as follows.

- ❑ Youth payments include all payments targeted at young people (378,000 beneficiaries in 2003).

- ❑ Recipients of parenting payment form a group large enough to be considered by itself (452,000 recipients in 2003).
- ❑ Newstart is likewise considered by itself (328,000 recipients in 2003)
- ❑ Mature age payments are essentially modifications of the former unemployment benefit available to early retirees (151,000 beneficiaries in 2003)
- ❑ Carer's payments are similar to mature age payments in that they are largely taken up by older people, but they are not historically connected to unemployment benefit. In many instances there is an implication that recipients are outside the workforce because of caring responsibilities. Many are the spouses of people receiving another benefit. (334,000 beneficiaries in 2003).
- ❑ Finally, Disability Support Payment is considered by itself (599,000 recipients in 2003).

**Table 10.1 Social security recipients aged 15-60 by employment status, 2003, per cent**

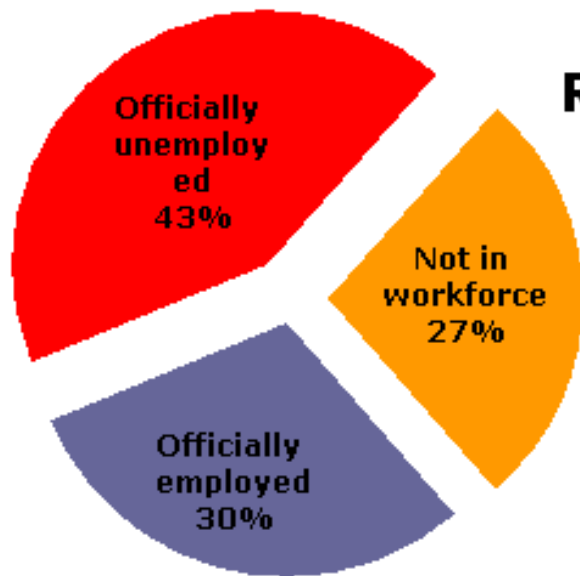
Social Security payment	Survey employed	Survey unemployed	Not in workforce	Total
Youth payments	50	13	36	100
Parenting Payment	34	9	57	100
Newstart	30	43	27	100
Mature age payments	23	2	75	100
Carer's payments	17	3	80	100
Disability Support Pension	14	3	83	100
All on pensions/benefits	28	12	60	100
Not on benefit	84	2	15	100
Total population	73.4	3.6	23	100

*Definitions:* Youth payments: Youth Allowance, Austudy, Abstudy; Parenting Payment; Newstart  
Mature age payments: Mature Age Allowance, Mature Age Partner Allowance, Service Pension;  
Carer's payments: Wife Pension, Carer Payment, Sickness Allowance, Widow Allowance, Special Benefit, Partner Allowance; and  
Disability Support Pension.

*Source:* HILDA.

Had full employment continued, one would have expected all Newstart recipients to meet the survey definition of unemployment. Instead, we find that 30 per cent of them are survey employed, while a further 27 per cent are outside the workforce. The proportion survey unemployed is a bare 43 per cent.

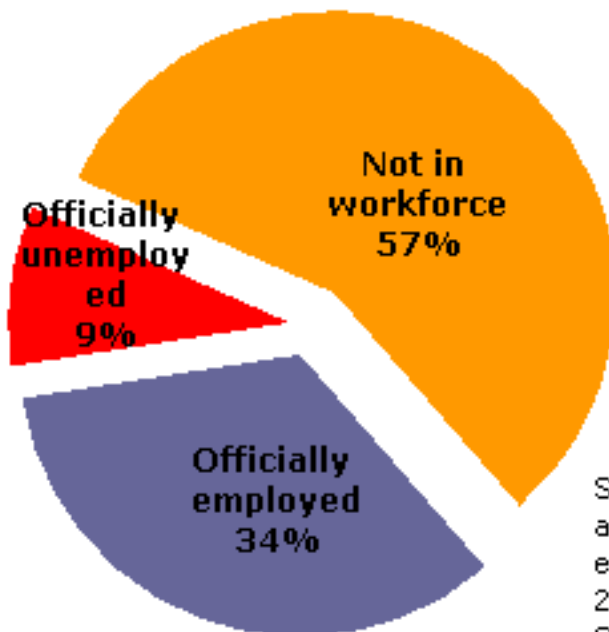
## Newstart Recipients Workforce Status



Social security recipients aged 15-60 by employment status, 2003.  
Source: HILDA

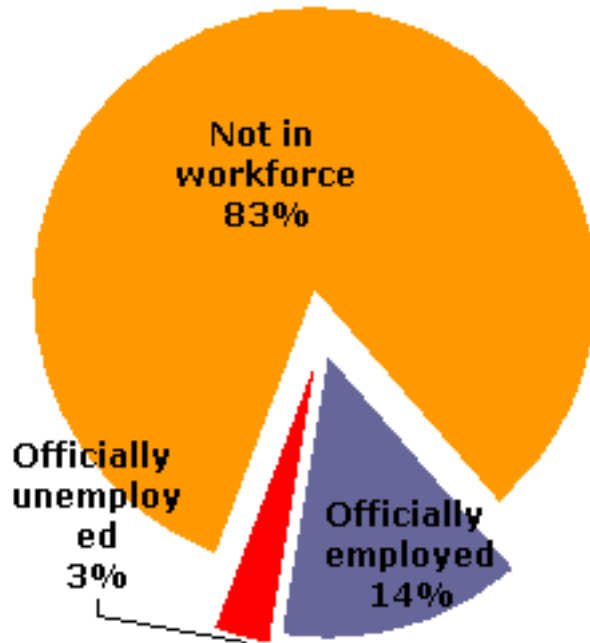
Similarly, one would expect all Parenting Payment and DSP recipients to be outside the workforce. However, 30 per cent of the former, and 14 per cent of the latter, hold jobs. Unlike Newstart, it is not a condition of their benefit that they should be seeking work, so the proportion survey unemployed is lower, but still quite significant at 9 per cent of Parenting Payment recipients.

## Parenting Payment - Single Recipients Workforce Status



Social security recipients aged 15-60 by employment status, 2003.  
Source: HILDA

## DSP Recipients Workforce Status



Social security recipients aged 15-60 by employment status, 2003.  
Source: HILDA

The NIEIR measure of unemployment assumes that many recipients of DSP and mature age payments would have been on Newstart apart from the administrative changes of the 1990s, but their survey unemployment rate is very low; few of them are searching for work. This accords with the eligibility conditions for DSP and mature age allowances, but raises the question as to whether these people will ever work again. If they won't, why count them as unemployed? We will return to this question below.

The proportion of recipients meeting the official definition of unemployed is somewhat higher for youth payments (which is consistent with NIEIR's definition) and also for Parenting Payment (yet Parenting Payment recipients are excluded from NIEIR's definition).

**Table 10.2** Persons aged 15-60, employment status and social security receipt, 2003, per cent

Social Security Payment	Survey employed	Survey unemployed	Not in workforce	Total
Youth payments	2.1	11.2	4.9	3.1
Parenting Payment	1.7	10.1	9.1	3.7
Newstart	1.1	32.3	3.1	2.7
Mature age payments	0.4	0.7	3.9	1.2
Carer's payments	0.8	2.7	8.9	2.7
Disability Support Pension	1.0	4.1	17.7	4.9
Not on benefit	92.9	39.1	52.3	81.6
Total population	100	100	100	100

Source: HILDA

A further indicator of the poor overlap between social security receipt and survey employment status is that, even after excluding Family Allowance recipients, 7 per cent of all employed people of workforce age receive social security income in addition to what they earn. (Family Allowances are excluded because they are deliberately designed as a wage supplement.)



The number of survey unemployed people on Newstart is less than the number not receiving benefits of any kind, and not much more than the number receiving various other social security payments. Because of its means test and waiting period, Newstart is deliberately designed to exclude unemployed people who are deemed 'not in need'.

People of workforce age who are outside the survey workforce are more or less equally divided between those receiving benefits and those not receiving. The latter group has shrunk to 12 per cent, and includes dependent spouses, dependent students and self-funded early retirees. Despite the nostalgia of social conservatives, most women have rejected the status of stay-at-home housewife.

## 10.7 Overlap between survey and NIEIR unemployment

The HILDA sample yields an official unemployment rate of 4.7 per cent of the workforce. (There are differences between the questions in the HILDA and official surveys, but these are not considered likely to make a major difference.) Making the adjustments required to generate the NIEIR unemployment rate, HILDA yields an estimate of 8.1 per cent, somewhat less than the National Economics' estimate of 8.9 per cent but, like the National Economics' estimates, significantly greater than the official survey unemployment rate. National Economics has explained this difference as reflecting the strictness of the survey definition of the unemployment rate, compared with the inclusion of an allowance for discouraged workers and hidden unemployment in the National Economics' estimate.

	Unemployed: survey only	Unemployed: both definitions	Unemployed: NIEIR only
Social Security payment			
Newstart		141	187
Mature adult payments		3	148
DSP		18	216
Carer's	12		
Parenting Payment	44		
Youth payments		49	86
Not on benefit	171		
<b>Total</b>	<b>227</b>	<b>212</b>	<b>637</b>
Per cent official workforce	2.4	2.3	6.8

The divergence between the two estimates of unemployment is considerable, with the NIEIR measure excluding roughly half the people included by the survey definition, but adding in a further 563 000 people. National Economics argues that these additions reflect excess social security take-up due to slack regional labour markets.

These differences also concern the numerator of the unemployment rate. National Economics adds back its estimate of DSP recipients to the workforce, but does not add back the excess recipients of Newstart, mature age and youth allowances. Were these excess recipients added to the numerator, the NIEIR unemployment rate would fall from 8.1 per cent to 7.8 per cent.

**Table 10.4**      **Overlap between survey unemployment and NIEIR structural unemployment, persons of workforce age ('000)**

Social Security payment	Unemployed: survey only	Structurally and officially unemployed	Structurally unemployed: NIEIR only
Newstart	99	42	56
Mature adult payments		3	148
DSP		18	539
Carer's	12		
Parenting Payment	22	22	204
Youth payments	49		
Not on benefit	171		
<b>Total</b>	<b>353</b>	<b>85</b>	<b>948</b>
Per cent official workforce	3.8	0.9	10.1

Source:      Calculated from HILDA.

NIEIR's estimate of structural unemployment has even less overlap with the survey unemployment rate. Not only are most of the survey-unemployed excluded, but large numbers of other social security recipients are included, particularly recipients of DSP and Parenting Payment. In other words, the definition of structural unemployment emphasises circumstances that make labour force participation quite unlikely, and excludes unemployed people who do not face these particular circumstances.

A further comparison is between the two NIEIR measures. As can be seen, there is overlap, but the structural unemployment estimate omits youth unemployment and also omits Newstart unemployment apart from people of non-English speaking background, while it includes considerably more people receiving DSP and Parenting Payment.

**Table 10.5**      **Overlap between NIEIR unemployment and NIEIR structural unemployment, persons of workforce age ('000)**

	NIEIR unemployed only	Both measures	NIEIR structurally unemployed only	NIEIR not in workforce
Newstart	230	98		
Mature adult payments		151		
DSP		233	366	
Carer's				334
Parenting Payment			226	226
Youth payments	186			192
Not on benefit				
<b>Total</b>	<b>416</b>	<b>482</b>	<b>592</b>	<b>752</b>

Source:      Calculated from HILDA.

The third measure of unemployment in the *State of the Regions* reports is long-term unemployment – continuous unemployment for a year or more, as recorded by Centrelink. With the HILDA data to hand we cannot exactly replicate this, since the HILDA data is a comparison between two points a year apart. Some of those who were unemployed at both survey dates in 2002 and 2003 will have experienced employment in between, and so not be counted by Centrelink as long-term unemployed. This said, HILDA yields estimates of long-term social security receipt by type of benefit.

From Table 10.6 we may conclude as follows.

- ❑ Two thirds of social security recipients of workforce age are long-term recipients.
- ❑ The proportion of long-term recipients is relatively low for Newstart, youth payments and parenting payments. Even so, half of Newstart recipients were receiving Newstart a year ago, and a further 18 per cent were receiving some other social security payment.
- ❑ There is significant traffic between Newstart and other social security payments.

The traffic between benefits is more closely described in Table 10.7. Unlike Table 10.6, which starts with people as they were in 2003 and asks where they were in 2002 (and the percentages add horizontally), Table 10.7 starts with the benefit they were receiving in 2002 and asks where they ended up in 2003. The percentages in this table add vertically.

**Table 10.6 Social Security recipients in 2003 by Social Security payment received in 2002 (per cent)**

Social Security payment	Not on Social Security a year ago	On Newstart a year ago	On other social security payment a year ago
Newstart	31	51	18
Mature adult payments	12	6	82
DSP	9	4	87
Carer's	21	5	77
Parenting Payment	27	3	70
Youth payments	30	4	65
All on benefits	21	11	68
Not on benefits	94	2	4
<b>Total</b>	<b>80</b>	<b>3</b>	<b>16</b>

Source: HILDA.

**Table 10.7 Persons aged 15-60 by benefit received in 2002 and 2003**

2003 position	New-start	Mature age	2002 DSP	Benefit carer	Parent payment	Youth	No benefit
Newstart	42	2	0	4	5	5	1.1
Mature age	2	64	1	6	0	0	0.2
2002 DSP	6	4	86	8	2	1	0.5
Benefit carer	4	10	4	59	5	0	0.7
Parent payment	4	0	1	6	60	3	1.2
Youth	4	0	1	1	0	57	1.2
No benefit	38	20	8	17	28	34	95
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Other b	20	16	6	24	12	9	
Itself	42	64	86	59	60	57	

Note: Transfers to Age Pension are not included since the Table relates to persons of less than Age Pension age.  
Source: HILDA.

## 10.8 Movement between social security and not-on-benefit

In 2002 and 2003:-

- ❑ 77 per cent of the population of workforce age was not receiving benefits (other than family allowances) at either survey point, though a few may have gone on and off during the year;
- ❑ 15 per cent were on benefit at both survey points;
- ❑ 3.4 per cent went from not-on-benefit to some sort of benefit; and
- ❑ 4.6 per cent moved from benefit to not-on-benefit.

The net result was a reduction in social security uptake, reflecting the booming labour market, and possibly other factors such as stricter administration of eligibility conditions.

We will first consider the flows to and from not-on-benefit (which are not the same as to and from work, given that a great many beneficiaries work at least part-time). Such flows can take place for several reasons.

- ❑ Claimants move in and out of the eligible categories. A person may become a claimant by becoming a single parent, or may cease to be such either through re-partnering or through the child growing up. A person may become a claimant by sustaining an injury outside the list covered by workers' compensation and transport accident insurance; but may also recover from sickness and injury.
- ❑ Earned incomes may increase or decrease, affecting eligibility via the means test. Eligibility is affected not only by the earned income of the individual, but by that of his or her partner. Social security rates are pitched so that most clients with full-time jobs are not eligible for payments other than family allowances, which we omit from our coverage.
- ❑ It should always be remembered that people who do not meet Centrelink administrative requirements do not receive social security. Some of those who are eligible for payments do not apply. Other eligible claimants fail the paperwork and are 'breached' – that is, put off benefit until the paperwork can be rectified. This group receives much less publicity than those who claim even though they are not eligible, yet it is probably much larger.

Over the twelve months to June 2003 the exit rate from benefits to not-on-benefit translated into 24 per cent of the population who were on benefits in June 2002. Not surprisingly, given the eligibility conditions, exit rates to not-on-benefit were above average for Newstart and youth allowances. They were very much below average for DSP, and a little less than average for the other three types of benefit – mature age, Parenting Payment and carer's payments. These findings are corroborated by a recent study by Harris and Kalb which used a different data source and time period – Centrelink longitudinal data for 1995 to 2000 (see Harris and Kalb, *Movement between Benefit Types*, report available on [melbourneinstitute.com](http://melbourneinstitute.com)).

Entry from not-on-benefits to on-benefit accounted for 21 per cent of the population who were on benefits in 2003. New entry rates were fairly similar for Newstart, youth allowances and Parenting Payment, around 30 per cent of recipients in 2003, but were very much less for mature age payments and DSP. The various carer's payments were around overall average, perhaps reflecting the status of many carers as partners of social security recipients.

Balancing the flows, more people went from not-on-benefit status to DSP and the carer payments than transferred the other way. This correlates with the high proportion of middle-aged people receiving these benefits, which often cover early exit from the workforce. The main exit gate from carer's payments and (even more) DSP is the Age pension – which is not covered here, because the exit does not occur till the recipients are beyond workforce age.

By contrast, more people moved from Newstart and youth allowances to not-on-benefit than moved onto benefit. Despite the limited overlap between official unemployment and benefit take-up, these are still the benefits which are most sensitive to labour-market conditions. Take-up therefore declined under the buoyant labour market of 2002-03. There was also a weak net flow from mature age payments to not-on-benefit: this parallels the net exit from Newstart. Mature age payments, even though they are not activity-tested, do not separate people from the workforce as strongly as DSP.

Finally, there were strong flows both ways between not-on-benefit and parenting payments, with a turnover of nearly a third of all recipients. As one would expect during a boom, the net flow was from benefit to not-on-benefit, but it was weak compared to the flows in both directions. Two explanations are possible.

- ❑ Movements between not-on-benefit and parenting payment may more often reflect changes in family composition than changes in earnings from work.
- ❑ As can be seen from Table 10.8, a third of parenting payment recipients are employed, with a further 9 per cent officially unemployed. Because of the means test, most of those who are employed would be working part-time. The picture is of a group who are fairly marginal to the labour force, and who move on and off benefit according to the availability of work. If this is correct, one may ask why the buoyant labour market did not generate a higher rate of net exit from parenting payment. The answer could well be a lack of full-time jobs suitable for single parents, that is, jobs where child-care can be arranged and travel times are not excessive.

Benefit	From not-on-benefit to on-benefit	From on-benefit to not-on-benefit	Net
Newstart	103	150	-47
Mature age payments	18	30	-12
DSP	53	43	+10
Carer's payments	71	54	+17
Parenting payment	120	129	-9
Youth allowances	114	143	-29
<b>Total</b>	<b>479</b>	<b>549</b>	<b>-70</b>

Source: HILDA.

Not only did beneficiaries move on and off benefit. There was also significant movement between benefit classes. Many of these flows were to-and-fro, for example the number of carers switching to DSP was roughly balanced by the number making the opposite move, indicating a close relationship between caring and disability. However, there were several strong one-way flows.

- ❑ Newstart to DSP, indicating that a condition that initially manifests in unemployment is quite often subsequently identified as a disability. There was also a flow from Newstart to mature age payments, but this was relatively weak, perhaps due to the strong labour market.
- ❑ A net movement from youth allowance to parenting payment was to be expected as disadvantaged young people split up and/or have babies.
- ❑ A common transition for former single parents with limited workforce experience was from parenting payment to mature age allowances. There was also a flow from parenting payment to Newstart (mothers of maturing children who are too young for mature age payment?) partly balanced by a flow from Newstart to parenting payment (unemployed people who split or have babies?)

<b>Table 10.9</b>		<b>Flows from one benefit to another, 2002-03 ('000)</b>		
From	To	Dominant flow	Reverse flow	Net
Newstart	DSP	23	0	23
Youth	Parenting	12	2	10
Parenting	Mature age	10	0	10
Parenting	Newstart	24	15	9
Newstart	Mature age	9	3	6
Newstart	Carer's	18	13	5
Youth	Newstart	20	16	4
Parenting	Carer's	24	20	4
Carer's	Mature age	19	16	3
Parenting	DSP	7	5	2
Carer's	DSP	25	24	1
Mature age	DSP	6	5	1
Youth	DSP	4	4	0
Youth	Carer's	2	2	0
Youth	Mature age	0	0	0

Source: HILDA.

On the basis of Table 10.9 the six classes of payment can be ranked from entry-level payments, from which net transfer is likely to another payment, to destination payments, whence there is relatively little transfer to other payments. The ranking is as follows:-

- Youth allowance;
- Parenting payments;
- Newstart;
- Carer's payments;
- Mature age allowance;
- DSP; and
- absent from the table because of the age cut-off, that final destination payment, the age pension – with its ultimate exit of death.

The balancing item for all this is the number of social security beneficiaries who remain on the same benefit from year to year. In 2003, a little less than two-thirds of social security recipients of workforce age were receiving the same benefit as they had in 2002. This proportion was highest for DSP, and considerably less than average but still significant for Newstart, at 42 per cent. The proportion was about average for the other benefits. Over the longer period from 1995 to 2000, nearly half of social security recipients of workforce age continued to receive the same benefit (Harris and Kalb Table 4.1).

## 10.9 Labour force under-utilisation

In a recent analysis of ABS data, Michael Keating has calculated that in 2003 the Australian workforce was under-utilised by about 11 per cent, meaning that people would have been willing to put in 11 per cent more hours, at going wages and conditions, were the jobs available. (His paper is available on the website of the Centre for Public Policy, University of Melbourne.) This calculation allowed for frictional unemployment (people changing jobs were not counted as available for work)

and also did not count unfulfilled desires to work overtime. The unutilised hours were distributed as follows.

- ❑ 23 per cent by people currently working part-time who wish to work full-time
- ❑ 37 per cent by people currently officially unemployed (whether seeking full or part-time work) and
- ❑ 39 per cent by people currently marginally or potentially attached to the labour force. These included people who were looking for work but not available for immediate start, or who were not looking for work though they wanted to work and could start within four weeks, plus men who might be dissuaded from early retirement. The calculated work shortage took into account the likelihood that many of these marginally-attached workers did not want to work full-time.

Keating's suggestion that labour force under-utilisation should be calculated in hours rather than in completely-unemployed individuals accords with the changes to the labour market we have discussed, as does his inclusion of the marginally-attached. His conclusion that the official unemployment rate considerably understates the job shortage also concurs with National Economics' arguments. However, the people that he identifies as under-utilised are not identified with any particular group of social security recipients. The overlap is roughly as follows.

- ❑ Perhaps a quarter of all social security recipients of workforce age work part-time, but not all of these would wish to upgrade to full-time. It is probable that a majority of workers wishing to upgrade are not receiving social security apart from family allowances.
- ❑ Keating's second group is the officially-unemployed, about a third of whom receive Newstart with a further 27 per cent receiving other social security benefits. However, 40 per cent are not receiving social security.
- ❑ Keating estimates that approximately 0.7 million marginally-attached workers would be available to undertake full or part-time work. This compares with 2.8 people of workforce age who were outside the official workforce in 2003, 1.3 million of whom received social security benefits and 1.5 million of whom did not.

If there is considerable overlap between Keating's marginally-attached and social security, his 0.7 million marginally-attached workers will be drawn mainly from the 1.3 million social security recipients who are outside the workforce. This would represent a change from the position at the end of full employment, when married women were still entering the workforce and constituted a majority of the 'hidden unemployed'. The 1.5 million persons of workforce age reported as outside the workforce and not receiving social security payments include self-funded early retirees and their spouses, as well as housewives in the more traditional sense. There are probably still marginally-attached workers among these groups, but they are likely to be less numerous than they were a decade or two ago. On the social security side, it is likely that many recipients of parenting and mature age payments are marginally attached workers, and also the 27 per cent of Newstart recipients who were not in the official labour force and some of the recipients of carer's payments. It is also reported that the vast majority of DSP recipients would like to work, but have given up on the availability of work, as well as having fairly poor work incentives – a full-time job at the minimum wage does not yield much more take-home pay than the DSP payment for a couple.

## **10.10 The NIEIR measures**

As noted at the beginning of this chapter, National Economics resorted to Centrelink data to estimate the state of local labour markets because the official measure is not available at LGA level. This is also true of Keating's measure of labour force under-utilisation, which, however, comes far closer to measuring the state of the labour market than the official definition. To avoid confusion, we will refer to Keating's concept as labour under-utilisation rather than unemployment.

Of the three Centrelink-based indicators used in the *State of the Regions* reports, the estimate of long-term unemployment has been least discussed in this chapter, mainly because it is estimated by Centrelink and its interpretation is fairly straightforward. It comprises people who have been receiving unemployment payments for more than a year, despite job search and training requirements and the financial attractions of full-time work (which pays better than Centrelink). The long-term unemployment rate is perhaps the best indicator of a current shortage of full-time work, particularly at the low-skill end of the labour market.

The other two NIEIR indicators split the Centrelink population of workforce age into four groups.

- Those considered both structurally and generally unemployed.
- Those considered generally but not structurally unemployed.
- Those considered structurally but not generally unemployed.
- Those not considered unemployed at all.

This reflects an attempt to distinguish, on the basis of benefit received, between recipients whose labour potential is under-utilised in Keating's sense, those who would like to work but are prevented by major barriers, and those who are considered to be out of the workforce. Let us review this distinction benefit by benefit.

- Nearly all Newstart beneficiaries are likely to pass the under-utilised definition. How many are also structurally unemployed, in the sense of facing serious barriers to employment, is a moot point.
- Mature Age allowance recipients are also likely to pass the under-utilised definition, and on the current labour market have a greater claim to be considered structurally unemployed than most Newstart recipients.
- A high proportion of DSP recipients would meet the structural unemployment definition, with the remainder being outside the potential labour force even on its broadest definition. The question is how many meet the under-utilisation definition. The low exit rate from DSP back to not-on-benefit argues that the proportion is low; however, the low rate of DSP take-up in regions with high job availability, and the success of specialised back-to-work programs in these regions, argues otherwise.
- We have grouped together a number of benefits mainly directed towards older women. Many recipients of wife's pension, widow's allowance, special benefit and partner allowances may be considered structurally unemployed, but probably do not meet the under-utilisation definition. Recipients of carer's allowance are generally already fully-employed (though not for pay), while recipients of sickness benefit are not available for work.
- We have noted that recipients of parenting payment tend to be active members of the labour force. It is arguable that many of them are under-utilised (the exception being those who already work as many hours as are compatible with their child care responsibilities – though even here the hours available are likely to increase if child care services are improved). Whether this under-utilisation counts as structural unemployment depends on one's view of the impediments to single parents' workforce participation.
- Finally, the youth allowances are a mixture of study support and income support. The jobholding rate is high for youth allowance recipients, and it is likely that these job-holders are working as many hours as they want to; indeed, there is evidence that many are working longer hours than is good for their studies. Non-student recipients, however, meet the requirements for under-utilisation. Their fairly rapid rate of absorption into not-on-benefit argues that they are not structurally unemployed.



On this basis, NIEIR's measures are defensible as follows.

- ❑ NIEIR unemployment is primarily a measure of labour under-utilisation.
- ❑ NIEIR structural unemployment is primarily a measure of workers facing major barriers to employment.
- ❑ Long-term unemployment is primarily a measure of slack demand for unskilled workers.

In addition, the first two can be interpreted as measures of excess social security take-up.

- ❑ NIEIR unemployment reflects excess take-up that could be corrected by an intensification of existing programs to upgrade skills and to generate jobs in disadvantaged regions. Keating gives a list of such policies.
- ❑ NIEIR structural unemployment reflects excess take-up which could only be corrected by a totally new approach to skills and to job generation.

### **10.11 Impact of regional specific impacts on the relative merits of the NIEIR measures**

One of the most significant reasons why NIEIR developed the measure is the deficiencies of Labour Force Survey based estimates on regional areas. In previous report we have seen that the difference between the NIEIR estimate and the official estimate is higher in regional areas than in metropolitan regions.

Whilst the findings presented in this chapter point to the complexity of the true labour force status of recipients, a number of issues raised are likely to further highlight the issues of regional variation.

- ❑ Since Newstart recipients actually work a significant amount as reported, they benefit when unemployment occurs in an area which has generally high levels of employment opportunities.
- ❑ The impact of being unemployed in a regional city with few employment opportunities is worsened by the difficulty of finding marginal employment opportunities.
- ❑ The variation of status amongst youth allowance recipients highlights the importance of strong regionally based education opportunities.
- ❑ The fact that most disability support pension recipients have given up looking for work, emphasises the impact on communities with high levels of DSP. The highest levels of DSP take-up are in regional areas, this research confirms that measuring a proportion of these being effectively unemployed is consistent with the weak employment outcomes likely to be achieved.

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## 11. Labour market, employment and unemployment

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### 11.1 Introduction

As in previous years this section of the report estimates the level of unemployment by region using the NIEIR corrected unemployment rate. The need for an alternative estimate of regional employment and unemployment has been documented in previous reports, and analysed in the previous chapter.

The NIEIR unemployment rate takes as a base the number of people that the government provides social security to, who could reasonably be considered unemployed. In addition, other measures of social disadvantage such as the structural and long-term unemployment rates by regions are presented.

### 11.2 Synopsis of results

- ❑ The Australian economy has once again significant levels of employment growth which have been reflected fall in NIEIR unemployment for the sixth year in a row.
- ❑ NIEIR effective unemployment is now 7.87 per cent nationally, a fall from the 2004 level of 8.30 per cent
- ❑ Unemployment has fallen by 1.42 percentage points in the past three years.
- ❑ The number of Disability Support Pension (DSP) recipients continues to grow but a lower rate than experienced up to 2003. The total grew by 1.2 per cent in the previous year, a similar rate to 2004.
- ❑ Approximately 5.34 per cent of all people aged between 18 and 65 years now receive the DSP, down from 5.55 in 2003.
- ❑ The number of structurally unemployed fell in 2005 and is almost 50,000 less than its highest level, experienced in 2003.
- ❑ The lowest levels of unemployment are once again in Sydney with 4 of Sydney's 7 regions occupying the top four positions in Australia. However recent reductions highlight concerns with Australia's largest city about future growth.
- ❑ 2004 showed signs of improvement in many of the least advantaged regions. This years report confirms these trends. Highlighted regions with significant improvements since 2003 include QLD Wide Bay-Burnett and all three regions in Tasmania.

### 11.3 NIEIR corrected unemployment

#### 11.3.1 Derivation

The NIEIR estimates of unemployment are based on recipient information in the September quarter of each year, and on the June quarter in this report due to changes in report timing. The following formula shows the components of the calculation used to estimate the NIEIR unemployment rate.

$$\text{NIEIR Unemployment} = \frac{\left( \text{Newstart} + \text{Mature Age Allowance} + \text{Excess growth} \right)}{\left( \text{Adjusted Labour Force} = \text{Official Labour Force} \right)} \frac{\left( \text{in Disability Support Pension} + \text{Estimate of unemployed youth} \right)}{\left( + \text{Excess growth in Disability Support Pension} \right)}$$

For background and notes on the way the changes in recipient status impact on official unemployment please refer to previous *State of the Regions* reports and to Chapter 10.

### 11.3.2 Growth in disability support

In June 1991 there were over 380,000 people on disability support pensions and unemployment was notionally at 9.4 per cent. From labour force surveys 802,635 people were identified as unemployed and 643,614 receiving unemployment benefits at this time.

Since 1991 major changes in the allocation of government benefits have occurred including an enormous increase in the number of people receiving disability support pensions. Table 11.1 outlines the total number of recipients of the disability and sickness type benefits. The vast majority receives the Disability Support Allowance. Other benefit types include Mobility, Sickness and Rehabilitation allowances (year dependent).

**Table 11.1 Disability Support Pensions (DSP)**

Year	DSP* recipients	% adults 18-65	Excess growth
1991	384,304	0.036	0
1996	515,092	0.045	141,243
1998	570,613	0.048	154,800
2000	638,406	0.054	178,320
2001	625,903	0.052	189,565
2002	648,657	0.054	209,924
2003	678,302	0.055	233,796
2004	686,837	0.053	236,088
2005	694,825	0.053	241,243

*Note:* \* includes sickness and mobility allowance recipients

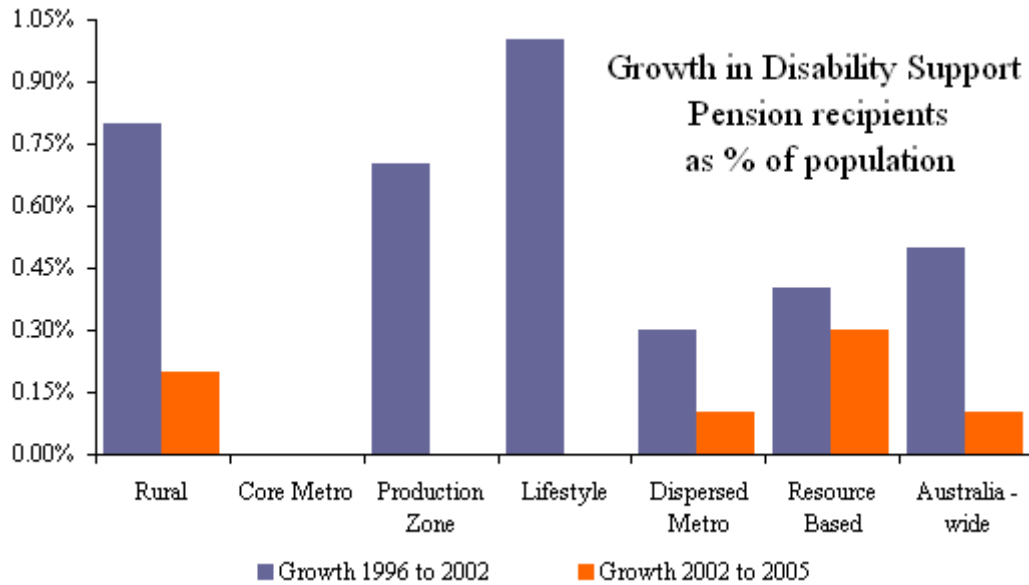
*Source:* National Economics' LGA YourPlace database.

Examination of the tables that follow reveals the enormous regional differences in these effects. Certain areas have received far higher rates of growth in the number of DSP recipients and, hence, their local unemployment estimates have been distorted even more than the national average.

**Table 11.2 Percentage of population receiving DSP**

Region	2005	2004	2002	2000	1998	1996	1991
Rural	4.2	4.2	4.0	3.7	3.5	3.2	2.3
Core Metro	2.8	2.8	2.8	2.8	2.9	2.8	2.2
Production Zone	3.9	3.9	3.9	3.4	3.5	3.2	2.5
Lifestyle	4.0	4.0	4.0	4.5	3.2	3.0	2.2
Dispersed Metro	2.5	2.5	2.4	2.0	2.3	2.1	1.5
Resource Based	3.1	3.1	2.8	2.4	2.5	2.4	1.9
<b>Australia – wide</b>	<b>3.4</b>	<b>3.4</b>	<b>3.3</b>	<b>3.2</b>	<b>3.0</b>	<b>2.8</b>	<b>2.1</b>

The rural and lifestyle regions have had the highest level of growth from 1991 as can be seen in the following graph. The population measure above is defined as the percentage of all people regardless of age.



Armed with the actual growth in the level of DSP recipients by region and the population growth that has occurred we can determine the excess growth in DSP since 1991<sup>10</sup>.

### ***Estimation of the levels of excess DSP growth***

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 the *corrected 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 the reported size plus the number of people who have been moved to the 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, that is, 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, therefore excess growth will be negative, and this will be allowed to have positive impact on corrected unemployment.

<sup>10</sup> There is an argument that due to the ageing of the population a greater allowance for population growth should be used. National Economics believes that the bubble in population due to the baby-boomers was a well-understood social phenomenon that should have been planned for. If this was the case the measures put in place to help the mature workers in the workforce could have resulted in less DSP recipients. Regardless, Australia is now without the utilisation of the productive capacity of many of these individuals simply due to the lack of appropriate opportunities.

The regional differences in the incidence of excess growth in DSP are stark. The following two tables show the ten regions with the lowest and highest levels of excess DSP numbers in the adjusted labour force. As alluded to, two of the top ten regions have had less growth in DSP than would be suggested by population growth. These regions are Melbourne Inner and Sydney Inner West.

**Table 11.3 Excess DSP in effective labour force, top ten regions**

Rank	SOR name	% of workforce, 2003	% of workforce, 2005
1	Melbourne Inner	-0.8	-1.1
2	Sydney Inner West	-0.2	-0.5
3	Global Sydney	-0.3	0.1
4	Sydney Outer North	0.4	0.4
5	Sydney South	0.8	0.7
6	Perth Central	0.9	0.8
7	Brisbane City	1.2	1.0
8	Darwin	1.1	1.2
9	QLD Pastoral	1.5	1.4
10	Perth Outer South	1.3	1.3

The tenth best region in 2004, Perth Outer South, still had more than 1.3 per cent of its effective work force transferred to DSP after accounting for population growth.

The large impact on some regions is clear in the table of the bottom ten regions. Tasmania's North West has a number of people equal to 6.6 per cent of its effective workforce on DSP in excess of population growth. This does not include the 4.1 per cent that were already on DSP in 1991. The 2005 level is however 0.2 per cent lower than in 2004.

For QLD Wide Bay Burnett the levels have risen between 2003 and 2005. The region has the highest levels of "excess growth" in DSP primarily due to the skewed nature of migration to the region. The weather, the cost of housing and the levels of population growth are all particularly attractive early retirement features. The nature of the DSP, its regulations and the stability of its levels in the population as a whole highlight the long-term nature of being a benefit recipient. For those with interest in liquidating value in metropolitan housing when approaching retirement, whilst being on the DSP, would find migration to the region compelling.

For Wide-Bay Burnett, population growth is far more likely to be capturing DSP recipients than other areas, and hence the excess DSP growth is very high. The ageing in situ of the blue-collar and agricultural population also contributes to high DSP growth.

**Table 11.4 Excess DSP in effective labour force, bottom ten regions**

Rank	SOR name	% of workforce, 2003	% of workforce, 2005
1	QLD Wide Bay-Burnett	6.7	7.2
2	TAS North West	6.5	6.6
3	NSW Richmond-Tweed	5.8	5.7
4	QLD West Moreton	4.7	5.2
5	TAS Hobart-South	5.6	5.3
6	NSW Mid North Coast	5.3	5.2
7	SA Eyre and Yorke	4.8	4.8
8	TAS North	4.5	4.7
9	VIC Gippsland	5.1	4.7
10	Adelaide Plains	4.3	4.4

National Economics has noted that in the past those regions with the least opportunities for employment tend to have had the largest increase in DSP. However, little change has occurred over the last three years for each region, indicating that it is not clear that recent growth is as unevenly distributed.

### 11.3.3 Corrected unemployment rates

After reporting these results for six years the gap between those who are considered unemployed according to official labour estimate of unemployment has finally almost reached the number of people actually receiving unemployment benefits. In fact, if National Economics used the slightly less conservative evaluation of youth unemployment utilised by Centrelink (simply non-student status, youth allowance recipients) the difference would be negligible.

Year	Labour force unemployed	Recipients*	Difference
1991	802,635	643,614	159,021
1996	760,131	819,995	-59,864
1998	735,045	803,388	-68,343
2000	627,169	720,431	-93,262
2001	648,218	799,706	-151,488
2002	659,860	711,022	-51,162
2003	628,095	677,877	-49,782
2004	599,870	622,710	-22,840
2005	572,725	583,261	-10,536

*Note:* \* Includes: Newstart, estimates of Youth Allowance unemployed and Mature Age Allowance circa. September each year  
*Source:* National Economics’ LGA YourPlace database.

It is important to remember however that this difference is between those receiving explicit unemployment benefits and does not include any of the National Economics defined excess DSP (or benefit re-assignment) effects that should be included in a estimate of unemployment.

Table 11.5 shows that in 1991, the number of recipients was below measured unemployment in the labour force. This was due to two factors. First, the unemployment rate was rising rapidly through 1991 to peak at 11 per cent in 1992. Consequently, given the lag between becoming unemployed and receiving benefits, it would be expected that the number of recipients would be less than the number of unemployed through 1991. Secondly, when unemployment changes suddenly, as was the case in 1991, many people who become unemployed, perhaps for the first time, were not eligible for benefits because of the *means tests*. However if they remain unemployed and their personal finances deteriorate they then become eligible. In the end result, recipients should approximate the levels of unemployment.

As highlighted in Chapter 10, the complexity of labour force status and social security status is high. It is likely that the measurement of unemployment using recipient data will tend to capture the actual pace of a nation’s capacity to increase opportunities for the least well off. There is no doubt that in 2000 and 2001 the labour force estimates of unemployment were drastically under-stated. The difference in the numbers receiving benefits as those considered unemployed was more than 150,000 people. This may well have been due to weak reported levels of participation, but it wasn’t low unemployment. The effect has been that the superb growth in the economy in the past four years has been understated in terms of its impacts on unemployment. Instead of reporting a likely 200,000 less unemployed, official figures have only declined by 70,000.

Looking at the trends at a regional level, the top ten and bottom ten regions are detailed. The top ten includes four of the seven Sydney regions occupying the first four places. The pre-eminence of Sydney as a centre of income, employment and wealth is once again shown.

**Table 11.6 NIEIR unemployment rate, top ten regions**

Rank	SOR Name	% of workforce, 2003	% of workforce, 2005
1	Sydney Outer North	2.0	1.8
2	Sydney Inner West	3.3	2.6
3	Global Sydney	3.6	3.0
4	Sydney South	4.0	3.4
5	Melbourne East	4.6	4.5
6	ACT	5.1	4.5
7	Melbourne Inner	6.4	4.7
8	QLD Pastoral	4.7	4.8
9	Melbourne South	5.8	4.9
10	Brisbane City	6.8	4.9

There is a flipside to the positive unemployment news in Sydney. At these low levels, continuing reductions in unemployment are likely to reflect factors other than simple job generation. In Sydney the reason is that the people are actually leaving. Out-migration from Sydney and New South Wales is now at levels not seen for more than a decade. High house prices, a slowing in employment in the construction sector, traffic congestion and artificial supply shortages in new housing are all factors.

Other factors include the many attractive options which exist in a range of places elsewhere in Australia. Put simply Sydney is no longer offering an attractive enough economic or lifestyle package.

In time, the failure of the NSW Government to build community and social solutions to counter these forces will reduce economic success and employment. The situation has not been improved by our broader failure to build on the global city position of Sydney through education, technology growth and professional services and innovation exports.

Sydney has failed in its primary mission to be the flag bearer of our global position.

These failures in Sydney are linked to the high debt exposure of many of its households. In a local economy where a labour shortage is combined with vulnerability to debt, strident individualism is a natural social and political response.

But the performance of Brisbane City, Melbourne Inner and Australian Capital Territory show that developing broad attractive economies, building capacity for growth, and embracing diversity and the service economy, deliver reductions in unemployment as well.

The levels of regional inequality are starkly portrayed in the table of the bottom 10 regions. There remains ample evidence in the tables that there are many regions of Australia that have unemployment significantly in excess of 10 per cent. However the performance of the bottom ten regions in the past two years has been strong. QLD Wide Bay-Burnett and TAS North West have followed up success in 2003-04 again this year. Growth in the economy for many of these regions has been directly related to their population growth. Ensuring that this growth leads to business development and industry diversification is vital.

The bottom ten regions lay in four separate states and a territory and the diverse membership of the list highlights the regional spread of unemployment.

**Table 11.7 NIEIR unemployment rate, bottom ten regions**

Rank	SOR Name	% of workforce, 2003	% of workforce, 2005
64	NT Lingiari	25.5	30.2
63	QLD Wide Bay-Burnett	20.1	17.1
62	TAS North West	18.6	15.4
61	NSW Mid North Coast	19.4	17.0
60	NSW Richmond-Tweed	19.8	16.5
59	SA Eyre and Yorke	15.6	13.6
58	TAS Hobart-South	16.0	13.3
57	TAS North	13.8	12.7
56	Adelaide Plains	14.5	12.5
55	NSW Far and North West	13.7	12.5

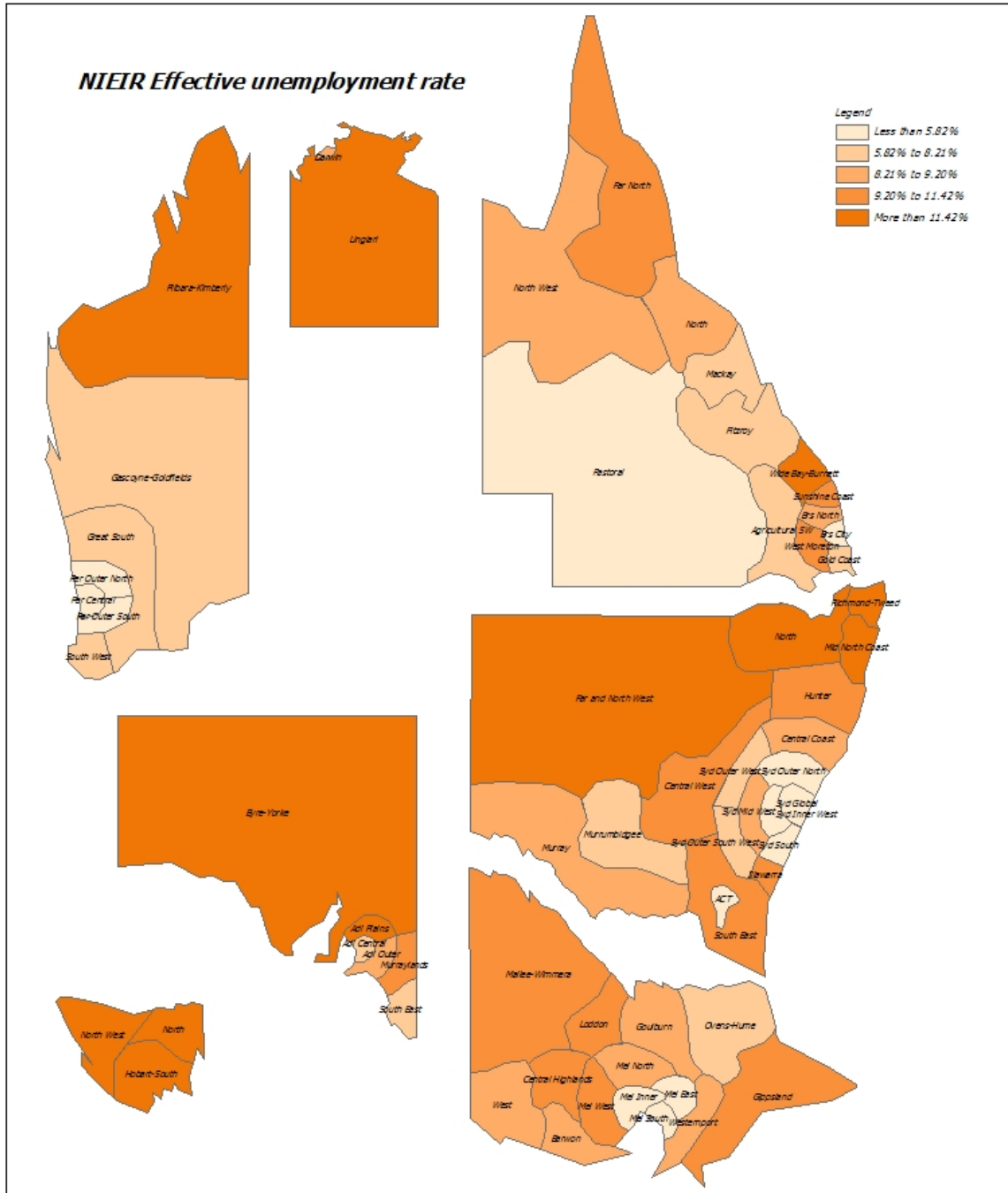
On the following pages maps of the NIEIR corrected unemployment rate and the change in unemployment rates between 2004 and 2005 are presented. The maps are used to display regions of different scale on a single map, by varying the size of the regions within state boundaries and varying the size of states themselves. The regions of high population density are enlarged and the sparsely populated areas reduced, allowing the richness of the national pattern to be mapped on a single page.

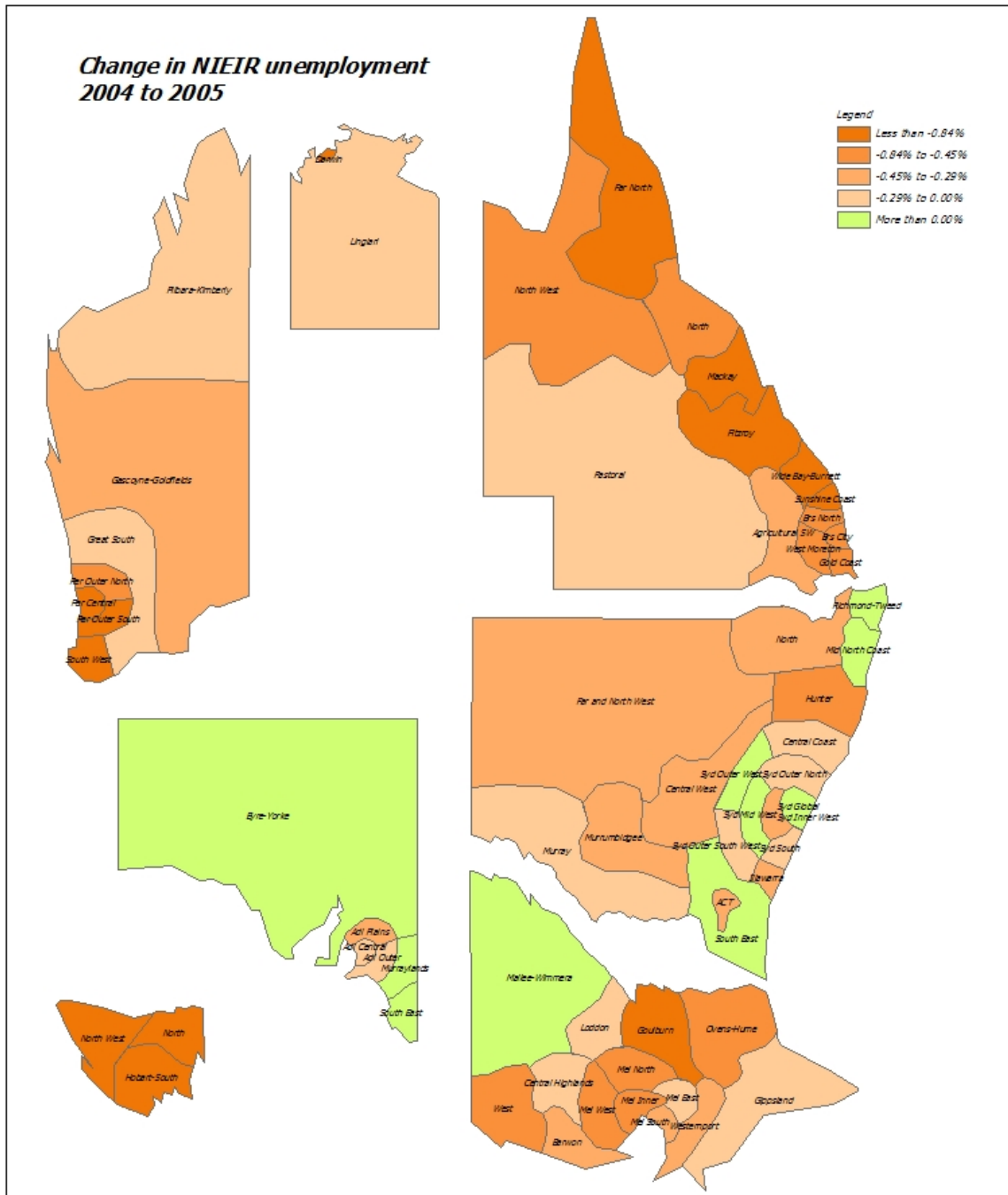
To demonstrate the scale of the difference between the official figure and the corrected unemployment rates, the 12<sup>th</sup> ranked region of Melbourne East has a corrected unemployment equal to the official national average. In last years report the 6<sup>th</sup> ranked region had a corrected unemployment measure equal to the official national average. As noted previously much of the reduction in unemployment achieved in 2005 is understated in the official unemployment rates as highlighted in Table 11.5.

In 2005, 52 of the 64 regions in Australia have a corrected unemployment rate that is worse than the official national average.



**NIEIR Effective unemployment rate**

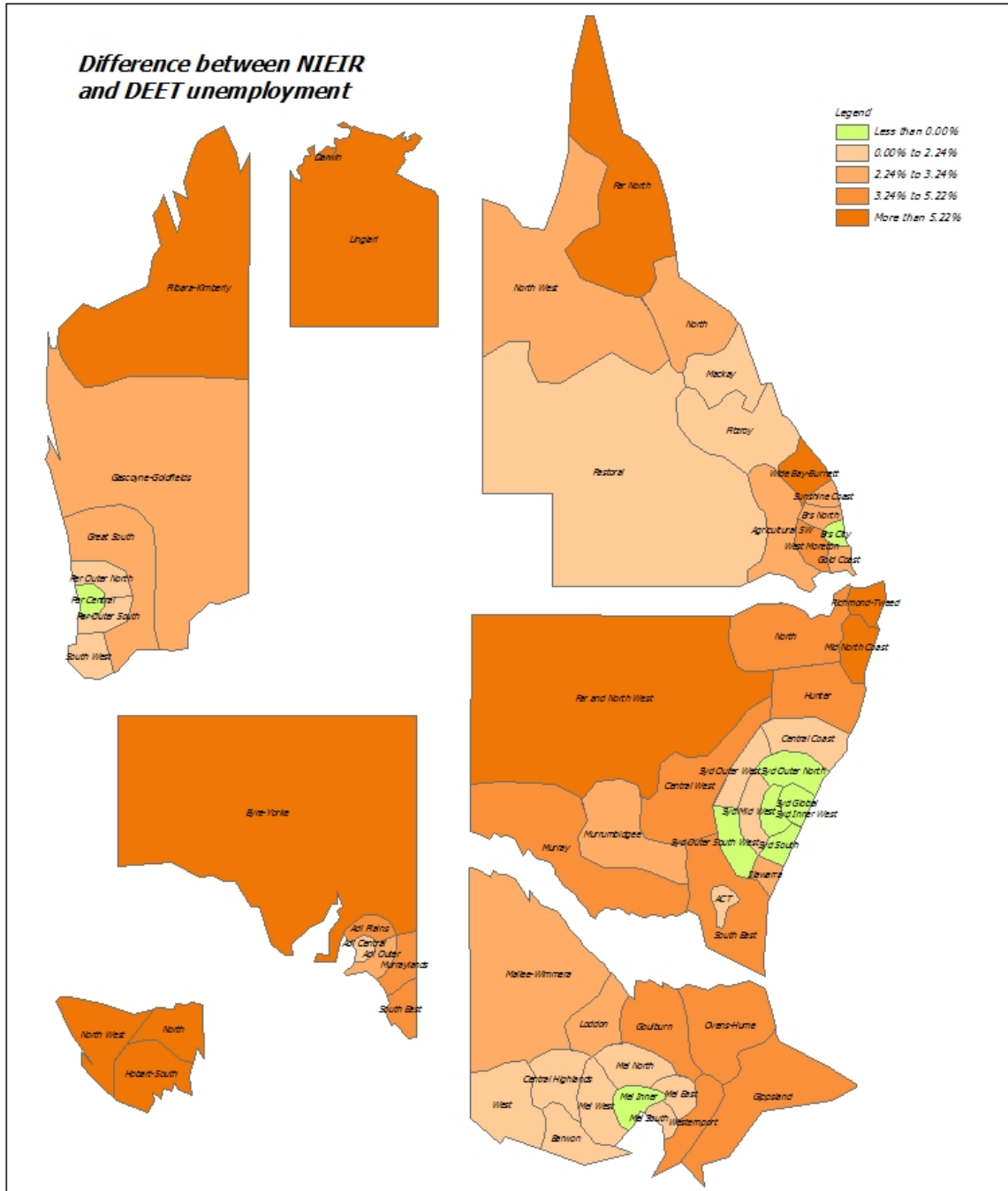




The relatively poor performance of the Sydney Basin is apparent in the map above. Following exceptionally strong growth in Richmond Tweed and the Mid North Coast in 2004, the improvement has stabilised in the 2005.

The strong performance of Tasmania in general is also clear.

***Difference between NIEIR and DEET unemployment***



### 11.3.4 NIEIR unemployment rates by region type

Combining the 64 regions into the six region types provides the trend in unemployment for Australia's various types of region. The regional inequality changes identified in the *2002 State of the Regions* report are once again reinforced when considering the distribution of unemployment and the changes in unemployment over the previous seven years. The largest falls in the NIEIR unemployment rate have occurred in the Lifestyle and Core Metro regions.

The production and dispersed metro regions have had continued decreases in the unemployment rate. The other trend of note is the decrease in the unemployment level in rural areas due to the end of the drought. The rural regions had for the previous few years experienced unemployment rate rises due to the drought. This decrease hopefully indicates a return of these lost jobs.

For two years running, when we turn to unemployment by region, there have been across the board reductions in unemployment. Consolidation of drought improvements begun in 2004 are clear in rural areas where unemployment has fallen by a further 0.53 percentage points. The dispersed metro areas which include a large part of the outer Sydney basin, now have very low levels of unemployment.

**Table 11.8 NIEIR unemployment rates by region**

Region	2005	2004	2003	Change 2003 to 2005	2001	1996	Change 1996 to 2005
Rural	10.28	10.81	11.80	-1.52	12.50	11.98	-1.70
Core Metro	5.23	5.68	6.46	-1.23	7.46	9.50	-4.27
Production Zone	9.47	9.86	10.13	-0.66	11.55	12.04	-2.57
Lifestyle	10.77	11.16	12.98	-2.21	15.34	15.37	-4.60
Dispersed Metro	5.25	5.58	5.83	-0.58	6.73	7.50	-2.25
Resource Based	10.20	10.85	11.31	-1.11	11.45	9.91	+0.29
<b>Australia – wide</b>	<b>7.87</b>	<b>8.30</b>	<b>8.89</b>	<b>-1.02</b>	<b>10.02</b>	<b>10.61</b>	<b>-2.74</b>

### 11.3.5 Structural unemployment

Since the *1999 State of the Regions* report, NIEIR has reported a measure of unemployment that accounted for those in the population who were considered to be structurally unemployed. Analysis of the labour market implications of the structural unemployment was presented in the previous chapter.

For the first time since measuring the series the share of population aged 18 to 65 considered to be structurally unemployment has fallen below 10 per cent. This is a fantastic result.

Based upon detailed DSS and Centrelink data the constructed series identifies regions that have high effective rates of under-employment due to structural issues in their workforce. Structural barriers identified included disability, single parenthood, migrant unemployment, mature aged unemployment and long-term unemployment. Each was included for its effect in reducing the opportunities for the person in question obtaining full-time employment.

Structural unemployment is measured by the level of long-term unemployed as a percentage of the population aged 18 to 65 years old. It includes everyone on disability support pensions, 50 per cent of people from a non-English speaking background on Newstart allowance, 50 per cent of people on single parents benefits and all people on the mature age allowance.

This measure excludes people on Newstart allowance short-term and anyone receiving youth allowance. It therefore assumes that none of the youth are structurally unemployed.

Previous sections of this chapter have highlighted the changes in the unemployed and disability support pensions. The ethnicity of the recipient is routinely collected and processed, along with the number receiving the Mature Age Allowance. The final vital component of the equation is the level of single parent pension payment.

When the various features of structural unemployment are totalled and weighted the following regional results are derived. Those regions with endemic social or economic structural concerns have the highest levels of structural unemployment. The range of outcomes is very large with the 64<sup>th</sup> ranked region, the NT Lingiari, having 20.3 per cent of its population classified as structurally unemployed versus only 2.9 per cent for Sydney's Outer North.

Levels of structural unemployment are detailed in Appendix 1 at the regional level and are included as a time series. Highlighting recent changes in the levels of structural unemployment, the top ten and bottom ten regions based on updated estimates for 2005 are compared with 2003 results.

The success of many of our regional communities in growing their economies is clear in Table 11.9. Strong reductions in the NSW Mid North Coast and the QLD Wide Bay Burnett in 2004 have been repeated in 2005.

The aggregate performance of Tasmania and its three SOR regions is great. Although the entire state remains in the bottom ten table the combined reduction in structural unemployment averages almost 2 per cent, and corresponds to a reduction from 46,000 to 43,000 people.

**Table 11.9 NIEIR structural unemployment rate, bottom ten regions 2005**

Rank	SOR Name	% of population aged 18 – 65, 2003	% of population aged 18 – 65, 2005
64	NT Lingiari	20.8	20.3
63	NSW Mid North Coast	19.7	17.6
62	NSW Richmond-Tweed	19.3	17.2
61	QLD Wide Bay-Burnett	19.4	16.9
60	TAS North West	18.0	16.0
59	NSW Far and North West	16.3	15.6
58	SA Eyre and Yorke	16.2	15.3
57	Adelaide Plains	16.4	15.0
56	TAS Hobart-South	15.8	14.0
55	TAS North	15.3	13.7

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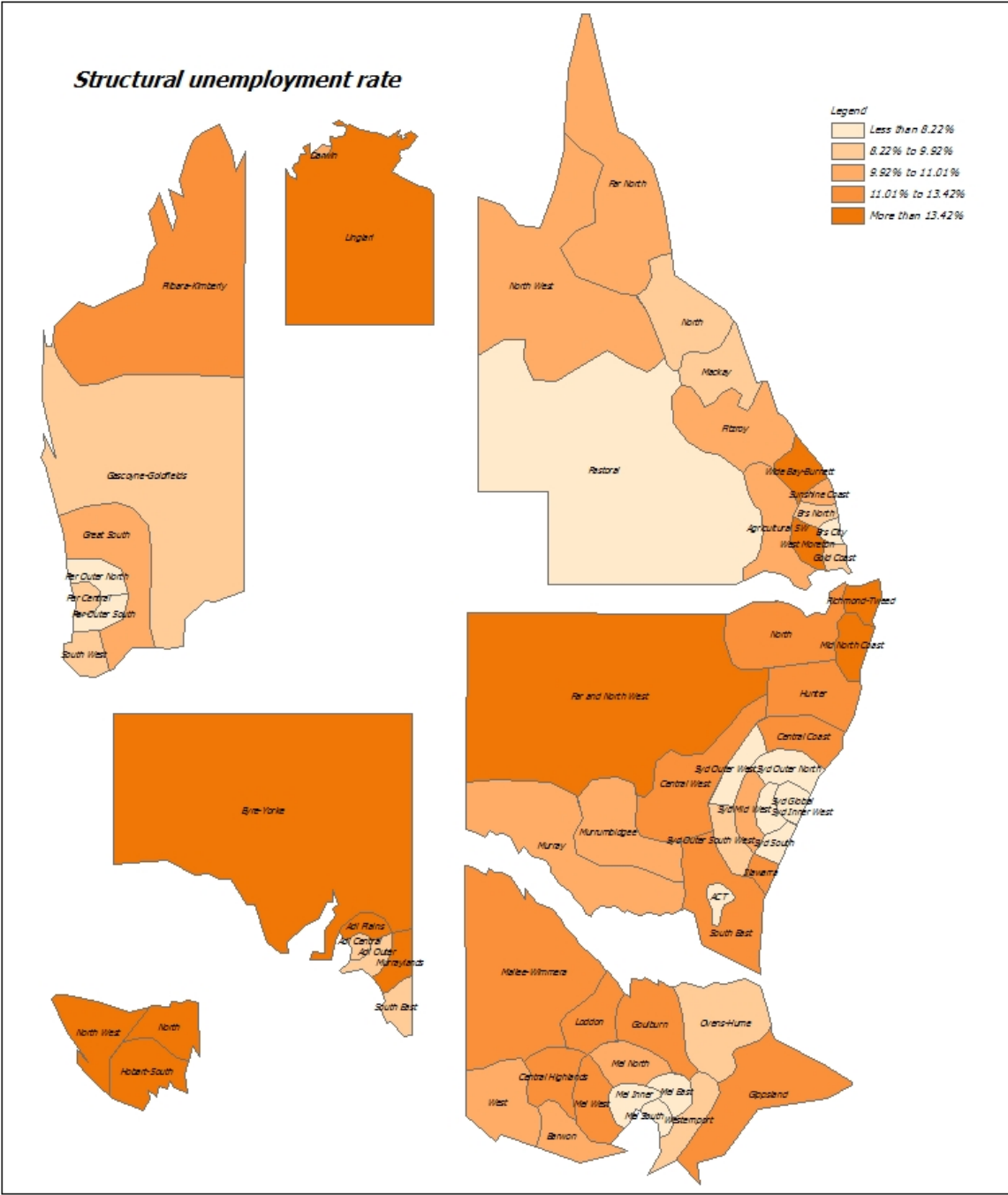
**Table 11.10 NIEIR structural unemployment rate, top ten regions 2005**

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Rank	SOR Name	% of population aged 18 – 65, 2003	% of population aged 18 – 65, 2005
1	Sydney Outer North	3.1	2.9
2	Global Sydney	5.8	5.0
3	Sydney South	5.9	5.4
4	Melbourne East	6.0	5.8
5	ACT	6.3	5.8
6	Sydney Inner West	6.5	5.8
7	Melbourne South	7.4	6.8
8	Brisbane City	8.2	7.0
9	Melbourne Inner	8.9	7.6
10	Perth Outer North	8.7	7.6

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The results for each of the 64 regions are presented in the regional summaries as part of the appendices and include the same results presented using the cartogram / map format on the following page. The map design allows us to clearly see the trend of unemployment fanning out from the centres of the major cities.



### 11.3.6 Long-term unemployment

A subset of the corrected and structural unemployment is the long-term unemployed<sup>11</sup>. The reduction of the long-term unemployment rate should remain a key objective of good governance. The results of the top and bottom ten regions in Australia are presented below. The worst performing regions are a mix of those with historically-based structural economic disadvantage and lifestyle regions.

The strength of the Sydney economy underpins the results presented in the top ten regions with five of Sydney's seven regions occupying places in the top ten.

**Table 11.11 Long-term unemployment, top ten regions from 2005**

Rank	SOR Name	% of workforce, 2003	% of workforce, 2005
1	Sydney Outer North	0.6	0.5
2	Sydney South	1.3	1.1
3	Melbourne East	1.3	1.3
4	Global Sydney	1.7	1.4
5	ACT	1.6	1.4
6	Sydney Outer West	1.6	1.5
7	Sydney Inner West	1.5	1.5
8	Melbourne South	1.9	1.7
9	QLD Pastoral	2.0	1.7
10	Brisbane City	2.4	1.7

There has been some continued positive news on the percentage of the workforce who are long-term unemployment benefit recipients. Most of the worst performing regions have experienced a fall in the past year although NT Lingiari has worsened over the past year.

The improvements in Wide Bay-Burnett seen in the other measures are replicated in the long-term unemployment measures. Similarly reductions in the long-term unemployed in Tasmania as a whole have been significant.

**Table 11.12 Long-term unemployment, bottom ten regions**

Rank	SOR Name	% of workforce, 2003	% of workforce, 2005
64	NT Lingiari	16.2	18.3
63	NSW Mid North Coast	7.5	6.3
62	NSW Richmond-Tweed	7.4	5.7
61	SA Eyre and Yorke	5.6	5.0
60	TAS North West	5.8	4.8
59	WA Pilbara-Kimberly	4.9	4.8
58	QLD Wide Bay-Burnett	6.1	4.7
57	NSW Far and North West	5.5	4.6
56	TAS North	5.3	4.5
55	TAS Hobart-South	5.7	4.4

<sup>11</sup> Definition as per Centrelink records, indicates recipient receiving benefits for a period greater than 12 months.



## 11.4 Highlights

The Australian economy and its continued prosperity have delivered employment growth across the regions. The gaps between regional performances have reduced by small amounts in the past three years.

- ❑ The Australian economy has once again significant levels of employment growth, which have been reflected in NIEIR's unemployment for the sixth year in a row.
- ❑ NIEIR's effective unemployment is now 7.87 per cent nationally, a fall from the 2004 level of 8.30 per cent
- ❑ Unemployment has fallen by 1.42 percentage points in the past three years.
- ❑ 2004 showed signs of improvement in many of the least advantaged regions. This year's report confirms these trends. Highlighted regions with significant improvements since 2003 include QLD Wide Bay-Burnett and all three regions in Tasmania.

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## 12. The role of local government in regional development

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Australian local governments have moved a long way from the days of roads rubbish and rates. Councils are now major agencies of regional development, partly by advocacy and partly by direct provision of a wide range of services. *This State of the Regions report* concludes with two chapters on the role of local government in regional development.

We begin by considering changes in the structure of Australian governance, particularly over the past three decades. This has increased the importance of local advocacy as well as requiring it to be more sophisticated: it is no longer sufficient merely to lobby the state treasury. Local advocacy now has to take into account the restraints of National Competition Policy on the approach of the Commonwealth, state and territory governments to regional development.

The relative withdrawal of the Commonwealth, states and territories from investment in the infrastructure necessary for regional development has increased the importance, not only of advocacy, but of council-funded initiatives. The need to finance such initiatives highlights the importance of keeping the costs of regular services under review – it is very difficult to generate investment funds unless this is done. In Chapter 13 we go on to consider the more efficient exploitation of council revenue sources as the other possible source of funds for development initiatives.

### 12.1 The old Australia and government enterprise

During the nineteenth and most of the twentieth centuries, Australia was known for its development-oriented governments – can-do governments which both built and operated infrastructure for colonial and later national development. From the beginning, government enterprise ran the ports, the water supply, the post office and the telegraphs, and built the roads. The colonial governments, frustrated by the slow progress of private companies building railways, took over and extended the rail lines to all the settled areas of each colony – often in advance of settlement. Half a century later, the state governments (and the Brisbane City Council) added sewerage to water supply, and, impatient with the slow progress of the private electricity companies, took over and extended mains power to nearly all the country. Meanwhile the Commonwealth, having acquired the colonial post offices at federation, extended from telegraphs to telephones. It also ventured into air transport and shipping, though never to the exclusion of private operators. The Commonwealth and all state governments also founded their own banks, again in competition with private businesses. At a time when government enterprise has become unfashionable, it is worth remembering this history. It had its notable successes; it helped create the Australia we know.

Local government's contribution to national development in the heyday of government enterprise was humble but essential: local roads, local drainage, waste management and (in some states) water supply, sewage, public transport and even electricity supply.

Whether owned by the Commonwealth, state or local governments, most of these infrastructure services were operated as businesses, financed mainly from user charges. There were two major exceptions.

- ❑ Water supply, drainage, sewerage were financed out of rates, partly to avoid metering expenses, but mainly because operating costs were low and fixed capital charges were high. The capital charges did not vary with water flow, and had to be matched with a guaranteed source of income. Rates were considered more reliable and equitable than user charges.
- ❑ Roads were not user-charged for two reasons: a tradition of free use, and the high costs of collecting tolls. It became normal practice to finance local roads from rates and major roads from general Commonwealth and state funds, with a tenuous connection to fuel taxes and vehicle registration fees.

Monopoly government enterprise was confined to these tax-financed services, and to user-financed major utilities subject to economies of scale and with natural monopoly characteristics. It was argued for half of the nineteenth and three-quarters of the twentieth centuries that government provision was efficient, since public ownership guaranteed responsiveness to the needs of the people served while avoiding wasteful competition.

In addition to providing local roads and the like, councils lobbied the state governments, which owned the major utilities, to ensure that infrastructure services were provided in each LGA.

## **12.2 Competition and market-based policy**

A century and more of investment saw the growth of some very large government-owned undertakings. With size came bureaucracy and technical conservatism, and the great public utilities were increasingly criticised as inefficient. By the 1980s there were people arguing that infrastructure services would improve if they were provided by market-oriented businesses competing for customers. This sudden discovery of the virtues of competition was not wholly due to discontent with the performance of the public utilities. Various other factors were involved, ranging from cold war rhetoric through the increasing sophistication of the financial sector (which offered its services as an alternative to centralised management) to new technologies that made competition feasible in industries that had previously been natural monopolies. The old phrase ‘wasteful competition’ was forgotten. Economic efficiency was redefined as whatever resulted from competition, and it became the duty of governments to promote competition wherever possible. This new approach was enshrined in National Competition Policy (NCP), introduced in 1995 by agreement between the Commonwealth, states and territories.

Local government was not directly party to the policy, and, except in Queensland, owned few of the undertakings that were its particular targets. However, a major change of policy at Commonwealth and state level cannot but impact on local councils. Because of state and territory involvement, this direct impact varied by state, but in all states and territories there were emphases on:-

- shifting from rate finance to user charges, even to the point of floating off some services as private businesses; and
- opening local government service provision to private contractors, whether by extension of traditional public works practice or new approaches such as purchaser-provider splits.

Several state governments accompanied these changes with a program of amalgamations, which aimed at reducing costs through economies of scale.

## **12.3 Competition and regional development**

Disconcerting though many of these direct impacts may have been, it is now becoming obvious that the main impact of competition policy on local government has been through its effect on regional development policy. With the exception of roads, the Commonwealth and the states have denied themselves the capacity to send strategic instructions to major infrastructure undertakings. Such instructions – both investment and price controls – were previously a major component of regional development policy. To give a typical example, a state government might instruct its electricity commission to extend supply to a particular region, and the commission did so whether it improved its bottom line or not. To show how much has changed, if Telstra were still a Commonwealth department it would be a simple matter for the federal government to order it to roll out broadband.

The argument for the abolition of strategic instructions was that they arise from political priorities, which are (by definition) a less efficient method of gauging consumer needs than market demand. The proponents of competition policy argue that government investment strategies create utilities with under-utilised and unwarranted investments financed by inefficient cross-subsidies. Against this, they

believe that prospective financial returns should be the sole criterion for investment, and that the financial markets are the best judges of prospective returns. Prices should reflect costs, and cross-subsidies should be abolished or replaced by transparent, budget-financed community service obligations. These arguments were illustrated with stories of poor service and with examples of politically-motivated investment.

In its tenth-anniversary Review of the National Competition Policy Reforms, the Productivity Commission joined other institutions such as the World Bank in adopting a less extreme view. This view concedes that investments, particularly in utilities, can lead to spin-offs for other businesses that, in turn, mean that the profitability of the utility, from the national point of view, is greater than its financial profitability. The classic case is the nineteenth-century Australian railways, which earned less than a full market rate of return, but which formed the basis of agricultural prosperity. The Commonwealth and state governments are now quite receptive to arguments for infrastructure investment that passes the spin-off test, though they are still very uncertain as to how they should finance it.

A somewhat similar reassessment is noticeable at international level. It is now common to see it argued, for the OECD countries and even more for the world as a whole, that the competition-based policies of the 1990s have resulted in:-

- an increase in inequality of market-based incomes;
- an associated increase in market-based inequality between regions;
- a marked reduction in infrastructure investment;
- a partly associated reduction in business investment as a whole;
- an increase in consumption expenditure; and
- an increase in consumer indebtedness.

Despite gradually increasing recognition, there is no agreement as to what to do about these trends. For example, it may be recognised that inequality between regions has increased, but denied that this is a result of competition policy, or that governments can or should do anything about it.

Meanwhile there is a danger that history will repeat itself. Given that governments can no longer command the public utilities to invest, they have had to resort to negotiation, employing the incentive of subsidies and the threat of regulation. The inherent messiness of this kind of negotiation was one of the reasons for the pragmatic nationalisations that occurred in the nineteenth and early twentieth century. One only hopes that the responsibilities of governments and the efficiencies of the private sector can be better combined this time round.

## **12.4 Competition and cost-shifting**

Competition policies achieve efficiency by aligning production to what people are willing and able to pay for. An important aspect is therefore a shift of financial responsibility for services from taxpayers to users. Theoretically this enhances consumer sovereignty: services are provided only when people want them enough to pay for them. However, for this to be really true a long list of conditions has to be satisfied, the first of which is competition, and the second (with many more) is that users should be able to afford the service. In the absence of genuine competition, shifting to user charges does not guarantee an increase in service responsiveness to consumer demands. When users cannot afford services, they have to go without – which is fine when the services are non-essential, but an affront to community values when services meet essential needs.

These two questions have dogged all three spheres of government as they have shifted financial burdens from taxpayers to service users. To expand a little, the questions have been as follows.

- ❑ Does user charging really increase the responsiveness of the service to consumer demands? User charges may be imposed with the old bureaucratic management still in place, unthreatened by competition. This is recognised as a possibility in National Competition Policy, under which natural monopolies such as the electricity bulk transmission grid continue to be regulated. However, there is a whole range of areas where there is argument as to whether competition is a sufficient force to deliver value for the money that consumers spend in user charges. We need instance only higher education.
- ❑ What happens when people cannot afford the user charges for essential services? Is it really a government responsibility to ensure that all children achieve minimum standards of literacy and numeracy, or can this responsibility be waived for the children of parents who fail to pay? Is it still a government responsibility to ensure that minimum infrastructure standards are met, or should this be left entirely to what investors are willing to provide, given what users are willing to pay?

In other words, a trend to user charges shifts costs from the taxpayer to the consumer without necessarily increasing consumer sovereignty, and at potential cost where services include a component of redistribution. Against this general background of cost-shifting from government to households, we turn to the question of cost-shifting between governments. This has been of particular concern to local government. It is very difficult to find funds for local initiatives if one keeps getting landed with expenditure requirements imposed by other levels of government.

## 12.5 Cost and responsibility shifting between governments

In Australia, shifts of responsibility and cost occur in the context of a rather unusual system of government. It is true that the Constitution provides a list of areas where federal legislation over-rides state legislation and local government decisions, but this list does not provide a clear-cut division of powers or responsibilities. In practice, most areas of government service have a mixture of private, local, state and Commonwealth responsibility, with international responsibilities gradually being added in. Consider transport:-

- ❑ because Australia has no land frontiers, it does not have to give high priority to international rules concerning motor vehicle traffic. However, international agreements are important elements in the administration of air and sea transport;
- ❑ the Commonwealth is the major source of finance for roads, and has important financial and regulatory interests in all other forms of transport;
- ❑ the states and territories are ultimately responsible for most transport infrastructure;
- ❑ local government has major responsibility for roads; and
- ❑ finally, the private sector owns and operates vehicles, ships and aircraft, and in addition owns some of the infrastructure.

In a complicated system like this, the international institutions, the Commonwealth, the states, local government and the private sector operators can easily be at a loss. We are familiar with the list of woes: waste through multiple levels of administration and high negotiation costs; mutual blaming and the negation of initiatives through non-cooperation. These problems have often led to arguments for strong central administration: the Commonwealth government should control, the states and local government merely implement. However, centralisation runs contra to world trends. Professor Galligan outlines these trends as follows.

*“Government systems across the world are becoming more complex, not less, with multiple centres of power and policy making. Governments that partly rule and partly share in ruling with other spheres of government, whether sub-national or supra-national, are the rule rather than the exception.”*

The potential advantages of multi-level government are many. Different views can be brought to bear on policy areas, and local knowledge combined with national strategy and the global need of nations to live together. As regards the contribution of local government, this is strongly recognised in the recent House of Representatives report entitled *Rates and Taxes: a fair share for responsible local government*, with its proposal for a summit on inter-governmental relations to build on the positive side of the Australian system of government. The report looks forward to growing independence of communities from reliance on central government, the maintenance of strategic infrastructure and services and the reduction of geographic inequity. It envisages that the capacity of communities to take control over their own futures can be enhanced at the same time, and by the same means, as the capacity of the Commonwealth to respond to differing local needs is enhanced, with one result being an improvement in international competitiveness (pp 142-3).

This report resulted from an inquiry into local government finance which received its terms of reference, with their emphasis on cost-shifting, against a background of deteriorating relations between the Commonwealth and the states and territories. However, the Inquiry was at pains to point out that its terms of reference were broader than cost shifting, which it defined as follows: 'Cost shifting by state governments...typically encompasses states funding a program through local government for a limited period then reducing or withdrawing funding and leaving local government to decide on its future.' The Inquiry disposed of cost shifting in a single chapter and then went on to broader considerations.

Cost shifting in the sense defined by the Inquiry should be seen against the background of continued negotiation of responsibility for financing and providing public services that occurs in a decentralised system of government. The home maintenance service for frail elderly people provides a fairly typical case study. This service was pioneered in the post-war period by a handful of non-government welfare services, which demonstrated the practicality and usefulness of the service. Cost and responsibility for the service was transferred to local government when it was taken up by a number of local councils, mainly in Victoria. After further establishment of its usefulness, the service was incorporated into the Home and Community Care (HACC) services provided throughout Australia, which transferred most of the cost of the service (after user charges) to the Commonwealth (60 per cent) and the states (40 per cent). A further step in these cost-shifts is now taking place, with the Commonwealth indexing its contributions at less than a realistic wage rate, giving service providers (including local government) the option of increasing their funding contributions or cutting services. So similarly with numerous points of friction between local government and granting governments – for example, relationships between state and local governments over libraries.

So long as national policies emphasise user pays and tax cuts, the flow of grant finance from the Commonwealth and the states is likely to be strictly limited. This goes not only for welfare services but also for infrastructure developments. The House of Representatives committee came to the conclusion that cost shifting has indeed taken place, and in future should be conducted on a properly negotiated basis under an inter-governmental agreement. Negotiations would have to cover both the responsibility for service provision and standards (including the scope for local variation) and the responsibility for finance.

## 12.6 Competition and advocacy for local public investment

At Commonwealth, state and territory level, the system of geographic electorates is supposed to ensure that local interests are represented. However, with members of all parliaments locked into disciplined parties, the scope for regional representation has declined – a decline that was necessary for the full implementation of competition policy. Instead, the parties have argued that competition should rule even if it creates local depression or misses local opportunities. This is particularly dispiriting to councils in their capacity as advocates for local economic development. Whether or not the Commonwealth and state officials who are being targeted by local lobbying belong to the competition purists, the lobbyists can no longer rely that politicians and bureaucrats at state and federal level will share local concerns. At the risk of caricature, we can chart two positions.

- ❑ The Commonwealth cannot see you, because it is absorbed with the big picture and you are too small. Whatever the Productivity Commission or the OECD may have said to the contrary, the belief is still widespread at Commonwealth level that economic growth is guaranteed if the Treasury and Reserve Bank get the macroeconomics right and leave the financial sector to look after everything else. The good performance of the Australian economy over the past decade, as judged by such macroeconomic indicators as GDP growth and the decline in unemployment (as conventionally measured) persuades bureaucrats at the Commonwealth level that their policies have been fundamentally right, and that they should not listen to pleading on behalf of one region or another. To do so would risk falling back into the bad old days of strategic instructions and cross-subsidies.
- ❑ There is a perception that state governments also overlook local needs. This is partly because the states and territories are intellectual partners with the Commonwealth in allegiance to market-oriented policies, and some of their politicians and bureaucrats echo federal attitudes. Even when state bureaucrats are inclined to intervention, they sometimes emphasise the role of their capital city and fail to notice needs elsewhere. The reason is simple: the financial markets tend to favour the capital cities because they offer the best investor security, not only to private investors but to global knowledge workers, symbolic analysts and the creative souls on whose combined inspiration economic development now depends. It is easier for a state bureaucrat to run with the market than to respond to the needs of regions with less attractive immediate prospects.

The message for nearly all councils, as regional development agencies, is: You are on your own. The national government is (or at least pretends to be) relaxed and comfortable, while each state and territory government is distracted by the excitements of creating its own global or near-global city. You can no longer rely on the states and the Commonwealth to provide you with the basis of growth. And if this is the case, you have to look to your own resources and the resources that you can attract on the basis of your own resources.

Taking it for granted that you are lobbying people who would much rather not respond, how can you attract resources to your area? The art of political lobbying is an old one, and inventive minds have been giving it their best for centuries, so it is not likely that there are any new approaches. We may distinguish two types of arguments.

- ❑ Arguments based on standards and equity: crudely put, they have it and we should have it too. A more sophisticated version appeals to national unity, responsibility, minimum standards of living and the like. The underlying threat is that of regional revolt.
- ❑ Opportunity-based arguments: we have an opportunity which will not only do us a lot of good but others as well, but need a little help to overcome constraints which mean that it is not being privately financed. These positive arguments are hard to convert into threats, unless they can be latched onto the opportunities favoured by the decision-makers of high competition.

Competition theory has provided a way for governments and bureaucrats to harden their hearts against the former type of argument. To them, geographic equity (or indeed any other sort of equity) is just another way of misdirecting investment and encouraging inefficiency. They perceive that equity arguments work against the market, and do not want to carry equity investment beyond such minimal 'safety nets' as may be required to maintain national cohesion. By contrast, opportunity arguments can be presented as working with the market by giving it a small, desirable shove. The success of the capital cities in attracting attention from the state and territory governments is not only due to political dominance; it reflects their use of opportunity arguments. Look at all the positive spin-offs that will result from our establishing ourselves as a global city!

## 12.7 Investment beyond the standard array

From a different point of view, in terms of the argument in last year's *State of the Regions* report, equity and standards relate to the standard array of services: those services which are generally expected, and whose absence is definitely noticed, but which, beyond a point of adequate provision, cannot be the basis of regional distinctiveness. By contrast, opportunity arguments relate to investments that are distinctive, and also risky. Investments in standard-array services beyond the adequate are almost certain to yield low returns unless they contain non-standard, opportunity-related elements. Investments in opportunity services may also yield low returns, but there is a much greater chance of their yielding high returns.

Important arguments in convincing a sceptical Commonwealth or state government that a local project is worth investing in are unanimous local enthusiasm and local co-investment. When it comes to co-investment, councils often believe that their own resources are so slight that they cannot make an investment that is significant enough to impress other levels of government. But is this the case? Last year we argued that most councils have the capacity to leverage significant loan resources by co-operating with the state and federal governments in raising loans for infrastructure finance. This year, in Chapter 13, we examine local government finances for ideas as to where money for economic development investment might be found.

Last year we listed the questions that should be asked when developing an investment plan. Suffice to say that such investments will differ considerably according to the opportunities facing each region. The most urgent investments facing a small country town may be whatever improvements to the local environment are required to help in recruiting and retaining a doctor, good teachers and a capable shire engineer. By contrast, the most urgent investments facing a capital city will be those required to enhance its claim to be a global city and a centre of consequence in the global knowledge economy. Traditional standard-array infrastructure still has its role in this game, but by and large it yields no positive advantage: once accepted standards are reached, the yield to further investment diminishes, and the key to advantage becomes creativity in investment. To create a milieu attractive to the people who must be retained, and attracted, if a prosperous local economy is to be built requires respect for local identity and creative use of inherited resources.

There are three sources of funds for new directions in local investment:-

- re-direct expenditure from existing areas;
- loan funds; and
- increased own revenue.

Leaving out loan funds, which we covered last year, the following questions therefore need to be asked in developing a local financial strategy.

- What areas require additional investment?
- What expenditures can be contracted to help finance investment?



□ What additional revenues can be raised?

The first two questions concern the expenditure side of the budget, which we will quickly review from the point of view of a council seeking to attract to its region the skilled personnel essential to economic growth in the knowledge era. We emphasise that each council should take a realistic look at its own resources before developing its strategy: not everybody can become a global city, and regions which follow the herd are unlikely to develop distinctive advantages.

There is inevitably a large element of luck involved, depending on the twists and turns of international markets and national and state policy. However, as the recent land boom subsides and households are frightened by over-indebtedness into reducing their consumption, the federal government will inevitably show more and more interest in infrastructure and in local development. Prosperity is fragile, but the times are likely to favour local investment initiatives.

## **12.8 Expenditure review**

National Economics recognises that expenditure review, under various names such as ‘best value’, has become standard practice in local government. Even so, there is room for a few remarks as to the opportunities that may be sought to release funds for investment. To ensure that we leave nothing out, the following systematic review of expenditure areas uses the classification of expenditure functions developed for horizontal equalisation purposes by the Victoria Grants Commission. Similar classifications are used in all other states and the Northern Territory.

### **12.8.1 Governance**

The basic cost of running the council is part of the standard array of service provided everywhere. Any economies which can be effected in this standard service will yield cash flow useful for investment. On the other hand, councillors deal in ideas and strategies, not to speak of generating the community cohesion that can be very important in attracting outside funds. Any additional expenditures which enhance their capacity to galvanise the local community are likely to yield investment returns. Returns may also be gained from the coordination of investment, for example, the way in which the mundane duty to fix the drains can sometimes be converted into an opportunity for environmental creativity.

### **12.8.2 Family and community services**

The major reason why local government has been persuaded to run family and community services is the cost-effectiveness of council provision. The reasons for this cost-effectiveness include local knowledge of the recipient families (who can be treated as a whole, rather than as recipients of a silo-style departmentalised services) and local knowledge of resources available to assist, notably volunteers. This said, there is also a strong reason why local government should not provide any more than marginal additions to these services from its own funds. The reason is that these services redistribute from taxpayers to the people entitled to the service, and should therefore be financed from as wide a tax-base as possible. Again, standards of service are ultimately a Commonwealth and state/territory responsibility. If councils have to finance these services from their own resources, the standard of service will inevitably suffer in LGAs with high needs and low resources. Admittedly horizontal equalisation grants are intended to compensate for this, but the amounts available are insufficient to fully compensate for differences in needs and resources.

Recognising that local taxes are not a suitable source of finance for redistribution, the Commonwealth and states provide grants for family and community services. Councils do their residents a disservice if they forgo grants and so provide less service than the other governments are willing to finance, and all councils have the opportunity and obligation to provide the best services possible within the funds available. On the other hand, councils that go beyond the common standard of service set by the Commonwealth and states need to ask whether this contributes to long-run prosperity.

As noted above, the system of local council provision of family and community services, where financing is fundamentally a federal/state responsibility, inevitably leads to friction and accusations of cost-shifting. It is certainly not an ideal system, its chief defence being that local provision is more user-focused and nuanced than that administered from the capital cities. Local government needs to keep watch against cost-shifting, and also to assist in redefining its role as the Commonwealth and states experiment with the contracting-out of services.

Can expenditure on family and community services, over and above that financed by specific-purpose grants and user charges, be justified as an investment in local economic development? It depends on the circumstances. For example, an expenditure on improving child-care facilities may assist in attracting skilled immigrants, particularly for country towns that are able to build on a reputation as good places for kids. However, most family and community services belong to the standard array, where there is little advantage in going beyond the common standard.

### **12.8.3 Aged services**

Much the same can be said for aged services. Expenditure on aged services above that financed by specific-purpose grants and user charges cannot directly attract skilled personnel. The most that can be said is that it may assist in attracting doctors and nurses if the local aged care facilities are above the regular Commonwealth standard. Investment in superior aged care may also help to attract retirement migration and hence underpin a burst of house construction, but at the cost of creating communities with low incomes and potentially high needs.

### **12.8.4 Recreation and culture**

Recreation and culture is the fashion item among council services – though fortunately the fashion cycle is slow, changing from generation to generation rather than from year to year. Despite the slow speed of the cycle, there are dangers in maintaining facilities that are no longer attractive except to an ageing rump of users, particularly if this means forgoing opportunities to invest in facilities that are in advance of the trend and can be included in skilled migrant attraction. In many country towns, the need for football grounds is declining, but the need for environmental reserves is increasing. In between are services that form part of the standard array and are available in most places, such as swimming pools and libraries, though even here there is often room for investments that enhance community formation and identity.

### **12.8.5 Waste management**

By contrast with recreation and culture, waste management is part of the standard array of services. Little need be said beyond noting that it is a service where cost control is important.

### **12.8.6 Business and economic services**

There are standard elements in local government business and economic services, but they are laced with opportunities for creativity. Basic town planning rules can be administered mechanically, or may be administered to anticipate development opportunities. Town planning may be used to keep the peace, ensuring that development opportunities do not split the community. Beyond this, there are often opportunities to leverage private investment, all the more if council is realistic about what can be done, and creative in doing it.

### **12.8.7 Traffic and street management**

It may be that few councils distinguish between traffic and street management and local roads, but following the Victoria Grants Commission list we include it as a separate heading. This has the virtue of pointing out that traffic management and street design can offer low-cost means to improve the amenity and attractiveness of a town or suburb.

### **12.8.8 Local roads and bridges**

Local roads and bridges fall squarely into the category of standard array services. Councils receive no compliments for their roads, only brickbats when road surfaces are not kept up to the high standards now expected. Not for decades has any local government area been able to attract economic development because of its superior local roads.

What's worse, roads can be a distraction. Consider the position of a rural shire struggling to retain its doctor. The doctor makes little use of local roads – all the roads connecting the shire capital to other towns are state roads, so she uses local roads only in town and when visiting patients who live on rural properties. However, these local roads total hundreds of kilometres and absorb not only the shire's roads grants but most of its rate revenue as well. Meanwhile the town's recreational and cultural facilities fail to respond to changing fashions, opportunities to improve its environment are missed and its main street languishes. Such a shire is likely to struggle to retain its complement of professional personnel.

Not all councils have under-utilised and over-maintained local roads, but many have some roads which are maintained more out of custom than for current traffic need, and many also have single-user roads which present an opportunity for privatisation. There are shires where the number of properties has fallen to less than a quarter of the number for which the current road system was designed, but which still obstinately maintain the whole inherited system. Another example is inherited bridges. Once again, not all shires have them, but plenty do, and are struggling to upgrade them to carry the truck axle loads now permitted by the Commonwealth and the states. Where such upgrading is required, serious thought should be given to closing the bridge. It can be guaranteed that road speeds are now faster than they were when the bridge was built, and costs to road users of going round the long way are likely to be less. Another option, which may not be available in all states, is that if particular ratepayers wish to see a road or bridge maintained, they could pay a rate surcharge to cover the cost.

### **12.8.9 Other infrastructure services provided by local government**

In some states, councils are responsible for water supply and sewage, both of which are standard array services which, unlike roads, can (and should) be financed from user charges. In most states councils are responsible for drainage, once regarded as a humdrum necessity but now giving opportunities for environmental creativity.

The theme of this *State of the Regions* report derives from widespread concern among rural councils about infrastructure deficiencies in telecommunications. Up to a decade ago the solution was to lobby the Commonwealth, but that government now has to negotiate with Telstra and other operators rather than simply directing Telecom to provide service. Things that were once simple are now difficult. Worse, the areas that are disadvantaged by the new arrangements hold a minority of the population, which limits the political will to find ways round the difficulties. It will take local creativity, and perhaps some local expenditure, to maintain the competitiveness of rural shires into the information age. As detailed elsewhere in this report, it may even involve local investment in telecommunications.

## 12.9 Summary

At least as we now remember the past, there was once a time when local government contributed to local economic development by providing its humble services and relying on the local member to ensure that the state kept up the standard of public utility services, education and health services, and various other forms of assistance to local business such as agricultural extension. But life is no longer so simple.

Many of the reasons why councils have to be increasingly nimble if they are to promote local economic development have been rehearsed in these Reports, and are summarised in the stylised facts listed at the beginning of this edition. This chapter has described the way in which competition policy reforms have complicated matters. The Commonwealth, states and territories have withdrawn from direct provision of a number of utility services, and it is no longer realistic for councils to lobby these larger governments to maintain and extend services in local areas. Lobbying is only likely to be effective if a good economic case can be drawn up – which requires an investment of time and expertise on council's part. Again, as the *State of the Regions* reports have documented, economic development may now involve local government initiatives outside the traditional areas of council responsibility. In both cases council funds will be called on, at the very least in order to document the case, and sometimes more substantially – nothing talks like putting your money where your mouth is.

A first requirement for generating funds for local initiatives is control of standard-array service expenditure, so that it does not run away with such funds as are available. This includes resistance to cost-shifting, but also requires a lively sense of priority. The second requirement is to exploit revenue-raising opportunities. We devote a final chapter to this.

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## 13. Sources of revenue for local government

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If councils are to maintain their standard array services and also to generate economic development through investment beyond the standard array, they need revenue. Local government CEOs and finance executives are fully aware of this, and are always on the look-out for sources of funds. This chapter is unlikely to tell them anything new, but is included as a check-list of the possible sources, with some of the arguments for and against each one.

As with our brief list of areas for expenditure review, we will endeavour to cover all sources of local government revenue systematically.

In local government, many sources of revenue are closely allied to particular expenditure purposes. This is most obviously the case for user charges, but also applies to many forms of grants. Indeed, rates themselves are an appropriate form of finance for some kinds of service, and much less for other kinds. In our discussion we will emphasise these relationships.

### 13.1 Specific purpose grants and revenue from contracts

The difference between a specific purpose grant and a service contract is one of degree. Where a contract is awarded, the council is specifically appointed to deliver a service that is the acknowledged responsibility of another level of government. The traditional example is where council is contracted to maintain arterial roads on behalf of the state. Specific purpose grants give greater range for local discretion. Sometimes the granting government acknowledges responsibility for the service concerned, but more often it is trying to encourage provision by subsidising council's own expenditure. Many councils are suspicious of these subsidies, since there is past experience of subsidies being withdrawn or inadequately indexed, leaving council to bear the cost of raised community expectations.

Two questions may be used to classify specific purpose grants.

- Is the grant for standard-array or innovative services?
- Is the grant for property related services or not?

For the purpose of the second question, a property-related service is one that tends to raise property values. The traditional list is local streets, local parks, waste management and the like, but local economic development also qualifies. Most of the services provided by local government that do not have much effect on property values are redistributive. These are services to meet particular needs of particular recipients. There may be user charges, but these do not recoup the whole cost of the service, usually because it is judged that the recipients are too poor to pay.

Aged care is a good example of a standard array, redistributive service. As noted in Chapter 12, there are good efficiency reasons for local government to deliver these services, but there are equally good tax-incidence arguments that it should not finance them. Briefly, if redistributive services are financed from rates, there is a risk that rich people will congregate in municipalities that provide good services for a low rate, while poor people are left to live in other municipalities that provide bad services for a high rate. In order to avoid this effect, it is desirable that such services should be financed from national taxation. If they are to be delivered by local government, a grant system is accordingly required. The argument for contracting service delivery to local government is that it is a local democratic institution, which is both responsible and well placed to deliver the service, either itself or by sub-contract. The alternative is for the spending government to administer the services directly, either providing them itself or contracting them out. Though an efficient service delivery system for aged care would probably direct all funds through local government, we in fact have a mixed system, reflecting the desire of the Commonwealth and states to deliver services directly, the lobbying of service providers and potential recipients, and the reluctance of some councils to become involved.

Where responsibility for a service is divided between a financing government and service providers (be they local governments or other agencies), there is inevitable friction between national standards and local responses. Councils must in the end acknowledge that they are spending money that they did not raise, and that national standards are appropriate, even when they are lower than the standard council itself would prefer. If a council provides redistributive services that are markedly better than national standard, it risks attracting a population of service recipients, and incurring expenditures which burden the rate and make it harder to attract business to the area.

Beyond national programs, local governments often have bright ideas for the better provision of redistributive services. Sometimes these can be financed from innovation grants from the state and Commonwealth governments and occasionally from philanthropic bodies. To gain such grants, council must apply, and in most cases present a developed proposal in competition with other applicants. Expenditure from any grants gained must accord with the purpose of the grant, and is generally subject to audit. Often the process is so costly that council finds it easier to finance the innovation from its own funds, but there is a good argument for persevering with applications for grants. These make it more likely that the innovation will be treated as part of general service development, and incorporated into the standards and financed by regular grants.

In the case of property-related standard-array services the arguments for grants are weaker, since it can be argued that property rates are a surrogate user charge. Though improving service quality will raise the rate, it will not necessarily cause ratepayers to sell up and move away, since they benefit from the services and this benefit is reflected by their property values. However, the standard array also includes services that are very dubious as enhancers of property values. An important example is local roads beyond those required for property access, some of which even depress local property values. The Commonwealth has acknowledged the case for grant finance and, in *Roads to Recovery*, has quite appropriately insisted on its right to be acknowledged as the funding agency.

What about innovative, property-related services? These are the very investments we are talking about as the basis for local economic development. As for innovations in the human services, sometimes special-purpose grants can be accessed, but a council which confines its innovations to those which can be grant-financed will inevitably fall behind in competition with those which take greater risks.

## **13.2 As-of-right grants**

Grants as-of-right are in principle effort neutral, in that councils do not have to apply for them or show cause why they should receive them. However, there may be other conditions, such as preparation of statistical returns, matching expenditure and audits. As-of-right grants have obvious advantages for councils, but the granting government is liable to complain that it bears the opprobrium for raising the taxes that finance the grant, without gaining any kudos from the expenditure.

It is only since 1975 that local government has received as-of-right grants from the Commonwealth. The grants have had a triple rationale:-

- horizontal equalisation;
- the general benefit of local government services; and
- the general inadequacy of the local government tax base.

The emphasis has been on horizontal equalisation. The need for equalisation arises partly from local government responsibility for redistributive services, and will tend to diminish the more the Commonwealth elects to finance these services through specific purpose grants. Again, to justify the program local government needs to continue to demonstrate that it is fully utilising its own tax base and capacity to raise user charges – a point reiterated by the recent House of Representatives report on *Rates and Taxes*. An important part in the continuing justification for grants is the importance of

horizontal equalisation grants as a source of funds for resource-poor councils, not only to help them maintain standard array services but as a source of funds for innovative investment.

The House of Representatives report devotes a substantial chapter to Commonwealth funding of local government (Chapter 6). The report supports the continued distribution of untied Commonwealth grants to local governing bodies on equalisation principles, that is, on the basis of need. Local government should heartily endorse this recommendation. The report also recommends that the different distribution methodologies employed by the seven state and territory local government grants commissions should be replaced by a single national model. This recommendation follows from the nature of horizontal equalisation, in the sense that it seems unfair that a council's equalisation entitlement should depend on what state it's in. However, the difficulties of devising an all-Australia distribution methodology that is fair to all councils should not be underestimated. The only certain outcome is that there will be losers as well as winners.

One cause for concern is that, following the perceived success of its methodology for allocating grants to private schools, the Commonwealth has developed an enthusiasm for socio-economic status (SES) as an indicator the capacity of ratepayers to pay local government taxes and charges. This indicator has the considerable merit of being available Australia-wide, whereas the property valuation data on which most of the grants commissions base their assessments is not comparable between states. However, SES is at best a measure of household ability to pay, and provides no indication of the rateable capacity of local business. A methodology that emphasises the SES of residents to the exclusion of other measures of ability to pay is guaranteed to increase the grants to councils that combine low-SES residential populations with high commercial and industrial rate bases.

### **13.3 Fees**

Councils may charge fees for various administrative services, such as dog registration, town planning permits and building and health inspections. Fees are in principle restricted to reasonable cost recovery – anything more than this would offend National Competition Policy if nothing else. In some jurisdictions competition policy has also exerted pressure to privatise services where fees can recover costs, for example, building inspections.

The House of Representatives inquiry found that fees are often set by state agencies that fail to index them to costs. This piece of disguised cost shifting calls for action by local government. However, even if fees can be properly indexed, it is not considered that this revenue source can be developed beyond basic cost-recovery.

### **13.4 Fines**

Councils may charge fines for offences against local regulations, including dog and other animal control offences, parking infringements and town planning infringements. Charges are again limited to what is reasonable, and as with fees may be capped by the state government. It is again important to ensure that fines are properly indexed, but even then there is not much scope for increased contributions to general revenue.

## 13.5 User charges

Many local government services lend themselves to partial, if not complete, cost-recovery through charges paid by individuals according to how much they use the service.

The scope for Councils to impose user charges is limited in four directions.

- ❑ User charges are not appropriate for all services, either because the beneficiaries are not identifiable (fire prevention, perhaps) or the cost of collecting user charges is prohibitive. The chief example of prohibitive collection costs is road use, though here technology is changing.
- ❑ A tradition of free use applies to roads, beaches, parks and various other community facilities. According to this tradition, it is unthinkable to attempt to collect user charges for local roads, parks and the like. Behind this unthinkability lie costs which are difficult to identify and quantify, but none the less serious, such as damage to community cohesion and the sense that the community welcomes tourists and other outsiders.
- ❑ Where there is community agreement that the full cost should be recovered from individual users, it is difficult to justify council involvement in providing the service, since private business can do the job. Competition policy strongly favours private provision where full cost recovery from user charges is feasible.
- ❑ Where there is community agreement that council should be involved in a service for which it is possible to impose user charges, the reason for council involvement is usually that the community wishes to provide the service with less than full cost recovery. These community wishes are then the major brake on user charges.

Where a service is to be provided but cannot be user-charged, there is no question that council should bear the cost, whether or not it contracts out the actual works. Where user charges are feasible but are not to cover the full cost, the choices are more complex. Councils must decide whether to provide the service themselves or contract out. If a council provides the service itself, it perforce collects the charges, and usually sets them, though for some grant-aided services the granting agency determines the user charges. If a council contracts the service out, it may choose to set the charges or may choose to let the contractor set them. In either case (though more likely in the former) it may require the contractor to remit the charges collected to the council account, in which case the user charges appear as council revenue. If the contractor is not required to remit the amounts collected, the user charges are off-budget, and the service is hard to distinguish from other community activities subsidised by local government. Different councils may approach the same service in different ways, and the same division of financial responsibility between the council and service users may be differently expressed in the accounts of different councils according to the administrative decisions they have taken. Once again, competition policy favours contracting out.

The boundary between user charges and rating is sometimes hazy, particularly as regards waste management. A flat-rate garbage collection charge has commonly been imposed, at least on urban residential properties, which is independent of the quantity of garbage generated, and hence closely resembles a tax. Another example is the car park where parking is free, but the cost is recovered from local businesses via a special rate.

For all services where it is possible to impose user charges, there may be an element of benefit to property-owners that justifies resort to partial rate finance. This element apart, the arguments for limiting cost recovery from user charges vary by service.

- ❑ For human, educational and recreational services, the arguments are usually that the service should be provided at less than full cost to enable low-income residents to use the service and to encourage all residents to do so – and sometimes, for recreational services, to encourage visitors, in the hope that they will patronise local businesses. Human services are frequently part-financed by Commonwealth (and less often state) grants that include limitations on user charges, sometimes to the extent of setting the charges to be imposed.



- ❑ Waste management has a compulsory aspect and a general community benefit which lead to the argument that strict user pays should be modified in accordance with ability to pay.
- ❑ Parking on council streets and in council car parks has often been exempt from user charges due to its strong service-to-property elements, including competition between businesses in different municipalities to attract car-borne customers.
- ❑ Roads have rarely been regarded as candidates for user charges, reflecting both established custom and the cost of collecting tolls. As the cost of collection of road user charges falls, and particularly if user charging becomes more common for roads, local governments that decide to maintain the tradition that roads should be free will increasingly have to defend their decision to do so. They may choose to rely on customary or service-to-property arguments, or possibly welfare arguments.

In addition to the general concession implied in setting user charges that do not recover full costs, councils may provide further concessions for particular groups. Except where these concessions are determined by another level of government that is providing funds, councils face the question of how much concession to provide for which groups. In making these decisions, councils must remember that, within a given budget, the more and deeper the concessions, the higher the charges to users not eligible for concession.

The obvious factors that should be taken into account when councils have freedom to set their charges and concessions are those that underlie the community demand that the service be provided at less than cost. Thus recreational services intended for children and youth may be provided at a concession for these groups, but not for adults. However, concessions are often provided as a matter of course, unrelated to the purpose of the service. The usual recipients are children and pensioners, but concessions are sometimes extended to students, health care card holders and seniors. The most common argument for this list is that it provides a rough-and-ready means-test. As with rate rebates, to be considered below, the inclusion of pensioners and seniors on the list involves providing concessions for a great many people who, though income-poor, are asset rich. Concessions are sometimes also extended to local residents as distinct from outsiders. In cases where it is desired to benefit locals, and the non-locals are mostly short-term visitors, it is not really necessary to provide a local resident concession, since discounted season tickets have the same effect.

Over the past couple of decades there has been considerable emphasis on local government exploiting opportunities for cost recovery from user charges. In many areas the push for user charging has reached a point of balance against service users' ability to pay, though judgements will always differ as to where this point lies for each service. The main areas where there may be scope for further developments are road user charges, including electronic tolls and parking charges.

## **13.6 Profits of council-owned businesses**

In former times, it was possible for councils to operate businesses that generated profits to subsidise council services. A typical example was a contracting business, which not only maintained council roads and drains, but contracted to other authorities (especially the state road authorities). Past examples have also included council enterprises in land development and quarrying. Competition policy and, perhaps, the Australia United States Free Trade Agreement, make it more difficult for councils to subsidise services from business profits.

The opportunities for cross-subsidisation depend on local government having access to opportunities for monopolistic behaviour, or to costs which are systematically lower than competing businesses. National Competition Policy has been directed towards removing these opportunities, and it is not considered that this revenue source can be further developed. This is not to deny that remote area councils will continue to operate businesses which in other parts of the country are run privately, but to note that these businesses are unlikely to make large profits.

### **13.7 Road and congestion pricing: Vehicle registration fees**

Technological developments involving electronic collection mean that it is now technically practical to collect user charges from the owners of vehicles using the roads. Such charges could prove extremely attractive to some councils. Consider, for example, a suburban council that wishes to reduce traffic on a shopping street. At present it would try traffic calming, but this hinders the traffic to the local shops, which the council wishes to encourage, as much as it hinders the through traffic the council wishes to discourage. An alternative measure, which happens to yield revenue, would be to toll through traffic. More generally, there is a strong economic case for congestion charges. Various cities round the world are experimenting with cordon charges and area charges in addition to distance-related tolls, all of which can be varied by time of day. The more these cities demonstrate benefits from the charges, the easier it will be to overcome the inevitable political objections.

Another area where road user charges may be applied is heavy vehicles. It is not possible to trace the movements of such vehicles, and compensate the owners for the particular roads they use. This would have to be a national scheme, compensated by reductions in fuel tax and heavy-vehicle registration fees, but local government would almost certainly be advantaged by such a scheme.

For most of the twentieth century a running battle took place between local residents, anxious to maintain the amenity of their streets and properties, and motorists, anxious to get from A to B as fast as possible. This battle is likely to continue over road pricing, and will probably be expressed as conflict between local councils and the metropolitan authorities – particularly the road authorities, but perhaps also the strategic town planners. There is a strong case for local government to be pro-active, for if it is not, the states are likely to monopolise the area – and collect all the revenue.

In the nineteenth century, and in Western Australia up to more recently, councils were responsible for vehicle registration and charged the relevant fees, but with motorisation they lost these fees to the states. A replacement could be a tax on privately-owned vehicle parking spaces, defended as a proxy user charge for roads. The tax would need to be matched by improved cost recovery from council car parking. Though there is obvious scope for development of vehicle parking fees and taxes as a source of road funds, two practical difficulties arise.

- ❑ Judging by current revenue patterns, it is easiest to raise revenue from parking in areas of high land value, in particular the capital cities. This limits potential revenue. In addition, there may be other claimants for the funds. In Melbourne, the state government has stepped in with an inner city parking tax, which it justifies as an appropriate source of revenue to finance public transport improvements.
- ❑ If parking taxes are to be imposed outside the inner cities, they cannot diverge between municipalities without tipping economic activity from one into another.

It is quite probable, therefore, that if parking charges increase much beyond present levels they will follow a similar trajectory to vehicle registrations and be taken over by the state and territory governments.

### **13.8 Developer charges**

The land-development industry was created by local government requirements that sub-dividers provide standard services as a condition of subdivision. Before that we merely had sub-dividers and speculators. Reflecting council requirements, drains and local streets in new subdivisions are generally built by the developer, while contributions in land, cash and kind may be required towards parks, arterial roads and other facilities. These costs are included in the developer's mark-up, and in general flow through into the purchaser's mortgage. When first introduced, developer charges raised serious equity concerns about the treatment of new and old properties in the same municipality, but they are now such an established custom that these concerns have evaporated. When developer charges are

paid in kind, they do not appear in the typical council revenue statement. In areas where development has been sluggish, councils may elect to forgo developer charges and pay the costs themselves as a development exercise, but they do not receive any horizontal equalisation grants for this.

Councils are now adept at imposing conditions on developers, and it is considered that there may not be much scope for further development of this source. Indeed, in the current climate of concern about the affordability of housing, local government has been accused of imposing costs that raise the price of suburban land. If it is satisfactory that new residents should bear the cost of all investments required to provide them with standard-array services, contributions to the amplification of local-government arterial roads and to services such as libraries would be required, but it has been difficult to exact them.

Competition policy has also resulted in some developments that are inefficient if not subjected to developer charges. For example, deregulation of the transport and marketing of bulk rural products such as grain has led to the establishment of new bulk terminals that require the upgrading of local roads. If developers were charged for all relevant road upgrades, they would site their facility so as to minimise this cost, but if they are not charged, they will seek cheap land and let local government bear the cost of changed traffic patterns.

### **13.9 Rates**

The classic local government revenue source is a rate imposed on property value. In addition to rates, it is possible that local government may be granted access to a wider range of taxes. Unfortunately, they cannot access sales taxes, since these are reserved for the Commonwealth. However, it would be possible for state governments to grant local government access to other areas of state taxation, and it is understood that Queensland has moved in this direction. A particularly interesting possibility – if inherently no more popular than rates – is a local payroll tax.

Nobody pretends that rates are popular: the political history of many a council can be written as a series of rate revolts. However, defenders of local democracy regard this as all very healthy. Ideally, voters choose their councillors to gain the best-value compromise between services and rates.

Somewhat less healthy is the way the New South Wales state government has cashed in on the unpopularity of rates by imposing rate pegging. This imposition was strongly criticised in the House of Representatives report. National Economics can but endorse the report's position that rate increases should be limited by local choice and not by state fiat.

Despite their unpopularity, rates are small beer, either in household budgets or by comparison with other taxes. At the household level, rates are typically around 2 per cent of expenditures, on a par with electricity bills. On average, rates absorb around 7 per cent of the annual value of housing (that is, the recurrent costs and the annual value of the capital invested). It should also be remembered that businesses pay around 20 per cent of the total rate bill in states that use unimproved value rating, and around 25 per cent in states that use improved values. The burden of rates on farmers is around 2.5 per cent of the value of their production, while the burden on other business is around 0.2 per cent of value added, with much lower compliance costs than are occasioned by the GST. In relation to total taxes, rates hover around 3 per cent. None of these figures suggests an impost that is likely to incite popular revolt. We have to look elsewhere for reasons for the unpopularity of rates.

## **13.10 The unpopularity of rates**

Unlike income tax and GST, there is no pay-as-you-go arrangement for rates. However, many councils try to ease the pain with pay-easy plans and the like, rates require specific payments that make people conscious of the amounts they are paying, and hence more likely to object to them. However, rates are not the only significant quarterly bill imposed on households. Psychologically, the rate notice is likely to be relatively acceptable if it is not too far out of line with other regular quarterly bills, like the electricity bill and the water/sewerage bill. Councils may find it a good idea to follow trends in these other billing industries, not only as to the amounts paid, but as to means of payment, including the offer of automatic deductions.

Rates also differ from income tax and GST in that they are imposed by readily-identifiable local councillors. Resentment against the total tax burden, imposed mainly by Commonwealth bureaucrats and politicians, can be expended on councillors simply because they are nearby and accessible. Resentment against rates can also be generated in the course of local politics. Not everybody wants the services that councils provide; not everybody feels that they are getting their moneys worth from their local municipality. The contrary argument is that most council services support and even increase property values, so a property tax is a fair way to finance them. This is particularly true for councils that finance services other than property-related services from grants and user charges.

A third source of rate resistance is the widespread furphy that income is the only acceptable tax base. This is a narrow version of the argument that taxes should be levied according to ability to pay – a broader version of the same argument concedes that possession of valuable property adds to ability to pay, whether or not the property yields cash-flow income. While it is broadly true that rates are a higher percentage of income for low-income households than high-income households, they are much less regressive when assessed in relation to household wealth rather than household income. Indeed, in view of the lack of general wealth taxation in Australia, and the leniency of capital gains taxation, rates contribute to equity between property owners and non-owners by ensuring that the former pay at least some tax.

Though there are strong arguments for the broader interpretation of ability to pay, the narrow version is a widespread belief, surfacing, for example, in claims that rates are regressive. It is common to hear it said that council sets the rate in accordance with residents' incomes, and only uses property values to distribute the rate burden across the municipality. A related approach is to decide how much a pensioner in a typical owner-occupied house can afford to pay, go on to set the general rate and hence the total budget and the services that can be provided.

## **13.11 Inability to pay rates**

The people who are most likely to resist rates on ability to pay grounds are those whose property does not yield cash flow from which to pay the rate. These fall into four broad groups.

### **13.11.1 Low-income owner-occupiers**

For the most part, low-income owners of valuable homes are retirees. Serious resentment can be aroused if a council is seen to be hounding somebody to sell their home in order to pay the rates. In theory these cases can be dealt with by rate deferment – the typical council rate is low enough, in comparison to property values, for rates to be deferred for the duration of a typical retirement and recouped either when the property is sold or from the owner's final estate. This provides fair treatment when ability to pay is given its broad definition, but has not satisfied pensioner home-owners who have persuaded state governments to apply the narrower definition and impose pensioner rate rebate schemes. In some states these schemes are state-financed, but there is a tendency to make local government bear the cost, thus shifting the rate burden from pensioners to other ratepayers. The equity

of these schemes is further compromised in that they do not benefit pensioner tenants in cases where the landlord pays the rates and they go into the rent, though admittedly the Age Pension has a supplement for renters.

Though rate rebates are established custom, the time is ripe for review. There has been generational change, and the current generation of retirees shows greater inclination to treat its houses as assets rather than castles. Mortgage debt is more widespread, and the typical household no longer spends its whole life in one house. In these changed circumstances there is a strong argument for reverting from rate rebates to rate deferral. The ageing of the population can only strengthen the argument for review.

### **13.11.2 Unprofitable businesses**

Unprofitable businesses constitute a second broad class of ratepayers whose ability to pay is low judged by income or cash flow. Public sympathy for farmers in this position is likely to be particularly strong when the lack of cash flow is due to drought or plunging market prices, but there is nothing much that most councils can do about this apart from curtailing expenditure, since all the farmers in the shire are likely to experience tough times at the same time, and these tough times will extend to the shire's urban property base as well. There is much less general sympathy for businesses that fail in the general course of competition. If these are unprofitable, they are expected to sell up and pay their rates and other debts.

### **13.11.3 Properties providing public services**

A third class of ratepayer with low cash flow in relation to property value, and with potential appeal to public sympathy, is the ratepayer who claims that he is using the property to provide a public service. Several types of potential ratepayer in this position have gained total exemption, notably schools and religious bodies. Others with potential claims are private conservation reserves and private recreational facilities, notably golf clubs. Sometimes a compromise is reached, whereby the rate is applied but the property is valued as restricted to its current use.

Another common case is where outer-suburban property is used for agricultural production, which yields cash flow considerably less than that implied by the property value. In these cases two claims may be made. First, a claim based on history: the land has been agricultural for generations, and the current generation should not be forced out of farming. Second, peri-urban farmland benefits the urban population by providing picturesque views, cleaner air and the like. It is common practice to strike an agricultural rate in such areas, lower than the general rate. Alternatively, the land may be valued as restricted to present use. It is, however, sometimes difficult to distinguish between genuine farmers and speculators.

In all these cases of land under-valuation, there is a strong argument for rate deferral rather than rate remission, so that, in the event of the land being converted to more intensive use, the council gets a share of the capital gain.

### **13.11.4 Land speculators**

Finally, property may be held without earning income for speculative reasons. There is not much public sympathy for this, and the argument for the allocative efficiency of rates comes into full play. Taxing an asset that would otherwise remain idle increases holding costs, and reduces the likelihood that the asset will be held idle rather than being put to its 'highest and best' use.

## **13.12 The virtues of rates**

In countering the argument that rates are regressive because they are not levied on income, we have encountered two of the positive virtues of rates as a local tax. These are that rates are consonant with a broad definition of ability to pay, and that they are an efficient tax. It is worth expanding on these points.

### **13.12.1 Rates and ability to pay**

The virtue of rates from an ability to pay point of view is that property ownership contributes to wealth, even if, as discussed above, it doesn't always yield cash income. A property-owner has advantages over a person of similar income and similar non-property assets who does not own property, and these advantages can be construed as ability to pay. From this point of view, the broader the definition of property included in rateable value, the better. In Australia the choice is between improved values (with variations between the states in detailed definition and nomenclature) and unimproved values (again with variations), but in other countries there have been attempts to broaden the definition further to include building contents, motor vehicles garaged and even financial assets. Such broadening converts the rate into a wealth tax, but is not practical for two reasons: it is easily evaded by wealthy persons shifting to low-tax municipalities, and bristles with practical difficulties in valuation (though insurance values provide a guide). There are also problems in the impact of such a broad definition on business.

### **13.12.2 Rates and efficiency**

The virtue of rates from an allocative efficiency point of view is broader than increasing holding charges to discourage land speculation. The case for rates and land value taxation that was established two centuries ago starts from the proposition that the nothing that any individual land-owner did created either the land or its value. In so far as land values derive from the inherent properties of the soil or from location (as is more important nowadays), the decisions of the owners do not affect the values. Since the owner's decisions do not create land value, a tax on land value is both justified as a tax on unearned wealth, and has no incentive effects. It is an ideal tax. For those with long memories, this was the message of the American Henry George more than a century ago.

The obvious objection to this argument is that portion of land value is due to improvements, which are very much at the discretion of the landowner. Hence the argument applies only to unimproved values. With this restriction, land taxes and rates may be contrasted with income taxes, which reduce the returns from income-earning effort and are thus a disincentive to work. The incentive effect of an unimproved value rate, on the other hand, is to push land use towards the 'highest and best' – that is, the most profitable use. Further, expected land taxes and rates are likely, in theory, to be capitalised into land values. Where land values are rising due to a speculative boom, and bringing totally undeserved wealth to sitting owners, increases in land taxes can, in theory, redirect some of the increase to public benefit. It is surprising that the recent revival of nineteenth-century economics that underpins competition policy did not include revival of the argument for heavy land taxes as an economically efficient and fair way of raising revenue.

### **13.12.3 Rates and benefit**

In the case of rates, the argument that land taxes are efficient and equitable is accentuated by the content of the local government service package. Here we move from ability to pay and allocative efficiency to the hoary benefit-principle justification of rates – that they are the obviously appropriate revenue source for those local government services that tend to raise land values. A simple version of this argument runs that the services raise land value; liability to pay rates reduces land value, and local

democracy allows ratepayers collectively to select the service/rate package that provides the biggest net land value increase. Putting it another way, the rate passes muster as a user charge for property-related services. The obvious property-related services are access roads, drainage, waste management, local parks and the like, but there have always been councillors who argued for broader definitions. In the nineteenth century the broader definition tended to include grand town halls, while in the twenty-first it recognises a wide range of economic development infrastructure and environmental preservation.

#### **13.12.4 Administrative advantages of rates**

Finally, as a local tax base, the rate base has the considerable virtue that property cannot get up and leave the jurisdiction in response to rate differences. Property cannot go offshore. Its owners are identifiable, and for the most part a fair market value can be established. It is a relatively simple tax, within the administrative competence of the least sophisticated local governments. Payment of rates can be enforced by the seizure and sale of delinquent property. (We exempt Aboriginal community councils from these remarks, because they do not have a rate base.)

Though property cannot move in response to rate differentials, councils are quick to point out that economic activity can migrate, the usual argument being that high rates will frighten development away. This is indeed a risk when rate revenue is used to finance redistributive services, but much less serious when rate payments are simply the quid pro quo for property services, and least serious when rates are imposed on unimproved values. Councils with a choice between unimproved and improved values as a rate base have to weigh this advantage against the closer alignment with ability to pay which results from improved-value rating.

#### **13.13 An assessment of rates**

Taken as a whole, there is a very strong case for rates as a source of finance for local property-related services, broadly defined to include economic development services and the payment of interest on loans raised to finance infrastructure investments. Those who think otherwise, and insist that income is the ideal tax base, may like to contemplate what would happen if councils were given power to levy income taxes. Unlike sales taxes, which are reserved for the Commonwealth under the constitution, local income taxes would be constitutional, and could be imposed if the states and the Commonwealth agreed. It would be quite practical for the Commonwealth to collect a small levy on top of its income tax base, determined by each local council, from residents of each municipality, and pay the result to the council. However, the distribution of the income tax base between council areas is at least as unequal as the distribution of the property tax base. As compared with the present system, by which the Commonwealth raises all income taxes and distributes portion to local government on effort neutral, horizontal equalisation principles, this arrangement would benefit municipalities with rich residents. This would be a step in the American direction, encouraging rich people to congregate in municipalities where they pay low taxes for quality services and leaving poor people to congregate in other municipalities where they pay high taxes for bad services.

In other words, Australia has a fundamentally sound system, with rates covering property-related services and grants covering other services. Councils' part of the tax bargain is that they should shoulder their fair share of government revenue-raising. Ideally, revenue raised should cover the property-related services demanded in each municipality, but in local government areas with below-average resources and above-average demands this revenue will require supplementation from horizontal equalisation grants.

## 13.14 Rates and values

At a more practical level, the various local government acts require that rates be imposed on property value as determined by state government valuers or by private valuers audited by the state government. Variations include the following.

### 13.14.1 Exemptions

The list of exempt properties varies by state. In general, land used for transport, defence, education, public recreation and religious purposes is exempt. The exemption list is a grievance to some councils, but competition policy has improved the position by removing the rate exemption previously enjoyed by government business undertakings. The major exception is the railways – but as shires in the grain districts are learning, the railways have a subsidy claim based on reducing road maintenance costs.

There are councils, mainly Aboriginal community councils, which cannot impose rates because all properties in the council area are exempt and/or have no market value and/or no ownership distinct from the community. Such councils tend to depend on grants for most of their revenue. Attempts to introduce community charges in lieu of rates tend to flounder on low resident incomes, and the House of Representatives report recognises that such councils will remain a major target for horizontal equalisation for some time to come.

### 13.14.2 Valuation methodology

Choice of valuation methodology is available in some states. We have already rehearsed the merits of improved (capital improved) values as an approximation for wealth, and the contrasting merits of unimproved (site) values from the point of view of allocative efficiency and the benefit principle. The incidence of rates on rental values (net annual value) comes close to improved values, but has the merit of relating rates to the expected annual earnings of the property – an advantage that is obvious in areas of widespread landlord ownership. In practical cases where a choice must be made the arguments are likely to be less theoretical, and revolve more around incidence. A shift from unimproved to improved values increases the rates to be paid by the owners of properties with above-average improvements in relation to underlying land value, and as noted above tends to shift the rate burden away from residential and rural properties towards industrial and (even more) commercial properties.

The choice of rate base is likely to affect the distribution of the rate burden between residential and business ratepayers. The effect will differ municipality by municipality, but the general trend is that, under unimproved value rating, residential and rural properties pay more than under improved value rating, and non-farm businesses pay less. This is illustrated for Victoria in Table 13.1.

Table 13.1 derives from the Victorian Valuer General's requirement that all properties should be valued according to three principles. The Victorian definition of site value is similar to the unimproved value used in other states, the major difference being that it does not attempt to return the land to its original pre-settlement condition. Capital improved value is a standard improved value concept, while net annual value is a rental value related to the gross rental value used in Western Australia. It will be noted that residential and rural properties account for a lower proportion of total state value under CIV and even more under NAV than they do using site values. NAV rating is particularly good at shifting the rate burden from households to commercial businesses, which may account for its unpopularity with business-dominated councils. Estimates are provided for 2000 and 2001, and, even though they are only a year apart, they illustrate how the combination of a land boom with relative industrial and rural depression shifted values out of industrial and rural land into residential and commercial land.



**Table 13.1 Land value by land use, Victoria, 2000 and 2001 (per cent)**

Land use	SV		CIV		NAV	
	2000	2001	2000	2001	2000	2001
Residential	78.0	78.2	73.9	74.4	65.9	66.5
Commercial	7.6	7.8	11.6	11.9	17.4	17.6
Industrial	4.0	3.9	6.1	5.0	9.2	9.2
Rural	9.8	9.4	7.8	7.1	6.9	6.2
Other	0.7	0.7	0.6	0.5	0.6	0.5
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Note: SV = Site Value, CIV = Capital Improved Value, NAV = Net Annual Value.

Source: Victoria Grants Commission

In Western Australia different valuation methodologies are prescribed for urban, rural and mining properties. Each council has to make a conscious decision as to the rate to be set for each class of property. In other states and territories, councils may be able to set different rates by property type.

Councils may be able to vary the rate by district within the LGA. This may include a very useful power to impose rate levies in defined areas benefited by particular public works or services.

### 13.14.3 Minimum rates

Councils may be able to prescribe a minimum rate per property. Some councils set this minimum rate so high in relation to the multiplicand of the struck rate and property values that most owners are paying a per-property charge rather than a rate on the value of property. This increases the share of the rate burden borne by owners of low-value properties, to the benefit of the owners of high-value properties, and is usually defended on the grounds that council services benefit property-owners more or less equally. This argument has some affinity with the argument for the poll tax imposed by the Thatcher government in England, with the difference that the tax is imposed per property rather than per person. Both the poll tax and the per-property charge are difficult to defend on ability-to-pay grounds, hence the resort to benefit arguments. However, in economic theory there is a strong inference that the benefit from council services is capitalised into land values, in which case it is difficult to maintain the argument that council services benefit all properties equally. Rather, they benefit properties in proportion to value, hence the justification for the rate. It must, however, be admitted that so many factors influence land values that it is difficult in practice to determine the local service contribution – save to note that minimal local services are essential. A property without road or street access can have no market value apart from the value of the property in which it is embedded. We conclude that charging a high minimum rate offends against the ability to pay argument for local taxation, and is difficult to justify from the benefit principle.

### 13.14.4 Changes in the pattern of values

Despite the virtues of land values as a general local tax base, transitional problems can arise when the market changes some values without changing others. We have already alluded to the problems that arise on urban fringes as land is converted to rural residential or fully urban use: should there be rate concessions to support continuing agricultural use? (We argued that the rates should be deferred). Trouble can also arise when a land boom raises the values of some properties rather than others. Since land booms generally raise values district by district rather than property by property, this is not necessarily a problem for councils: if all properties in the municipality go up by roughly the same amount, the rate can go down and ratepayers are left making their customary contributions. However,

land booms that raise values in one district rather than another have created problems for the local government grants commissions in assessing revenue-raising capacity for horizontal equalisation purposes.

### **13.15 Water rights and land values**

A recent case of unexpected change in values has arisen with the moves to split the value of irrigation water rights from the underlying land value. Strictly speaking, this should not affect the unimproved value of the properties concerned, though it will reduce both improved values and total district cash flows. In practice, it is quite likely that some of the water-right value has crept into the unimproved values of properties with irrigation available.

The separation of land and water rights has been hailed as a win-win way of buying out farmers in regions where total water rights are over-committed. Farmers who want more water can buy it, and farmers who want to quit receive a golden handshake. However, the moral position is more complex.

- ❑ There is variation from district to district in the extent to which farmers and their forbears paid for the irrigation scheme, and therefore in the extent to which farmers can claim that they own the water rights. The typical irrigation scheme was constructed in the first half of the twentieth century, and paid for out of loans that were technically repaid from water charges, but in fact lost most of their value due to inflation. One can argue that most water rights were created at the expense of anonymous bondholders.
- ❑ However, it certainly is not the fault of the farmers concerned that water rights were over-allocated. The states bear this responsibility, and the Commonwealth too, since it was heavily involved in the expansion of irrigation during the soldier-settler era.
- ❑ A patchwork pattern of sell-outs will raise the costs of scheme operation for those who remain. (This is an example of the geographically inefficient patterns that can be generated by land markets where events in each owner's life cycle are more important in precipitating sale than considerations of current profitability. Another example is the patchwork penetration of the Western District of Victoria by blue gum plantations.)
- ❑ Investment in the district is not confined to farmers, but includes investments in local towns, which fall in value as land is converted from wet to dry farming.
- ❑ Local council revenues likewise fall as land converts. If the pattern of sell-outs is patchy, there is not always a complementary opportunity to cut road and other service costs.

At the very least, there is a case for local government to receive a share of the revenue generated from selling water rights, by taxing the sale of the rights. Farmers selling out would thus contribute to the adjustment costs of district residents who remain.

### **13.16 Conclusion**

Like state revenue sources, local government revenue sources are limited by the constitution. They are further narrowed down by state policy. However, they are not completely restrictive. Despite their unpopularity, rates are a fair source of revenue for services to property. Economic development tends to raise property values, and is hence a service to property that can appropriately be financed from rates. When all the grant applications fail there is a strong argument to call on the rate base – either directly, or, as explained in last year's *State of the Regions report*, as a source of revenue which can be used to underpin loan-financed investment.

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## Glossary

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**ADSL:** Asymmetric digital subscriber line. ADSL is one of a family of DSL technologies that are capable of transforming phone lines (copper networks) into high-speed digital lines. ADSL enables simultaneous voice and data transmission (for example, for voice telephony). ADSL is asymmetric in that it utilises most of a channel to transmit downstream to the user and only a small part to receive from the user.

**ATM:** An ultra-high-speed data transmission protocol which may be run over ADSL.

**Allocation:** The division of the radio spectrum bands of frequencies dedicated to particular services, as documented in the Australian Radiofrequency Spectrum Plan

**Bandwidth:** The range of frequencies, expressed in hertz (Hz), over which a spectrum user can transmit or receive radio signals. In general, the greater the bandwidth the more information that can be sent through the spectrum in a given amount of time.

**Bluetooth:** A short-range (10 to 100 metres), low-power radio technology that allows wireless communication between devices such as mobile handsets and computers.

**Broadband:** Broadband refers to information transmission speed and capacity.

**CDMA:** Code Division Multiple Access. A second-generation (2G) digital cellular mobile phone technology that uses spread spectrum techniques to transmit coded signals across several channels, rather than allocating each signal to an individual channel.

**CDMA 2000:** Code Division Multiple Access 2000. A standard for third generation (3G) mobile phone technology that employs advanced spread spectrum techniques.

**Cellular:** A mobile communications service using cells that are each served by a base station transmitter, and connected to a switching exchange that is connected to the fixed network. It allows frequency re-use across the service area and greater frequency use intensity than conventional mobile phone coverage.

**Congestion:** Too many spectrum users crowding into the same frequencies in the same location. Congestion can cause interference that reduces effective communication.

**Convergence:** The ability of similar types of information to be transmitted using different platforms and different radio frequencies.

**DSLAM (Digital Subscriber Line Access Multiplexer):** A device at the DSL provider end of the communication, which takes a number of ADSL subscriber lines and concentrates them to a single ATM line.

**DSL (Digital Subscriber Line)** is a system that provides subscribers with continuous, uninterrupted connections to the Internet over existing telephone lines.

**Frequency:** The number of complete cycles or waves per second, as measured in cycles per second or hertz (Hz).

**FDMA:** Frequency division multiple access. An analogue technique that increases the intensity of spectrum use by splitting a single channel (allowing one signal) into a number of sub-channels (each supporting one signal).

**GPRS:** General packet radio service. A packet-based data technology for cellular mobile phones that overlays global system for mobile (GSM) networks and supports data transmission rates up to 114 kilobits per second.

**GSM:** Global system for mobile. A second-generation (2G) digital cellular mobile technology based on time division multiple access (TDMA).

**Hz:** Hertz. A unit of frequency, equal to one cycle per second. A kilohertz (KHz) equals one thousand hertz. A megahertz (MHz) equals one million hertz. A gigahertz (GHz) equals one billion hertz.

**Interference:** The effect of unwanted energy colliding with transmitted signals. Interference can arise from artificial sources (for example, two or more radio signals colliding) or natural sources (for example, lightning). Interference is a negative externality.

**ISDN:** Integrated services digital network. A set of standards for digital transmission over copper wire and other platforms using a circuit-switched technology to allow both voice and data over the same network.

**Local Loop:** The local loop refers to a pair of wires, twisted for the entire length between the telephone company's end office and the user's telephone, thus forming a loop. ULL refers to the unbundled local loop.

**Last mile:** The last mile refers to the final stage in the connection from individual homes and businesses to broadband.

**LMDS:** Local multipoint distribution system. A terrestrial radio system using radio frequencies of around 25 to 40 gigahertz to provide interactive video, Internet and voice services (usually limited to customers residing within a 3 km radius of a transmission tower).

**MDS:** Multipoint Distribution Station. One-way radio services operating from a fixed location and generally transmitting to multiple receiving facilities at fixed locations, generally used for terrestrial broadcasting.

**MMDS:** Multichannel multipoint distribution system. A terrestrial radio system utilising radio frequencies between 2 and 3 gigahertz that is used for television broadcasting and increasingly for two-way, high-speed Internet access (usually limited to customers within a 50 km radius of the transmission tower).

**Platforms:** The type of system or network used to transmit communications, for example, platforms transmitted over copper wire, HFC cable, fibre optic cable, terrestrial microwave and satellites.

**Point-to- multipoint services:** Wide area services that transmit signals from a central distribution point to multiple fixed points (for example broadcasting transmitters, LDMS, MMDS, and mobile services).

**POTS (Plain Old Telephone Service):** POTS is the only name recognized around the world for basic analog telephone service.

**Propagation:** The area or distance of 'service coverage' that can be achieved from a transmitting device. The propagation of radio signals depends on factors including the communications equipment, power, time of day, time of year, solar activity and topography and weather conditions.

**Protocol:** Protocol is a formal description of message formats and the rules two computers must follow to exchange those messages. Protocols can describe low-level details of machine-to-machine interfaces (e.g., the order in which bits and bytes are sent across wire) or high-level exchanges between application programs (e.g., the way in which two programs transfer a file across the Internet).

**Radio-frequency spectrum:** Part of the electromagnetic spectrum, currently defined as the subset of frequencies between 3000 hertz (Hz) and 300 gigahertz.

**Spectrum:** The set of all frequencies (or electromagnetic waves) produced in the electric and magnetic fields. Spectrum can be defined according to frequency, space and time.

**Spectrum licence:** A licence authorising the use of spectrum space for any device from any site within that space, subject to the conditions of the licence and relevant technical regulations. They are issued for a fixed, non-renewable term and may be subdivided, combined and traded.

**Spread spectrum:** A digital technique that combines FDMA and TDMA technologies to allow many users to occupy several channels at the same time. Signals are distributed (or spread) over the whole range of channels and each user is assigned a unique code that differentiates it from other users simultaneously carried over the same spectrum (for example CDMA technology).

**TDMA:** Time division multiple access. A digital technique used to increase the intensity of spectrum use. TDMA splits a single channel (allowing one subscriber) into eight time slots (each supporting one subscriber).

**VDSL (Very-high-data Digital Subscriber Line):** VDSL or VADSL is a developing technology that promises much higher data rates over relatively short distances. It's thought that VDSL may emerge somewhat after ADSL is widely deployed and co-exist with it.

**WCDMA:** Wideband Code Division Multiple Access. A standard for third generation (3G) mobile technology that employs advanced spread spectrum techniques.

**Wide area services:** See point-to-multipoint services.

**Wi-Fi:** The standard commonly given to 802.11b devices that interoperate under testing by the Institute of Electrical and Electronic Engineers (IEEE).

**Wireless LAN:** Wireless local area networks (LANs) using the 802.11 standard are primarily provided in offices as an alternative or extension to a wire-line LAN. Wireless LANs can connect computers, printers, palm pilots and other equipment without the need for network cables.

**WLL:** Wireless local loop refers to the use of radio access technology to link a customer to a local exchange or service provider. WLL is now used interchangeably with 'wireless access', which the ITU defines simply as "End-user radio connection to a core network." A range of technologies can be used to provide WLL.

**2G mobile:** Second generation mobile. Mobile phone technologies that provide voice and low speed Internet access, using digital voice encoding and a mixture of circuit-switching and packet-switching techniques that support data transmission rates around 9.6 kbps (for example, GSM and CDMA).

**2.5G mobile:** 2.5 generation mobile. An evolutionary cellular mobile technology on the way to third generation (3G) mobile, using packet-switching techniques that can support data transmission rates up to 384 kbps (for example, GPRS and EDGE).

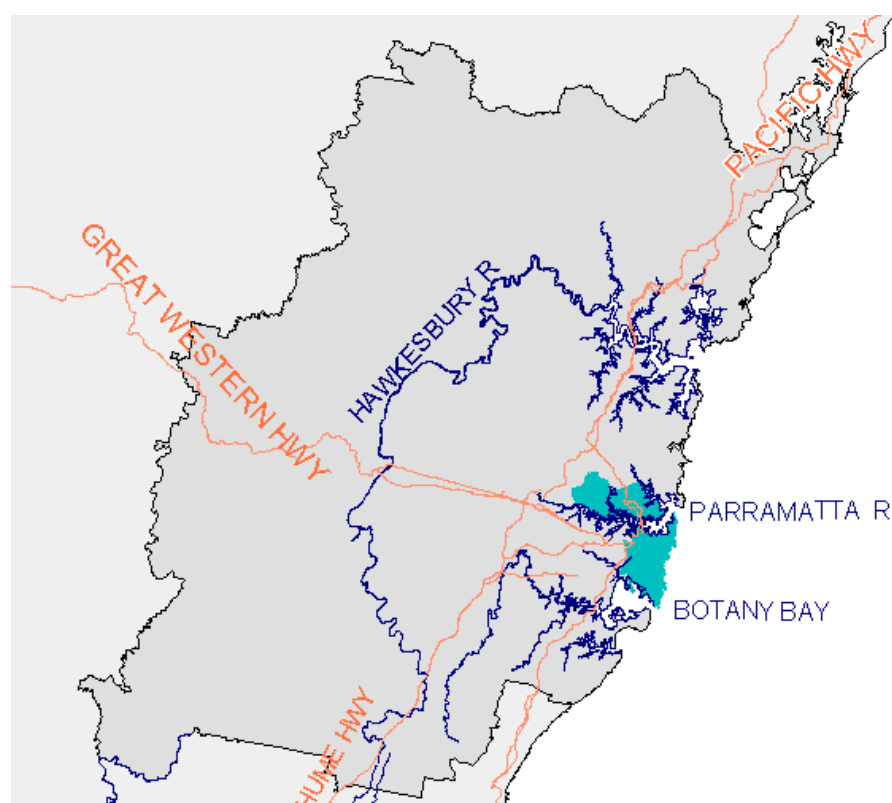
**3G mobile:** Third generation mobile. An emerging cellular mobile technology employing more advanced digital switching technologies than 2G and 2.5G mobile systems. 3G technologies include WCDMA and CDMA2000 and offer the prospect of data transmission rates up to 2 Mbps.



# **APPENDIX 1**

## **REGIONAL INDICATORS**

# Global Sydney



Global Sydney comprises the CBD, the inner North Shore, the eastern suburbs and the inner southern suburbs. The inner North Shore includes a spine of city-centre activity along the ridge from North Sydney to Chatswood, and otherwise comprises high-status suburbs. The eastern suburbs are nearly all high-status and include many areas with high dwelling densities. Some of the inner southern suburbs are still low status, but at high-status land values and with office invasion proceeding. The port has been moved from its proximity to the city centre, but is still within the region, sharing a crowded site with the airport. Global Sydney is Australia's provider of central city services par excellence.

## Major centres:

Sydney, Chatswood, Bondi Junction

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	669,747		687,856		720,957		-0.0
No. households	277,527		295,115		332,690		3.0
Workforce	372,241	55.6	363,113	52.8	398,696	55.3	2.4
Employment	350,376	–	349,660	–	386,612	–	2.5
Unemployment	21,866	5.9	13,454	3.7	12,085	3.0	-2.6
DEET U/E	16,277	4.4	12,740	3.5	15,329	3.8	4.7
Structural U/E, % population <sup>1</sup>	30,135	6.7	26,446	5.6	25,968	5.0	-0.5

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	13,744	18,517	18,211	26,476	21,279	29,516	8.1
Taxes paid	4,811	6,481	6,644	9,659	7,976	11,063	9.3
GST paid	830	1,118	1,303	1,894	1,757	2,437	–
Benefits	1,067	1,438	1,103	1,604	1,287	1,785	3.7
Business income	2,162	2,912	2,341	3,404	3,028	4,200	6.3
Interest/dividends	1,479	1,992	2,074	3,015	2,109	2,925	6.6
Interest paid	644	868	788	1,146	1,490	2,066	15.6
Net property income	725	976	839	1,219	665	923	-\$54
Net flow of funds	12,891	17,368	15,833	23,018	17,145	23,781	5.4
Rank		3		2		2	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.5	38
Population growth rate, 55+	21.8	1
% Years growing since 1995	86	24
Fertility, babies % pop, 2004	1.38	13
Fertility bounce, 1996-2004	0.20	1
Family / Youth migration	10.2	2
Aged migration	6.2	8
Working elderly	32.8	7
Demographic stress	24	20
Dominant locations	100	1
<b>Sustainability score</b>	<b>70</b>	<b>8</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Sydney	90.3	1
Least sustainable LGA – Waverley	45.0	390

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.23	28	14,828
New medium density and alterations	6.95	2	19,698
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.43	2.35	-0.08
Household size rank	62	63	52

	Pop.		
	New pop.	Existing pop.	conversion
Dwelling use	5,492	9,336	37.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	41.0	29.2	3
Computer use (%)	52.7	43.8	5
Ratio	77.9	66.5	1
Rank diff, net / computer	2	0	18
Estimated internet use (%)	38.8	29.2	3
Take-up surplus / shortfall	2.2	0	6
Av. household income, 2001	63,016	49,086	2

## ADSL COVERAGE

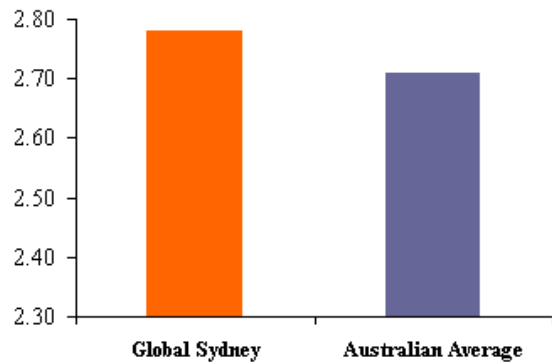
	Rate	Aust. Average	Rank
Coverage, % pop	100.0	90.4	Eq 1
Number of exchanges	27		
Number exchanges enabled	27		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.4	2.7	60
Lowest (%)	100.0		
Highest (%)	100.0		
% children	100.0	89.6	Eq 1
% of area covered	100.0	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.781	1	
Staging leaders (%)	9.083	2	6,198
Expected broadband (%)	49.9	1	34,039
Export elasticity (%)	4.13	55	2,824
Export x coverage (%)	0.00	59	0
Leaders lost (%)	0.00	59	0

### Expected E-staging Level

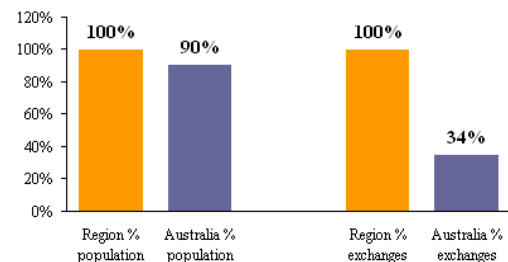


## BABY BOUNCE

	Per cent	Rank
1996	1.06	62
2001	1.13	61
2002	1.11	56
2003	1.14	50
2004	1.18	48
Bounce 2003-04	0.04	19
Actual change 2003-04 (number)	310	10

### Global Sydney

#### ADSL Coverage



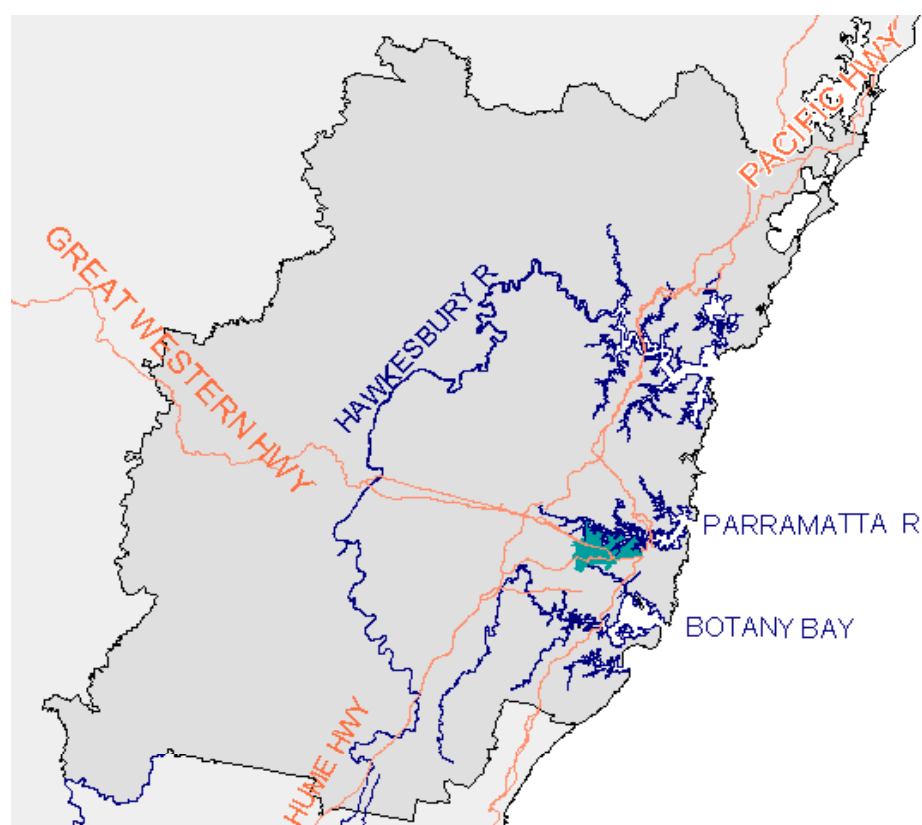
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.66	0.91
Long term Newstart	0.77	1.38
Total Newstart	1.42	2.29
Mature Age Allowance	0.06	0.11
Disability Support (DSP)	2.14	3.42
DSP, aged under 25	0.11	0.22
Youth unemployment	0.17	0.47
Parenting Payment Single (PPS)	0.86	2.25
PPS, aged under 25	0.08	0.29

	Social Security % NFOF	Rank
1999	8.28	2
2001	6.97	2
2003	7.45	2
2004	7.76	2
2005	7.51	1

## Sydney Inner West



The Inner West of Sydney comprises a group of suburbs immediately west of the CBD, south of the Harbour, and east of the north-south belt of cemeteries and former industries which now houses Olympic Park. Though it had its share of port functions and manufacturing, the Inner West was not as intensely devoted to manufacturing as the LGAs to its immediate south. Leichhardt has high residential densities because it was originally developed when walking was the main means of transport. By contrast, Strathfield was originally developed with large lots for mansions. The region has gentrified and gained a modest overflow of central city functions from Global Sydney.

### Major centres:

Burwood

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	220,061		226,789		234,991		0.9
No. households	85,478		90,157		99,975		2.6
Workforce	116,878	53.0	135,056	57.6	133,847	57.0	-0.2
Employment	110,487	–	130,359	–	130,338	–	0.0
Unemployment	6,392	5.5	4,696	3.5	3,509	2.6	-7.0
DEET U/E	3,312	2.8	3,780	2.8	5,245	3.9	8.5
Structural U/E, % population <sup>1</sup>	10,943	7.5	10,059	6.6	9,482	5.8	-1.5

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	3,779	18,189	4,964	21,889	5,724	24,360	5.0
Taxes paid	1,207	5,807	1,552	6,843	1,936	8,237	6.0
GST paid	204	984	371	1,635	466	1,982	–
Benefits	429	2,063	447	1,973	528	2,246	1.4
Business income	569	2,739	585	2,580	751	3,195	2.6
Interest/dividends	204	980	312	1,375	336	1,429	6.5
Interest paid	246	1,182	326	1,438	540	2,300	11.7
Net property income	114	548	102	448	67	284	-\$264
Net flow of funds	3,438	16,546	4,161	18,347	4,464	18,995	2.3
Rank		4		4		7	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	76.5	27
Population growth rate, 55+	6.1	17
% Years growing since 1995	81	34
Fertility, babies % pop, 2004	1.22	34
Fertility bounce, 1996-2004	0.08	6
Family / Youth migration	5.3	7
Aged migration	5.0	17
Working elderly	26.2	38
Demographic stress	32	7
Dominant locations	100	1
<b>Sustainability score</b>	<b>69</b>	<b>11</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Concord	78.2	26
Least sustainable LGA – Ashfield	44.6	393

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.96	16	5,173
New medium density and alterations	6.77	3	5,875
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.61	2.54	-0.07
Household size rank	49	55	50

	New pop.	Existing pop.	Pop. conversion
Dwelling use	2,585	2,589	50.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	36.4	29.2	8
Computer use (%)	48.6	43.8	8
Ratio	74.9	66.5	4
Rank diff, net / computer	0	0	27
Estimated internet use (%)	35.1	29.2	7
Take-up surplus / shortfall	1.3	0	13
Av. household income, 2001	61,259	49,086	5

## ADSL COVERAGE

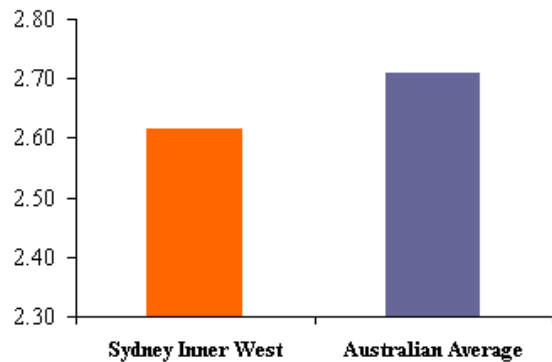
	Rate	Aust. Average	Rank
Coverage, % pop	100.0	90.4	Eq 1
Number of exchanges	9		
Number exchanges enabled	9		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.4	2.7	58
Lowest (%)	100.0		
Highest (%)	100.0		
% children	100.0	89.6	Eq 1
% of area covered	99.7	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.616	10
Staging leaders (%)	6.816	20
Expected broadband (%)	42.9	15
Export elasticity (%)	4.03	59
Export x coverage (%)	0.00	59
Leaders lost (%)	0.00	59

### Expected E-staging Level

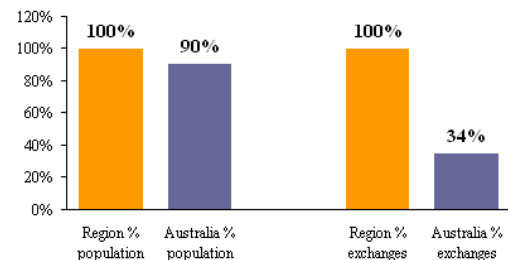


## BABY BOUNCE

	Per cent	Rank
1996	1.14	58
2001	1.15	58
2002	1.20	42
2003	1.19	38
2004	1.23	31
Bounce 2003-04	0.04	18
Actual change 2003-04 (number)	118	24

### Sydney Inner West

#### ADSL Coverage



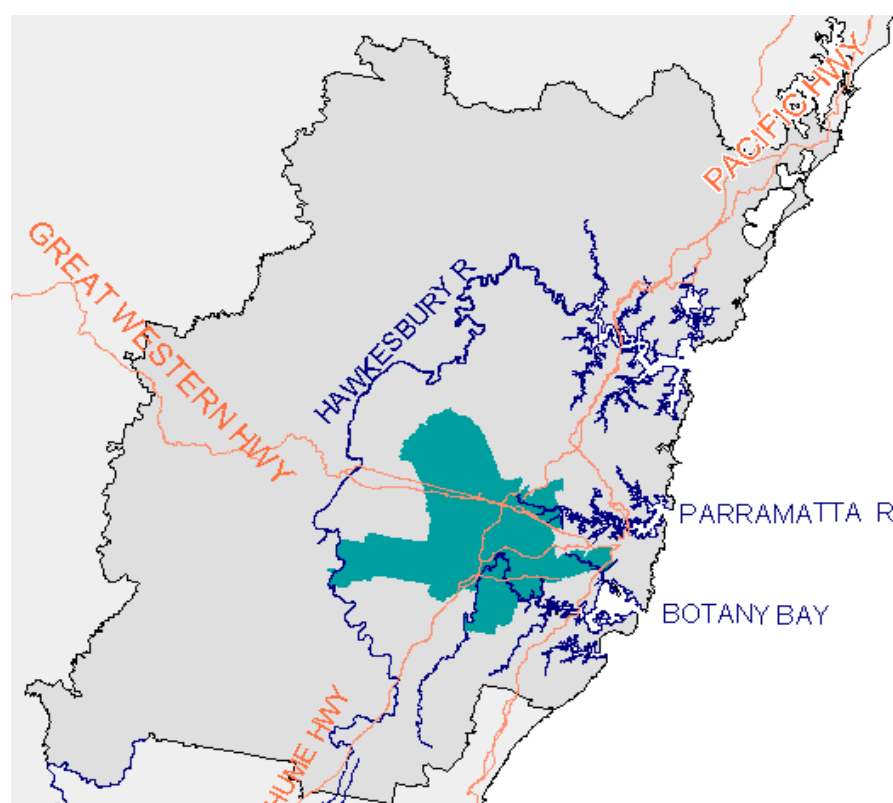
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.68	0.91
Long term Newstart	0.84	1.38
Total Newstart	1.52	2.29
Mature Age Allowance	0.07	0.11
Disability Support (DSP)	2.32	3.42
DSP, aged under 25	0.13	0.22
Youth unemployment	0.17	0.47
Parenting Payment Single (PPS)	1.06	2.25
PPS, aged under 25	0.10	0.29

	Social Security % NFOF	Rank
1999	12.47	7
2001	10.75	5
2003	11.74	5
2004	11.94	5
2005	11.82	5

## Sydney Mid West



The Mid West of Sydney is a large region, stretching west from Marrickville, and including several important urban centres which are important centres of retailing. There has been some office development particularly in Parramatta. Dates of urbanisation range from the nineteenth century to the late twentieth, but socio-economic status runs middle to low throughout, with considerable ethnic diversity. The region includes a number of important manufacturing areas, but also generates considerable commuter traffic to Global Sydney.

### Major centres:

Bankstown, Parramatta, Liverpool, Blacktown

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	1,248,053		1,294,904		1,333,689		0.7
No. households	407,518		432,908		460,215		1.5
Workforce	597,890	47.8	625,379	48.3	638,172	47.9	0.5
Employment	533,497	–	561,808	–	584,886	–	1.0
Unemployment	64,393	10.8	63,570	10.2	53,285	8.3	-4.3
DEET U/E	53,579	9.3	41,279	6.7	38,743	6.2	-1.6
Structural U/E, % population <sup>1</sup>	95,010	12.1	99,492	12.2	94,884	11.0	-1.2

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	15,580	12,360	18,090	13,970	20,419	15,310	3.6
Taxes paid	4,234	3,359	4,454	3,439	5,522	4,140	3.5
GST paid	1,054	836	1,590	1,228	1,955	1,466	–
Benefits	3,162	2,509	3,484	2,691	4,220	3,164	3.9
Business income	1,932	1,533	1,927	1,488	2,441	1,830	3.0
Interest/dividends	348	276	468	362	530	398	6.3
Interest paid	1,324	1,050	1,761	1,360	2,647	1,984	11.2
Net property income	159	126	14	10	-103	-77	-\$204
Net flow of funds	14,570	11,559	16,178	12,493	17,384	13,034	2.0
Rank		43		43		59	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	80.1	17
Population growth rate, 55+	6.4	15
% Years growing since 1995	77	43
Fertility, babies % pop, 2004	1.56	5
Fertility bounce, 1996-2004	0.00	10
Family / Youth migration	3.2	18
Aged migration	3.7	51
Working elderly	22.2	51
Demographic stress	27	15
Dominant locations	100	1
<b>Sustainability score</b>	<b>64</b>	<b>19</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Liverpool	83.8	6
Least sustainable LGA – Marrickville	42.7	414

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	3.73	43	15,513
New medium density and alterations	3.97	8	16,513
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	3.11	3.07	-0.04
Household size rank	3	3	25

	New pop.	Existing pop.	Pop. conversion
Dwelling use	10,050	5,463	64.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	25.1	29.2	29
Computer use (%)	37.4	43.8	47
Ratio	67.1	66.5	14
Rank diff, net / computer	18	0	1
Estimated internet use (%)	24.0	29.2	39
Take-up surplus / shortfall	1.1	0	15
Av. household income, 2001	51,116	49,086	16

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	99.6	90.4	Eq 1
Number of exchanges	37		
Number exchanges enabled	34		
% of exchanges enabled	91.9	34.3	10
Number HIBIS exchanges	1		
Exchanges per 10,000 pop.	0.3	2.7	63
Lowest (%)	98.6		
Highest (%)	100.0		
% children	99.6	89.6	Eq 1
% of area covered	87.3	1.2	10

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.609	12	
Staging leaders (%)	7.393	11	4,199
Expected broadband (%)	43.0	14	24,423
Export elasticity (%)	4.49	36	2,553
Export x coverage (%)	0.02	54	10
Leaders lost (%)	0.03	54	17

### Expected E-staging Level

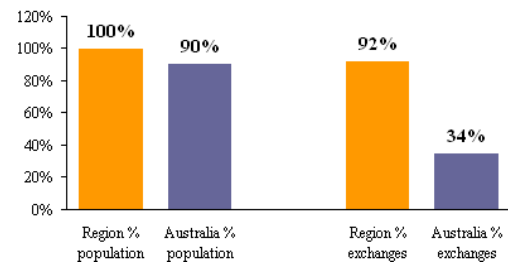


## BABY BOUNCE

	Per cent	Rank
1996	1.56	14
2001	1.50	14
2002	1.53	6
2003	1.54	6
2004	1.56	5
Bounce 2003-04	0.02	30
Actual change 2003-04 (number)	491	3

### Sydney Mid West

#### ADSL Coverage



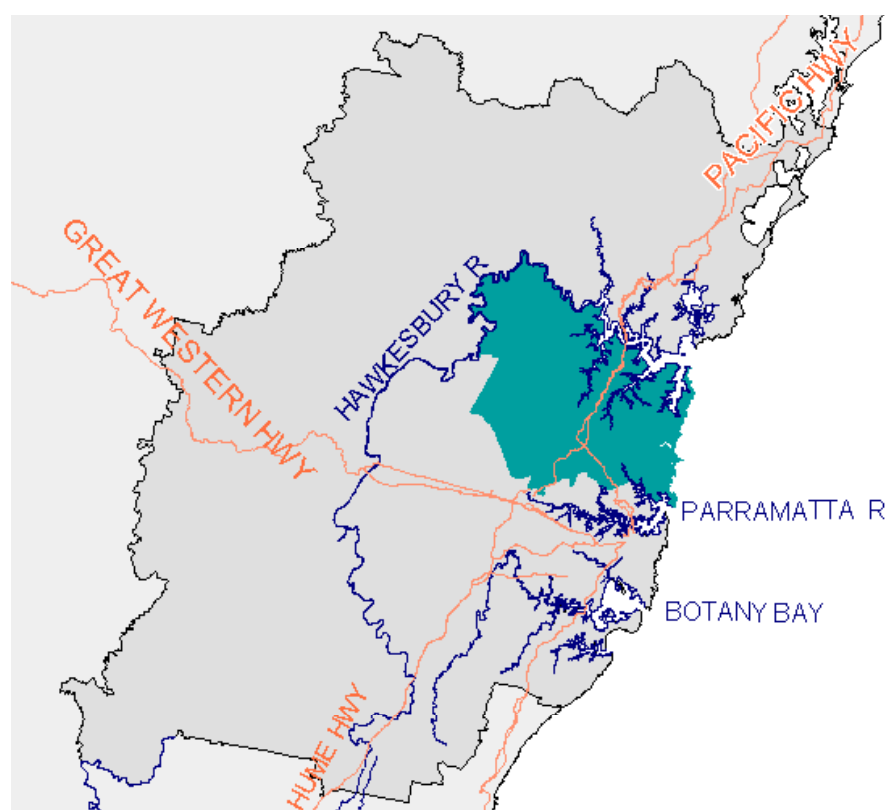
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.19	0.91
Long term Newstart	1.60	1.38
Total Newstart	2.78	2.29
Mature Age Allowance	0.10	0.11
Disability Support (DSP)	3.39	3.42
DSP, aged under 25	0.20	0.22
Youth unemployment	0.48	0.47
Parenting Payment Single (PPS)	2.50	2.25
PPS, aged under 25	0.30	0.29

	Social Security % NFOF	Rank
1999	21.70	35
2001	21.54	36
2003	22.69	41
2004	23.55	34
2005	24.27	41

# Sydney Outer North



Geographically, the Outer North of Sydney splits into three sub-regions:

- Manly-Warringah-Pittwater are beach suburbs cut-off from the rest of Sydney by Middle Harbour. The attractive location means that these suburbs are generally of high socio-economic status, and a source of commuters to Global Sydney, but the limitations of transport to and from the rest of the metropolitan area mean that these suburbs are to a remarkable degree self-contained as regards retail and other consumer-service functions.
- The classic high-status North Shore rail-commuter suburbs of Ku Ring Gai and Hornsby.
- The rather newer, heavily car-dependent commuter suburbs in Baulkham Hills.

Overall, the region is of high socio-economic status, and its economic base depends on commuting.

## Major centres:

Manly, Hornsby, Baulkham Hills

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	610,786		638,130		663,659		1.0
No. households	207,346		219,155		237,103		2.0
Workforce	329,683	53.9	346,873	54.4	363,651	54.8	1.2
Employment	318,494	–	339,380	–	357,223	–	1.3
Unemployment	11,189	3.4	7,494	2.2	6,428	1.8	-3.8
DEET U/E	7,345	2.3	9,011	2.6	11,147	3.1	5.5
Structural U/E, % population <sup>1</sup>	13,438	3.6	12,291	3.1	12,387	2.9	0.2

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	12,320	19,953	15,457	24,222	16,538	24,919	3.8
Taxes paid	4,110	6,656	5,330	8,353	5,932	8,938	5.0
GST paid	612	992	1,030	1,614	1,174	1,768	–
Benefits	752	1,219	804	1,260	1,010	1,521	3.8
Business income	1,883	3,050	1,987	3,114	2,433	3,666	3.1
Interest/dividends	1,146	1,856	1,610	2,523	1,572	2,368	4.1
Interest paid	716	1,160	922	1,444	1,703	2,567	14.1
Net property income	565	915	545	854	318	479	-\$436
Net flow of funds	11,228	18,184	13,120	20,560	13,061	19,681	1.3
Rank		2		3		5	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.6	35
Population growth rate, 55+	5.0	19
% Years growing since 1995	94	8
Fertility, babies % pop, 2004	1.19	43
Fertility bounce, 1996-2004	0.10	3
Family / Youth migration	4.2	9
Aged migration	4.0	37
Working elderly	36.2	2
Demographic stress	17	28
Dominant locations	100	1
<b>Sustainability score</b>	<b>67</b>	<b>13</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Baulkham Hills	77.6	28
Least sustainable LGA – Ku-ring-gai	52.7	323

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.08	29	10,713
New medium density and alterations	3.88	9	8,187
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	3.02	2.99	-0.04
Household size rank	4	4	21

	New pop.	Existing pop.	Pop. conversion
Dwelling use	7,932	2,781	74.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	44.2	29.2	1
Computer use (%)	58.4	43.8	2
Ratio	75.6	66.5	3
Rank diff, net / computer	1	0	21
Estimated internet use (%)	44.7	29.2	1
Take-up surplus / shortfall	-0.5	0	39
Av. household income, 2001	69,082	49,086	1

## ADSL COVERAGE

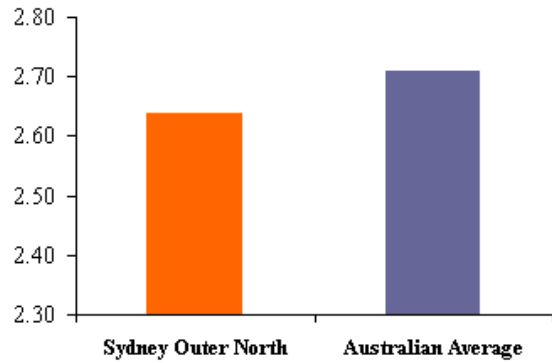
	Rate	Aust. Average	Rank
Coverage, % pop	99.5	90.4	Eq 1
Number of exchanges	37		
Number exchanges enabled	34		
% of exchanges enabled	91.9	34.3	10
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.6	2.7	51
Lowest (%)	98.8		
Highest (%)	100.0		
% children	99.5	89.6	Eq 1
% of area covered	90.5	1.2	9

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.637	9	
Staging leaders (%)	7.059	14	2,678
Expected broadband (%)	45.1	9	17,124
Export elasticity (%)	4.09	56	1,554
Export x coverage (%)	0.02	53	8
Leaders lost (%)	0.03	53	13

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.10	61
2001	1.20	52
2002	1.12	54
2003	1.15	46
2004	1.19	42
Bounce 2003-04	0.04	17
Actual change 2003-04 (number)	370	7

### Sydney Outer North

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.32	0.91
Long term Newstart	0.28	1.38
Total Newstart	0.60	2.29
Mature Age Allowance	0.03	0.11
Disability Support (DSP)	1.10	3.42
DSP, aged under 25	0.08	0.22
Youth unemployment	0.11	0.47
Parenting Payment Single (PPS)	0.78	2.25
PPS, aged under 25	0.07	0.29

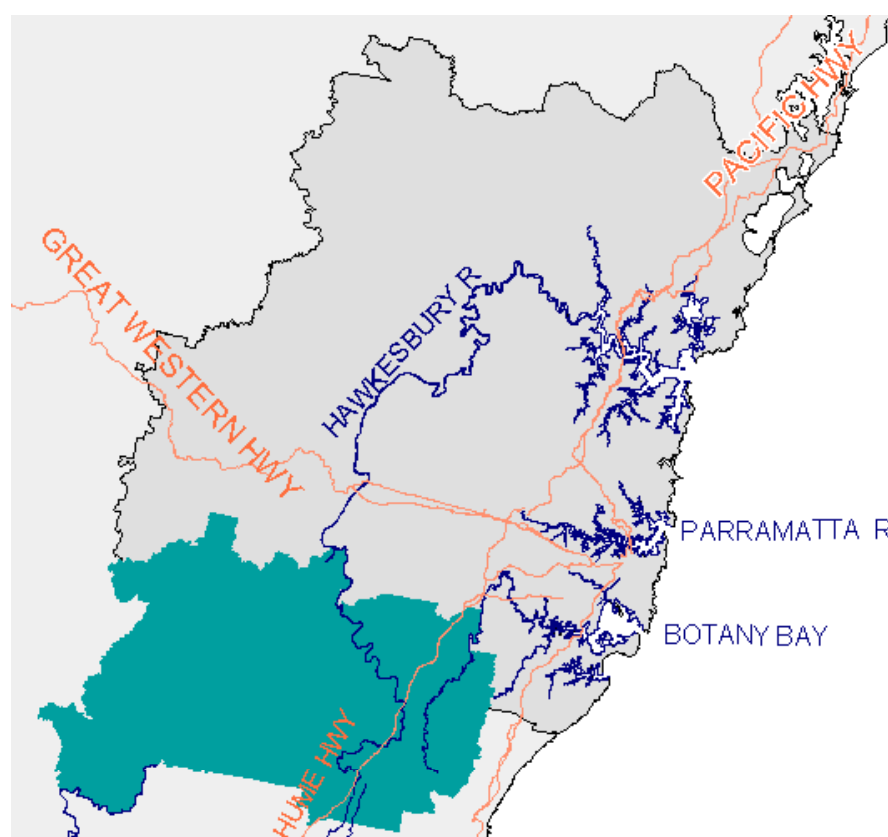
	Social Security % NFOF	Rank
1999	6.70	1
2001	6.13	1
2003	6.80	1
2004	7.48	1
2005	7.73	2

## Sydney Outer South West

The Sydney Outer South West, centred on Campbelltown/Macarthur, began its suburban life as a planned and balanced development of housing and manufacturing, and still bears some of the marks of this origin. However, it is mainly a commuter and hobby farm area, with a couple of large collieries for diversity. It shares campuses of the University of Western Sydney with the Sydney Outer West.

### Major centres:

Campbelltown



### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	222,342		234,032		243,186		1.0
No. households	71,114		76,096		81,972		1.9
Workforce	120,859	54.3	129,728	55.5	126,583	52.1	-0.6
Employment	111,111	–	119,282	–	117,716	–	-0.3
Unemployment	9,747	8.1	10,446	8.1	8,867	7.0	-4.0
DEET U/E	9,232	8.7	8,985	7.1	8,966	7.2	-0.1
Structural U/E, % population <sup>1</sup>	12,715	9.3	14,032	9.8	13,622	8.8	-0.7

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	3,143	13,876	3,698	15,803	4,260	17,516	4.0
Taxes paid	860	3,795	917	3,919	1,194	4,910	4.4
GST paid	184	812	288	1,229	377	1,549	–
Benefits	480	2,121	527	2,251	673	2,767	4.5
Business income	359	1,587	360	1,539	469	1,928	3.3
Interest/dividends	63	277	83	355	104	427	7.5
Interest paid	332	1,465	426	1,822	604	2,485	9.2
Net property income	16	70	-6	-25	-18	-75	-\$145
Net flow of funds	2,686	11,860	3,032	12,953	3,312	13,620	2.3
Rank		36		31		52	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	84.2	5
Population growth rate, 55+	7.9	11
% Years growing since 1995	84	27
Fertility, babies % pop, 2004	1.52	6
Fertility bounce, 1996-2004	-0.15	26
Family / Youth migration	2.1	25
Aged migration	3.6	52
Working elderly	29.8	17
Demographic stress	30	10
Dominant locations	85	28
<b>Sustainability score</b>	<b>65</b>	<b>17</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Camden	85.1	5
Least sustainable LGA – Campbelltown	58.4	253

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.54	23	4,061
New medium density and alterations	1.10	33	805

	2001	2004	Difference
Household size	3.19	3.14	-0.06
Household size rank	2	2	39

	New pop.	Existing pop.	Pop. conversion
Dwelling use	2,692	1,369	66.3

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	26.9	29.2	22
Computer use (%)	42.9	43.8	22
Ratio	62.9	66.5	29
Rank diff, net / computer	0	0	27
Estimated internet use (%)	29.2	29.2	16
Take-up surplus / shortfall	-2.3	0	64
Av. household income, 2001	55,062	49,086	12

## ADSL COVERAGE

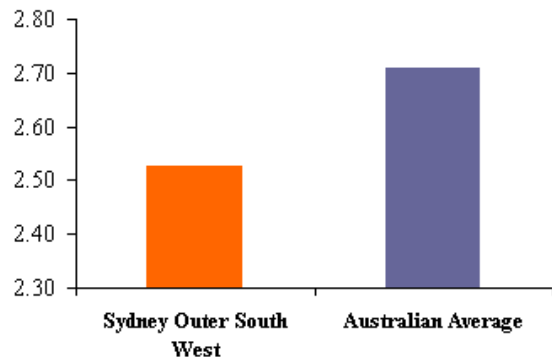
	Rate	Aust. Average	Rank
Coverage, % pop	92.8	90.4	24
Number of exchanges	23		
Number exchanges enabled	19		
% of exchanges enabled	82.6	34.3	17
Number HIBIS exchanges	1		
Exchanges per 10,000 pop.	1.0	2.7	46
Lowest (%)	76.6	Wollondilly	
Highest (%)	98.2	Campbelltown	
% children	92.8	89.6	24
% of area covered	28.2	1.2	22

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.527	21	
Staging leaders (%)	6.387	23	545
Expected broadband (%)	40.4	22	3,442
Export elasticity (%)	4.14	54	353
Export x coverage (%)	0.30	40	25
Leaders lost (%)	0.46	39	39

### Expected E-staging Level

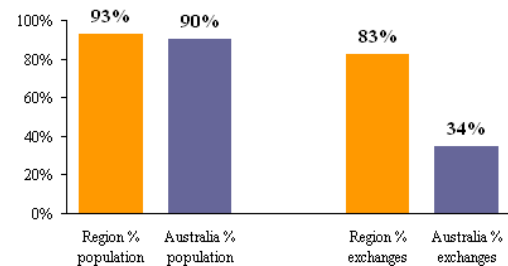


## BABY BOUNCE

	Per cent	Rank
1996	1.69	7
2001	1.57	8
2002	1.46	8
2003	1.55	5
2004	1.52	6
Bounce 2003-04	-0.03	58
Actual change 2003-04 (number)	-32	59

### Sydney Outer South West

#### ADSL Coverage



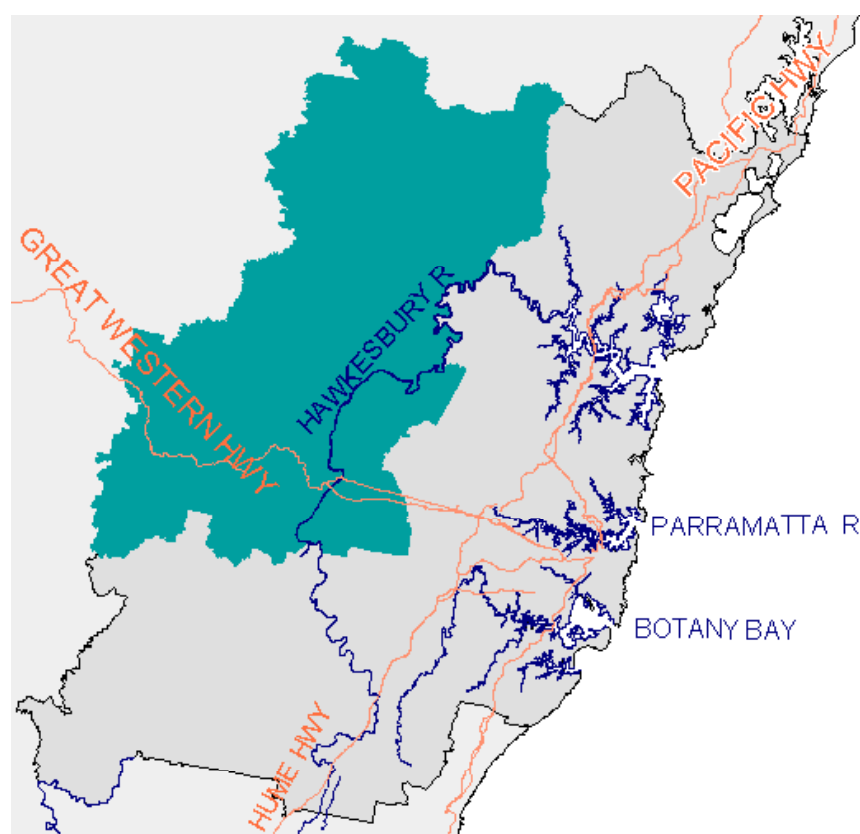
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.92	0.91
Long term Newstart	1.02	1.38
Total Newstart	1.94	2.29
Mature Age Allowance	0.07	0.11
Disability Support (DSP)	2.74	3.42
DSP, aged under 25	0.26	0.22
Youth unemployment	0.49	0.47
Parenting Payment Single (PPS)	3.11	2.25
PPS, aged under 25	0.47	0.29

	Social Security % NFOF	Rank
1999	17.88	21
2001	17.38	15
2003	19.36	22
2004	20.27	19
2005	20.32	23

# Sydney Outer West



The Outer West of Sydney is centred on Penrith. It comprises two sub-regions.

- The Western part of the Cumberland plain includes new manufacturing areas and several defence facilities (particularly airfields). Its educational infrastructure is integrated into the local economy. There are extensive new housing estates, whose residents are employed locally or in Mid West Sydney, with a few commuting as far as Global Sydney.
- The strip of settlement across the Blue Mountains has more of a resort character, with a tradition of long-distance commuting and retirement.

The north west part of the region consists of national parks, which are both inaccessible and bushfire prone.

## Major centres:

Penrith, Katoomba

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	307,940		317,248		319,280		0.2
No. households	104,297		109,872		117,770		1.8
Workforce	160,061	51.9	177,121	55.8	175,951	55.1	-0.2
Employment	147,177	–	164,219	–	164,338	–	0.0
Unemployment	12,884	8.0	12,903	7.3	11,613	6.6	-2.6
DEET U/E	11,351	7.3	7,906	4.6	7,793	4.6	-0.4
Structural U/E, % population <sup>1</sup>	15,928	8.3	16,930	8.6	16,711	8.1	-0.3

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	4,402	14,156	4,356	13,731	5,531	17,322	3.4
Taxes paid	1,221	3,925	1,104	3,481	1,612	5,049	4.3
GST paid	257	825	415	1,309	569	1,782	–
Benefits	628	2,021	684	2,158	846	2,648	4.6
Business income	545	1,753	547	1,723	764	2,393	5.3
Interest/dividends	117	375	136	430	171	535	6.1
Interest paid	458	1,473	603	1,900	866	2,713	10.7
Net property income	38	122	10	31	-18	-57	-\$178
Net flow of funds	3,796	12,205	3,611	11,383	4,246	13,298	1.4
Rank		28		60		56	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	82.6	7
Population growth rate, 55+	2.5	35
% Years growing since 1995	83	29
Fertility, babies % pop, 2004	1.44	8
Fertility bounce, 1996-2004	-0.16	31
Family / Youth migration	1.4	34
Aged migration	3.5	54
Working elderly	30.2	16
Demographic stress	18	26
Dominant locations	88	24
<b>Sustainability score</b>	<b>63</b>	<b>21</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Penrith	65.2	165
Least sustainable LGA – Blue Mountains	62.4	203

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	3.07	47	3,246
New medium density and alterations	1.59	27	1,679
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	3.00	2.94	-0.06
Household size rank	5	5	45

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,039	2,207	32.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	29.8	29.2	15
Computer use (%)	45.9	43.8	15
Ratio	64.9	66.5	22
Rank diff, net / computer	0	0	27
Estimated internet use (%)	31.7	29.2	13
Take-up surplus / shortfall	-1.9	0	59
Av. household income, 2001	55,183	49,086	11

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	94.8	90.4	22
Number of exchanges	47		
Number exchanges enabled	37		
% of exchanges enabled	78.7	34.3	18
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	1.5	2.7	40
Lowest (%)	75.8	Hawkesbury	
Highest (%)	99.9	Blue Mountains	
% children	94.7	89.6	22
% of area covered	56.4	1.2	16

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.489	24	
Staging leaders (%)	5.600	25	773
Expected broadband (%)	38.0	25	5,245
Export elasticity (%)	4.07	58	562
Export x coverage (%)	0.21	42	29
Leaders lost (%)	0.29	43	40

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.61	10
2001	1.53	10
2002	1.43	9
2003	1.43	9
2004	1.44	8
Bounce 2003-04	0.02	37
Actual change 2003-04 (number)	64	35

### Sydney Outer West

#### ADSL Coverage



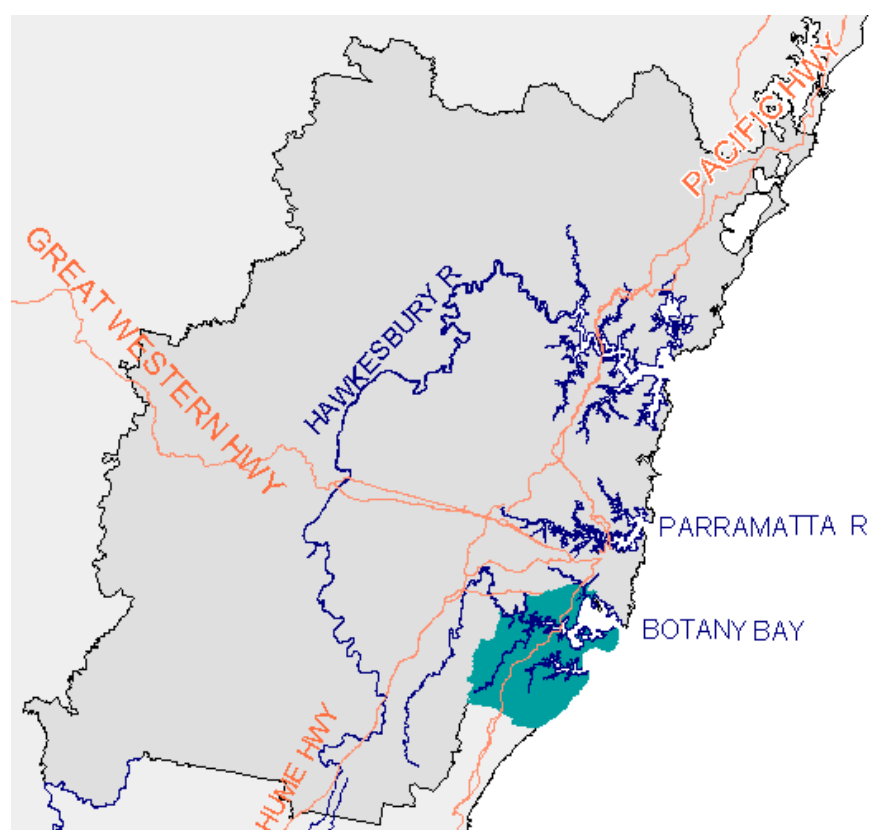
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.82	0.91
Long term Newstart	0.85	1.38
Total Newstart	1.66	2.29
Mature Age Allowance	0.06	0.11
Disability Support (DSP)	3.01	3.42
DSP, aged under 25	0.23	0.22
Youth unemployment	0.41	0.47
Parenting Payment Single (PPS)	2.46	2.25
PPS, aged under 25	0.37	0.29

	Social Security % NFOF	Rank
1999	16.56	19
2001	18.95	21
2003	18.89	20
2004	19.21	17
2005	19.92	20

## Sydney South



Apart from the Shire of Sutherland, the Sydney South region was mainly built up in the first half of the last Century; the Shire followed in the second half. Though mainly a middle-status commuter zone, it has areas of manufacturing employment, and the usual suburban retail centres. Its frontage to Botany Bay does not have the social éclat of the harbour side further north – the foreshore is naturally less attractive, and much of it is devoted to the airport, and the port and industry. Like Sydney north, the region abuts onto bush land which is a marvellous natural amenity when it is not the cause of bushfire scares.

### Major centres:

Hurstville, Miranda

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	419,979		433,055		441,234		0.5
No. households	147,571		157,057		166,094		1.4
Workforce	217,496	51.7	224,150	51.8	246,896	56.0	2.4
Employment	206,269	–	214,371	–	238,438	–	2.7
Unemployment	11,227	5.2	9,778	4.4	8,458	3.4	-3.6
DEET U/E	9,320	4.3	7,380	3.3	8,558	3.5	3.8
Structural U/E, % population <sup>1</sup>	15,985	6.1	15,788	5.8	15,516	5.4	-0.4

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	6,930	16,355	8,249	19,048	9,418	21,346	4.5
Taxes paid	2,055	4,849	2,328	5,376	2,799	6,345	4.6
GST paid	417	984	646	1,492	797	1,806	–
Benefits	775	1,828	837	1,932	1,018	2,307	4.0
Business income	984	2,322	998	2,305	1,276	2,891	3.7
Interest/dividends	376	887	495	1,143	528	1,196	5.1
Interest paid	482	1,138	669	1,544	1,038	2,352	12.9
Net property income	160	379	74	170	23	52	-\$327
Net flow of funds	6,271	14,800	7,010	16,186	7,629	17,289	2.6
Rank		10		10		11	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.3	42
Population growth rate, 55+	4.6	21
% Years growing since 1995	92	11
Fertility, babies % pop, 2004	1.31	20
Fertility bounce, 1996-2004	0.03	9
Family / Youth migration	3.2	19
Aged migration	3.7	50
Working elderly	27.4	33
Demographic stress	19	24
Dominant locations	100	1
<b>Sustainability score</b>	<b>66</b>	<b>14</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Hurstville	74.1	63
Least sustainable LGA – Sutherland Shire	62.0	206

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.19	55	3,300
New medium density and alterations	4.09	7	6,179

	2001	2004	Difference
Household size	2.87	2.84	-0.02
Household size rank	12	10	10

	New pop.	Existing pop.	Pop. conversion
Dwelling use	2,067	1,232	62.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	33.7	29.2	10
Computer use (%)	46.9	43.8	14
Ratio	71.9	66.5	8
Rank diff, net / computer	4	0	11
Estimated internet use (%)	33.2	29.2	9
Take-up surplus / shortfall	0.4	0	21
Av. household income, 2001	58,798	49,086	6

## ADSL COVERAGE

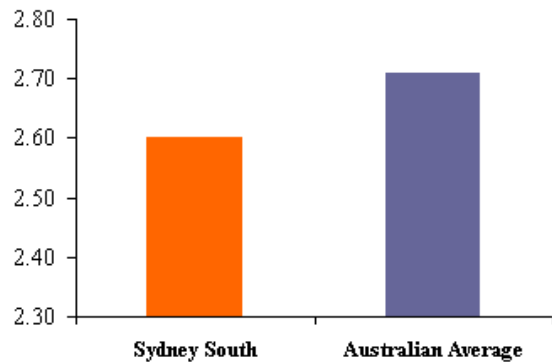
	Rate	Aust. Average	Rank
Coverage, % pop	99.8	90.4	Eq 1
Number of exchanges	14		
Number exchanges enabled	14		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.3	2.7	62
Lowest (%)	99.7		
Highest (%)	100.0		
% children	99.8	89.6	Eq 1
% of area covered	45.2	1.2	20

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.600	14	
Staging leaders (%)	6.992	17	1,464
Expected broadband (%)	43.5	10	9,101
Export elasticity (%)	4.08	57	855
Export x coverage (%)	0.01	56	1
Leaders lost (%)	0.01	56	2

### Expected E-staging Level

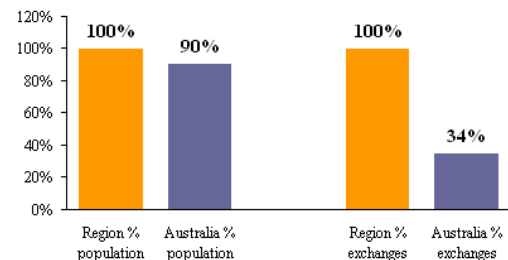


## BABY BOUNCE

	Per cent	Rank
1996	1.27	51
2001	1.30	33
2002	1.27	25
2003	1.26	22
2004	1.31	19
Bounce 2003-04	0.05	14
Actual change 2003-04 (number)	208	13

### Sydney South

#### ADSL Coverage



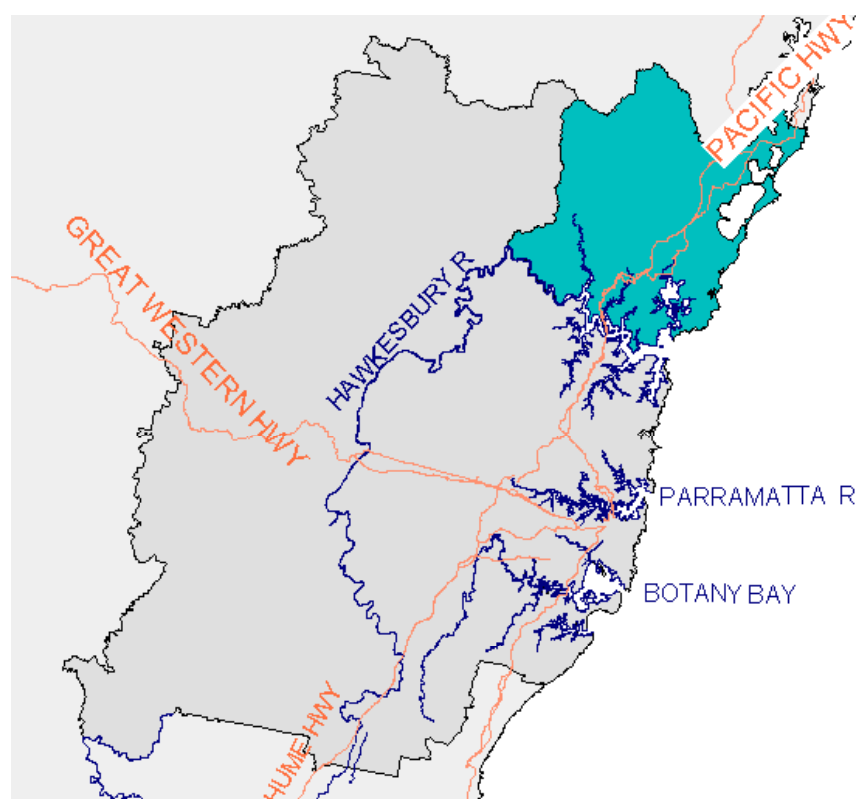
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.63	0.91
Long term Newstart	0.63	1.38
Total Newstart	1.26	2.29
Mature Age Allowance	0.07	0.11
Disability Support (DSP)	1.88	3.42
DSP, aged under 25	0.12	0.22
Youth unemployment	0.18	0.47
Parenting Payment Single (PPS)	1.42	2.25
PPS, aged under 25	0.13	0.29

	Social Security % NFOF	Rank
1999	12.35	6
2001	11.94	7
2003	12.50	8
2004	13.64	8
2005	13.35	8

## NSW Central Coast



Historically, the Central Coast was neither Sydney nor Newcastle; an area of holiday and retirement homes beside beaches and backing into infertile sandstone hills. Over recent decades it has received overflow from Sydney: initially long-distance commuters and increasingly manufacturing, and its population now includes many young families.

### Major centres:

Gosford, Wyong, The Entrance

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	281,230		296,258		306,989		0.9
No. households	106,397		115,065		129,996		3.1
Workforce	119,777	42.6	122,890	41.5	144,585	47.1	4.1
Employment	106,798	–	108,487	–	132,150	–	5.1
Unemployment	12,978	10.8	14,402	11.7	12,435	8.6	-3.6
DEET U/E	9,629	8.1	8,980	7.4	10,654	7.5	4.3
Structural U/E, % population <sup>1</sup>	19,321	12.2	21,249	12.7	21,335	11.9	0.1

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	3,412	11,962	4,008	13,530	4,540	14,789	3.6
Taxes paid	931	3,265	1,029	3,473	1,210	3,942	3.2
GST paid	277	971	403	1,360	530	1,725	–
Benefits	830	2,909	913	3,081	1,157	3,770	4.4
Business income	420	1,473	419	1,415	539	1,756	3.0
Interest/dividends	150	527	199	673	213	693	4.7
Interest paid	285	999	375	1,265	553	1,803	10.3
Net property income	72	252	50	167	38	123	-\$129
Net flow of funds	3,391	11,888	3,783	12,768	4,194	13,662	2.3
Rank		35		36		50	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	70.2	61
Population growth rate, 55+	8.4	9
% Years growing since 1995	100	1
Fertility, babies % pop, 2004	1.19	44
Fertility bounce, 1996-2004	-0.19	43
Family / Youth migration	2.1	27
Aged migration	7.3	2
Working elderly	17.0	64
Demographic stress	31	9
Dominant locations	100	1
<b>Sustainability score</b>	<b>70</b>	<b>10</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Wyong	74.1	64
Least sustainable LGA – Gosford	67.4	135

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.39	36	4,865
New medium density and alterations	2.82	13	3,131
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.67	2.65	-0.03
Household size rank	43	39	14

	New pop.	Existing pop.	Pop. conversion
Dwelling use	3,743	1,122	76.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	26.8	29.2	24
Computer use (%)	41.4	43.8	27
Ratio	64.7	66.5	23
Rank diff, net / computer	3	0	17
Estimated internet use (%)	25.9	29.2	28
Take-up surplus / shortfall	0.9	0	17
Av. household income, 2001	44,526	49,086	33

## ADSL COVERAGE

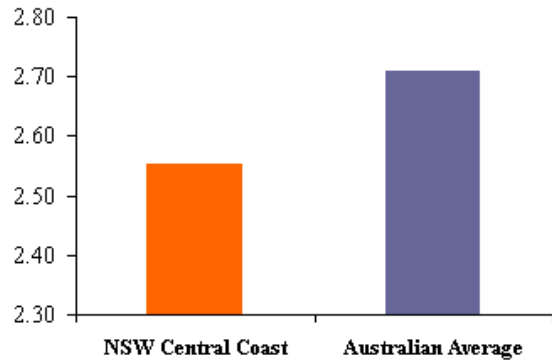
	Rate	Aust. Average	Rank
Coverage, % pop	95.3	90.4	21
Number of exchanges	31		
Number exchanges enabled	24		
% of exchanges enabled	77.4	34.3	19
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	1.1	2.7	45
Lowest (%)	92.6	Wyong	
Highest (%)	97.7	Gosford	
% children	95.3	89.6	20
% of area covered	54.5	1.2	18

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.552	19	
Staging leaders (%)	6.993	16	832
Expected broadband (%)	42.1	18	5,004
Export elasticity (%)	3.96	62	472
Export x coverage (%)	0.18	44	22
Leaders lost (%)	0.33	42	39

### Expected E-staging Level

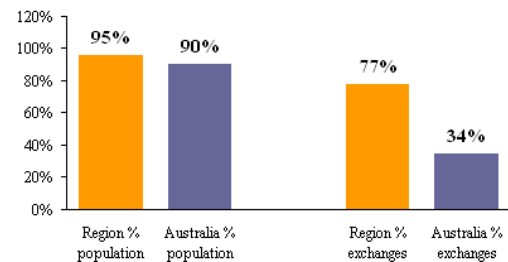


## BABY BOUNCE

	Per cent	Rank
1996	1.38	39
2001	1.29	35
2002	1.16	49
2003	1.17	41
2004	1.19	43
Bounce 2003-04	0.02	33
Actual change 2003-04 (number)	105	25

### NSW Central Coast

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.04	0.91
Long term Newstart	1.37	1.38
Total Newstart	2.40	2.29
Mature Age Allowance	0.13	0.11
Disability Support (DSP)	3.90	3.42
DSP, aged under 25	0.23	0.22
Youth unemployment	0.57	0.47
Parenting Payment Single (PPS)	3.01	2.25
PPS, aged under 25	0.35	0.29

	Social Security % NFOF	Rank
1999	24.47	47
2001	24.13	48
2003	22.91	42
2004	27.40	52
2005	27.60	55

## NSW Central West



The Central West of NSW consists mainly of hilly country, beginning just past the Blue Mountains and ending with the last of the slopes. Its principal towns include Lithgow, Bathurst, Orange, Cowra, Parkes and Forbes. The agricultural base varies from orchards in the high country round Orange to extensive wheat/sheep farming. Lithgow was first developed as a manufacturing town because of its coal mines, and coal is still mined for power generation and export. The Bathurst/Orange growth centre also has some manufacturing, particularly that gained as a result of Commonwealth growth-centre policies in the 1970s. The region is outside commuter range from Sydney, but there have been weekender and tourist developments in the hills.

### Major centres:

Lithgow, Bathurst, Orange

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	172,795		177,660		179,447		0.3
No. households	63,225		65,833		73,712		2.9
Workforce	84,810	49.1	82,540	46.5	89,142	49.7	1.9
Employment	76,376	–	72,799	–	79,967	–	2.4
Unemployment	8,434	9.9	9,741	11.8	9,175	10.3	-1.5
DEET U/E	4,747	5.8	3,609	4.5	4,481	5.3	5.6
Structural U/E, % population <sup>1</sup>	11,396	11.3	13,031	12.8	13,160	12.2	0.2

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,983	11,323	2,302	12,956	2,797	15,588	5.5
Taxes paid	521	2,974	567	3,189	740	4,125	5.6
GST paid	165	944	224	1,260	303	1,686	–
Benefits	460	2,629	502	2,827	634	3,534	5.1
Business income	283	1,613	281	1,580	342	1,905	2.8
Interest/dividends	80	459	100	561	115	639	5.7
Interest paid	185	1,057	260	1,466	355	1,980	11.0
Net property income	33	186	19	109	21	116	-\$70
Net flow of funds	1,968	11,236	2,153	12,120	2511	13,990	3.7
Rank		53		50		44	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.4	41
Population growth rate, 55+	0.2	48
% Years growing since 1995	71	45
Fertility, babies % pop, 2004	1.25	29
Fertility bounce, 1996-2004	-0.18	38
Family / Youth migration	-0.7	51
Aged migration	3.9	41
Working elderly	29.2	23
Demographic stress	5	44
Dominant locations	66	44
<b>Sustainability score</b>	<b>52</b>	<b>49</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Oberon	69.1	115
Least sustainable LGA – Rylstone	34.7	506

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.77	58	1,122
New medium density and alterations	0.36	57	231

	2001	2004	Difference
Household size	2.80	2.78	-0.02
Household size rank	19	17	8

	New pop.	Existing pop.	Pop. conversion
Dwelling use	698	424	62.2

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.0	29.2	49
Computer use (%)	37.1	43.8	48
Ratio	59.3	66.5	43
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	22.1	29.2	50
Take-up surplus / shortfall	-0.1	0	34
Áv. household income, 2001	43,242	49,086	41

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	72.2	90.4	44
Number of exchanges	173		
Number exchanges enabled	21		
% of exchanges enabled	12.1	34.3	58
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	10.2	2.7	11
Lowest (%)	3.7	Evans	
Highest (%)	93.6	Bathurst	
% children	72.1	89.6	45
% of area covered	1.1	1.2	53

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.364	56	
Staging leaders (%)	3.522	55	374
Expected broadband (%)	32.0	53	3,398
Export elasticity (%)	5.36	10	569
Export x coverage (%)	1.49	15	158
Leaders lost (%)	0.98	25	104

### Expected E-staging Level

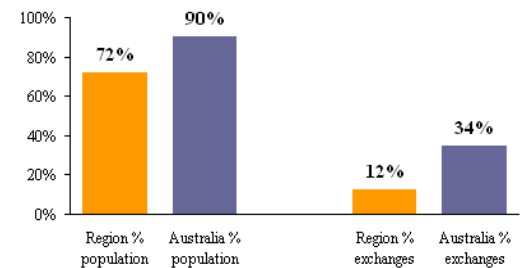


## BABY BOUNCE

	Per cent	Rank
1996	1.44	23
2001	1.41	18
2002	1.22	35
2003	1.21	33
2004	1.25	28
Bounce 2003-04	0.05	15
Actual change 2003-04 (number)	89	26

### NSW Central West

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.82	0.91
Long term Newstart	1.52	1.38
Total Newstart	2.34	2.29
Mature Age Allowance	0.09	0.11
Disability Support (DSP)	4.53	3.42
DSP, aged under 25	0.28	0.22
Youth unemployment	0.56	0.47
Parenting Payment Single (PPS)	2.34	2.25
PPS, aged under 25	0.37	0.29

	Social Security % NFOF	Rank
1999	23.39	44
2001	23.33	45
2003	25.59	52
2004	26.05	46
2005	25.26	44

# NSW Far and North West



The Far and North West puts together two NSW planning regions, including the sparsely-populated Far West. The result is a large and diverse region, with the following sub-regions.

- In the east of the region the country is hilly and in many ways resembles the Central West. The centre for this part of the region is Mudgee, which is well known for its wineries.
- Dubbo lies just beyond the hills, and is the centre for the plains beyond. The plains north and west of Dubbo produce cotton and a variety of cereal crops integrated with livestock production.
- Beyond Nyngan the country becomes pastoral, with small areas under intensive irrigation from the Darling. This is classic sheep country, though low wool prices have forced some diversification. There are two historic mining centres, Cobar and Broken Hill.

## Major centres:

Dubbo, Broken Hill

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	142,137		143,185		141,618		-0.3
No. households	53,627		54,487		59,939		2.4
Workforce	68,328	48.1	66,561	46.6	69,382	49.0	1.0
Employment	58,812	–	57,353	–	60,687	–	1.4
Unemployment	9,515	13.9	9,208	13.8	8,695	12.5	-1.4
DEET U/E	4,844	7.3	3,940	6.1	4,521	6.8	3.5
Structural U/E, % population <sup>1</sup>	12,673	15.4	13,562	16.7	13,201	15.6	-0.7

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,450	10,157	1,660	11,593	1,855	13,101	4.3
Taxes paid	376	2,633	408	2,850	454	3,209	3.4
GST paid	128	894	174	1,212	211	1,488	–
Benefits	427	2,992	490	3,422	590	4,169	5.7
Business income	227	1,592	225	1,574	252	1,781	1.9
Interest/dividends	60	421	78	547	83	586	5.7
Interest paid	143	999	200	1,394	271	1,912	11.4
Net property income	23	164	18	127	13	94	-\$69
Net flow of funds	1,542	10,799	1,691	11,807	1,858	13,122	3.3
Rank		59		57		57	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	76.2	30
Population growth rate, 55+	-0.9	54
% Years growing since 1995	54	58
Fertility, babies % pop, 2004	1.30	22
Fertility bounce, 1996-2004	-0.34	64
Family / Youth migration	-2.4	62
Aged migration	3.8	47
Working elderly	28.7	24
Demographic stress	-1	51
Dominant locations	65	45
<b>Sustainability score</b>	<b>47</b>	<b>57</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Dubbo	66.9	144
Least sustainable LGA – Bogan	28.8	573

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.22	62	643
New medium density and alterations	0.34	59	181
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.73	2.67	-0.06
Household size rank	34	33	41

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-494	1,137	-76.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	18.8	29.2	60
Computer use (%)	32.5	43.8	60
Ratio	57.9	66.5	49
Rank diff, net / computer	0	0	27
Estimated internet use (%)	17.8	29.2	61
Take-up surplus / shortfall	1.1	0	16
Áv. household income, 2001	40,189	49,086	52

## ADSL COVERAGE

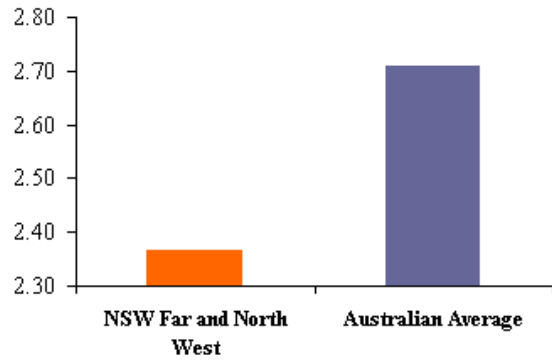
	Rate	Aust. Average	Rank
Coverage, % pop	69.9	90.4	50
Number of exchanges	153		
Number exchanges enabled	27		
% of exchanges enabled	17.6	34.3	55
Number HIBIS exchanges	3		
Exchanges per 10,000 pop.	10.8	2.7	10
Lowest (%)	0.0	Central Darling	
Highest (%)	97.3	Broken Hill	
% children	71.0	89.6	48
% of area covered	0.2	1.2	59

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.367	51	
Staging leaders (%)	3.635	50	345
Expected broadband (%)	31.9	55	3,031
Export elasticity (%)	5.45	8	517
Export x coverage (%)	1.64	12	155
Leaders lost (%)	1.09	17	104

### Expected E-staging Level

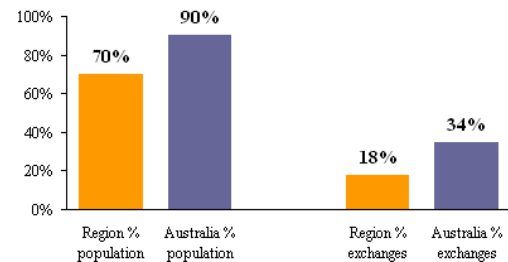


## BABY BOUNCE

	Per cent	Rank
1996	1.65	9
2001	1.58	7
2002	1.33	22
2003	1.25	25
2004	1.30	21
Bounce 2003-04	0.05	13
Actual change 2003-04 (number)	67	32

### NSW Far and North West

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.99	0.91
Long term Newstart	2.27	1.38
Total Newstart	3.25	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	5.34	3.42
DSP, aged under 25	0.27	0.22
Youth unemployment	0.74	0.47
Parenting Payment Single (PPS)	3.14	2.25
PPS, aged under 25	0.53	0.29

	Social Security % NFOF	Rank
1999	27.70	60
2001	28.98	60
2003	31.34	60
2004	34.22	60
2005	31.77	60

# NSW Hunter



The Hunter region centres on the City of Newcastle, which, despite its picturesque location, was always overshadowed by Sydney as a financial and administrative centre. The Port of Newcastle handles a wide variety of bulk freight, particularly coal mined within the region but also rural exports from the northern half of NSW. The region was also known for heavy industry, but this has shared in the general decline of Australian manufacturing. Parts of the region like Port Stephens and Scone are perhaps best thought of as extensions of the North Coast; hobby farm and retirement areas related directly to Sydney. The Hunter Valley vineyards have also been expanding.

## Major centres:

Newcastle, Maitland, Singleton

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	565,950		588,981		608,766		0.8
No. households	213,412		225,877		250,740		2.6
Workforce	265,843	46.9	288,185	48.9	297,225	48.8	0.8
Employment	231,861	–	248,762	–	263,284	–	1.4
Unemployment	33,981	12.8	39,423	13.7	33,941	11.4	-3.7
DEET U/E	24,485	9.4	24,496	8.8	19,126	6.7	-6.0
Structural U/E, % population <sup>1</sup>	43,866	13.0	51,558	14.9	50,158	13.4	-0.7

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	7,217	12,570	8,016	13,611	10,332	16,973	5.1
Taxes paid	2,016	3,512	2,094	3,555	3,104	5,099	6.4
GST paid	516	899	796	1,352	1,187	1,949	–
Benefits	1,702	2,965	1,918	3,257	2,305	3,786	4.2
Business income	891	1,552	896	1,521	1,273	2,092	5.1
Interest/dividends	284	494	370	629	402	661	5.0
Interest paid	562	978	760	1,290	1,068	1,754	10.2
Net property income	122	212	90	152	113	186	-\$26
Net flow of funds	7,121	12,403	7,641	12,973	9,069	14,897	3.1
Rank		26		29		30	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	73.2	54
Population growth rate, 55+	3.5	30
% Years growing since 1995	95	7
Fertility, babies % pop, 2004	1.15	53
Fertility bounce, 1996-2004	-0.17	32
Family / Youth migration	1.6	31
Aged migration	4.8	20
Working elderly	18.9	59
Demographic stress	15	31
Dominant locations	87	25
<b>Sustainability score</b>	<b>61</b>	<b>29</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Port Stephens	72.5	82
Least sustainable LGA – Murrurundi	31.9	536

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.56	35	9,903
New medium density and alterations	2.28	17	4,953

	2001	2004	Difference
Household size	2.71	2.67	-0.04
Household size rank	37	34	32

	New pop.	Existing pop.	Pop. conversion
Dwelling use	6,144	3,758	62.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	24.5	29.2	32
Computer use (%)	39.9	43.8	36
Ratio	61.4	66.5	38
Rank diff, net / computer	4	0	11
Estimated internet use (%)	24.5	29.2	37
Take-up surplus / shortfall	0.0	0	28
Áv. household income, 2001	43,775	49,086	38

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	91.9	90.4	25
Number of exchanges	142		
Number exchanges enabled	66		
% of exchanges enabled	46.5	34.3	28
Number HIBIS exchanges	6		
Exchanges per 10,000 pop.	2.5	2.7	37
Lowest (%)	38.7	Murrurundi	
Highest (%)	99.9	Newcastle	
% children	91.4	89.6	25
% of area covered	10.4	1.2	30

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.427	30	
Staging leaders (%)	4.268	30	1,101
Expected broadband (%)	34.7	29	8,943
Export elasticity (%)	4.24	46	1,095
Export x coverage (%)	0.34	39	88
Leaders lost (%)	0.34	41	89

### Expected E-staging Level

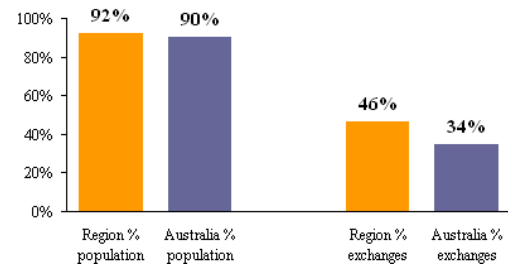


## BABY BOUNCE

	Per cent	Rank
1996	1.32	46
2001	1.28	36
2002	1.15	52
2003	1.15	45
2004	1.15	53
Bounce 2003-04	0.00	46
Actual change 2003-04 (number)	67	32

### NSW Hunter

#### ADSL Coverage



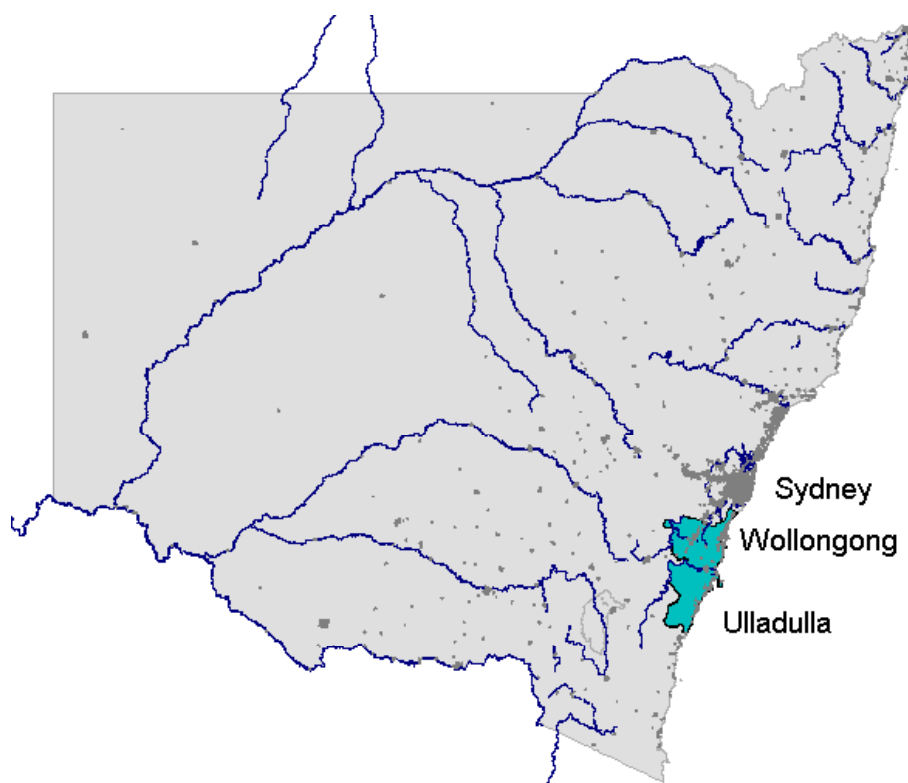
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.96	0.91
Long term Newstart	1.77	1.38
Total Newstart	2.73	2.29
Mature Age Allowance	0.17	0.11
Disability Support (DSP)	4.94	3.42
DSP, aged under 25	0.32	0.22
Youth unemployment	0.72	0.47
Parenting Payment Single (PPS)	2.63	2.25
PPS, aged under 25	0.34	0.29

	Social Security % NFOF	Rank
1999	23.90	45
2001	25.11	51
2003	29.21	59
2004	25.73	43
2005	25.42	46

## NSW Illawarra



During the last century, the Illawarra developed as a coal-based manufacturing area. Coal is still mined, though the deposits are now a long way back from the mine adits in the Illawarra range, and there is still heavy manufacturing industry, but it no longer employs as many people. There is an important bulk port, but its trade is hampered by the lack of a natural corridor inland. The region is relatively close to Sydney, and commuter traffic has developed. The part of the region over the top of the Illawarra escarpment comprises water reserves and hobby farms. South of Kiama there are dairy farms, hobby farms and retirement villages. Nowra has factories which process rural products.

### Major centres:

Wollongong, Nowra

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	380,626		399,987		413,121		0.8
No. households	140,741		149,909		172,201		3.5
Workforce	181,584	47.7	191,923	48.0	188,977	45.7	-0.4
Employment	160,490	–	168,456	–	169,585	–	0.2
Unemployment	21,095	11.6	23,468	12.2	19,392	10.3	-4.7
DEET U/E	19,558	11.6	13,003	6.9	14,343	7.8	2.5
Structural U/E, % population <sup>1</sup>	28,946	13.0	31,312	13.6	29,990	11.9	-1.1

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	4,781	12,335	5,502	13,756	6,364	15,405	3.8
Taxes paid	1,328	3,427	1,433	3,583	1,852	4,484	4.6
GST paid	343	885	521	1,302	690	1,670	–
Benefits	1,089	2,810	1,204	3,011	1,505	3,642	4.4
Business income	603	1,555	605	1,512	787	1,905	3.4
Interest/dividends	209	540	258	646	291	705	4.5
Interest paid	380	980	504	1,260	724	1,752	10.2
Net property income	78	202	65	164	80	193	-\$8
Net flow of funds	4,709	12,150	5,178	12,945	5,761	13,945	2.3
Rank		30		32		45	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	72.5	57
Population growth rate, 55+	4.4	23
% Years growing since 1995	97	5
Fertility, babies % pop, 2004	1.16	51
Fertility bounce, 1996-2004	-0.15	28
Family / Youth migration	2.2	24
Aged migration	5.0	18
Working elderly	18.4	61
Demographic stress	16	30
Dominant locations	74	35
<b>Sustainability score</b>	<b>61</b>	<b>27</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Wingecarribee	67.5	134
Least sustainable LGA – Wollongong	59.0	245

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.94	30	7,116
New medium density and alterations	2.03	20	2,924
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.77	2.73	-0.04
Household size rank	23	22	31

	New pop.	Existing pop.	Pop. conversion
Dwelling use	4,723	2,393	66.4

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	26.2	29.2	26
Computer use (%)	41.1	43.8	30
Ratio	63.7	66.5	25
Rank diff, net / computer	4	0	11
Estimated internet use (%)	25.8	29.2	29
Take-up surplus / shortfall	0.4	0	22
Av. household income, 2001	45,247	49,086	31

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	95.4	90.4	20
Number of exchanges	54		
Number exchanges enabled	45		
% of exchanges enabled	83.3	34.3	15
Number HIBIS exchanges	4		
Exchanges per 10,000 pop.	1.4	2.7	41
Lowest (%)	84.5	Wingecarribee	
Highest (%)	99.4	Wollongong	
% children	95.1	89.6	21
% of area covered	31.6	1.2	21

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.423	31	
Staging leaders (%)	4.224	31	678
Expected broadband (%)	34.3	30	5,511
Export elasticity (%)	4.03	60	646
Export x coverage (%)	0.19	43	30
Leaders lost (%)	0.20	47	32

### Expected E-staging Level

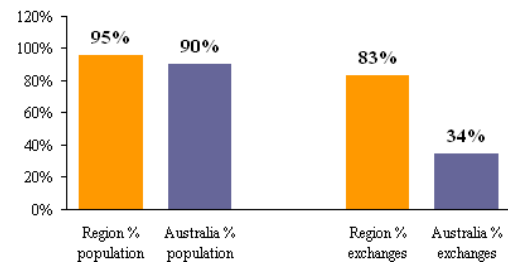


## BABY BOUNCE

	Per cent	Rank
1996	1.32	48
2001	1.27	41
2002	1.17	47
2003	1.14	51
2004	1.16	51
Bounce 2003-04	0.02	32
Actual change 2003-04 (number)	148	21

### NSW Illawarra

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.93	0.91
Long term Newstart	1.61	1.38
Total Newstart	2.54	2.29
Mature Age Allowance	0.18	0.11
Disability Support (DSP)	4.09	3.42
DSP, aged under 25	0.27	0.22
Youth unemployment	0.59	0.47
Parenting Payment Single (PPS)	2.49	2.25
PPS, aged under 25	0.32	0.29

	Social Security % NFOF	Rank
1999	23.13	42
2001	23.26	44
2003	24.22	49
2004	26.03	45
2005	26.12	49

# NSW Mid North Coast



The Mid North Coast comprises:

- a coastal belt of retirement and tourist developments including Port Macquarie and Coffs Harbour, and
- a series of well-watered valleys most of which have an important but flood-prone town located somewhat up-river from the coast (Taree, Kempsey, Grafton). Each of these towns is the supply centre for its valley, which includes areas of intensive river-flat agriculture.

With the retirement exodus from Sydney, the coastal belt is gradually coming to dominate the region.

## Major centres:

Coffs Harbour, Port Macquarie, Grafton

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	267,548		280,226		295,601		1.3
No. households	105,747		112,264		124,814		2.7
Workforce	114,431	42.6	113,689	40.6	124,983	42.3	2.4
Employment	92,963	–	89,524	–	103,701	–	3.7
Unemployment	21,468	18.8	24,167	21.3	21,282	17.0	-3.1
DEET U/E	13,594	12.2	11,788	10.8	9,521	8.0	-5.2
Structural U/E, % population <sup>1</sup>	26,016	17.6	30,289	20.0	29,830	17.6	-0.4

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,268	8,313	2,643	9,431	3,223	10,904	4.6
Taxes paid	553	2,027	609	2,174	841	2,846	5.8
GST paid	252	925	336	1,198	489	1,655	–
Benefits	958	3,511	1,075	3,836	1,375	4,650	4.8
Business income	330	1,209	324	1,158	441	1,492	3.6
Interest/dividends	118	433	146	520	194	655	7.2
Interest paid	209	764	305	1,088	417	1,409	10.7
Net property income	61	223	43	153	55	185	-\$37
Net flow of funds	2,721	9,973	2,981	10,638	3,540	11,976	3.1
Rank		63		63		64	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	68.0	64
Population growth rate, 55+	3.9	24
% Years growing since 1995	86	20
Fertility, babies % pop, 2004	0.96	64
Fertility bounce, 1996-2004	-0.26	59
Family / Youth migration	-0.3	49
Aged migration	7.1	3
Working elderly	17.1	63
Demographic stress	20	23
Dominant locations	45	61
<b>Sustainability score</b>	<b>57</b>	<b>42</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Hastings	67.8	130
Least sustainable LGA – Grafton	37.9	464

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.84	18	6,316
New medium density and alterations	2.02	21	2,178

	2001	2004	Difference
Household size	2.59	2.55	-0.04
Household size rank	53	52	30

	New pop.	Existing pop.	Pop. conversion
Dwelling use	4,405	1,910	69.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	20.9	29.2	54
Computer use (%)	35.2	43.8	55
Ratio	59.6	66.5	41
Rank diff, net / computer	1	0	21
Estimated internet use (%)	19.0	29.2	59
Take-up surplus / shortfall	1.9	0	8
Av. household income, 2001	35,801	49,086	63

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	75.6	90.4	38
Number of exchanges	120		
Number exchanges enabled	51		
% of exchanges enabled	42.5	34.3	31
Number HIBIS exchanges	3		
Exchanges per 10,000 pop.	4.1	2.7	30
Lowest (%)	33.9	Pristine Waters	
Highest (%)	95.3	Grafton	
% children	75.0	89.6	39
% of area covered	7.1	1.2	33

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.381	47	
Staging leaders (%)	3.779	42	511
Expected broadband (%)	32.8	42	4,431
Export elasticity (%)	4.58	31	620
Export x coverage (%)	1.12	27	151
Leaders lost (%)	0.92	26	125

### Expected E-staging Level

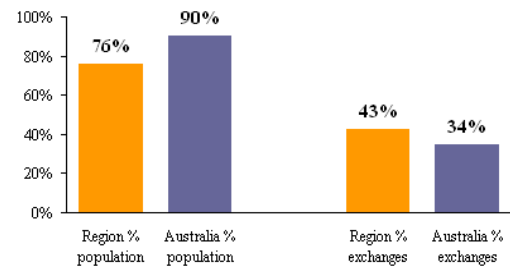


## BABY BOUNCE

	Per cent	Rank
1996	1.22	53
2001	1.15	57
2002	0.99	63
2003	0.96	63
2004	0.96	64
Bounce 2003-04	-0.01	49
Actual change 2003-04 (number)	19	46

### NSW Mid North Coast

#### ADSL Coverage



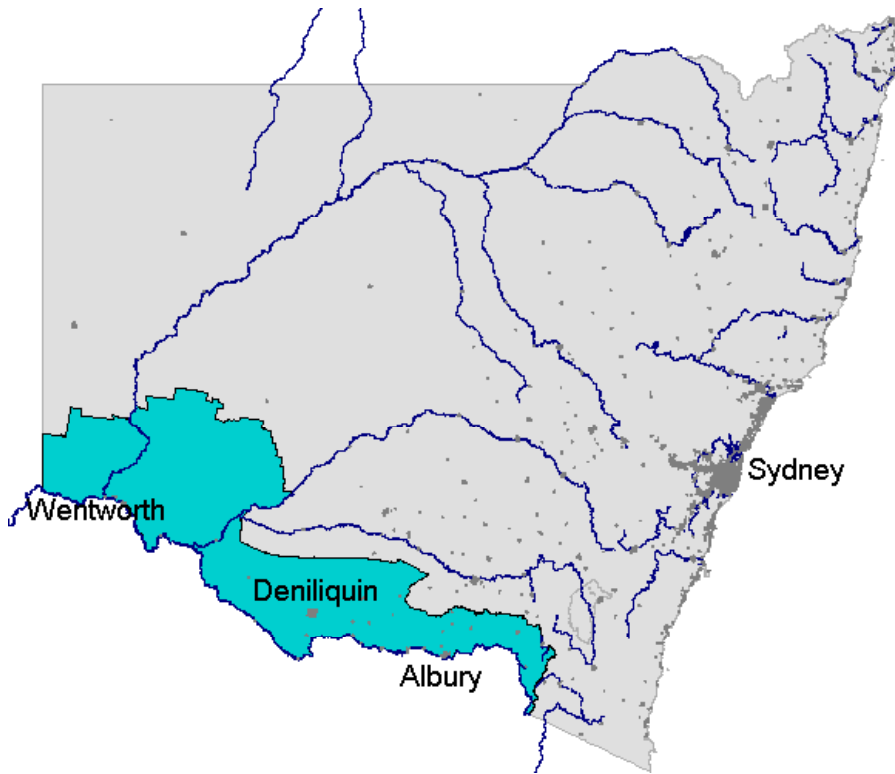
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.28	0.91
Long term Newstart	2.68	1.38
Total Newstart	3.95	2.29
Mature Age Allowance	0.25	0.11
Disability Support (DSP)	5.45	3.42
DSP, aged under 25	0.32	0.22
Youth unemployment	0.79	0.47
Parenting Payment Single (PPS)	3.32	2.25
PPS, aged under 25	0.42	0.29

	Social Security % NFOF	Rank
1999	35.21	64
2001	36.06	63
2003	35.82	63
2004	37.42	63
2005	38.83	63

# NSW Murray



The Murray planning region of NSW comprises a strip running from the edge of the Snowy Mountains to the SA border. The region is within the economic hinterland of Melbourne rather than Sydney, and were it not for the state boundary would be divided into three parts and added to the adjacent Victorian regions. The hilly country east of Albury concentrates on livestock with gradually expanding timber plantations. Between Albury and Deniliquin the strip comprises classic wheat/sheep country, now diversifying. West of this lies dry pastoral country apart from irrigation areas, some of which are known their rice, while those across the Murray from Mildura are more involved with intensive vine and fruit cultivation. Albury has several resource-processing industries.

## Major centres:

Albury, Deniliquin

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	110,596		113,397		115,313		0.4
No. households	42,130		43,857		48,531		2.6
Workforce	57,042	51.2	58,822	51.9	61,286	53.1	1.0
Employment	51,038	–	53,069	–	56,060	–	1.4
Unemployment	6,005	10.5	5,752	9.8	5,226	8.5	-2.4
DEET U/E	4,214	7.4	3,567	6.2	2,848	4.8	-5.5
Structural U/E, % population <sup>1</sup>	6,888	10.6	7,665	11.9	7,371	10.6	-1.0

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,249	11,108	1,496	13,194	1,714	14,866	5.0
Taxes paid	316	2,812	364	3,206	436	3,781	5.1
GST paid	96	850	140	1,230	194	1,683	–
Benefits	291	2,588	326	2,872	403	3,498	5.2
Business income	187	1,666	185	1,632	233	2,023	3.3
Interest/dividends	57	505	74	654	91	793	7.8
Interest paid	122	1,083	173	1,523	237	2,051	11.2
Net property income	27	239	21	187	22	188	-\$51
Net flow of funds	1,277	11,361	1,427	12,580	1,597	13,853	3.4
Rank		51		39		47	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	74.3	48
Population growth rate, 55+	-0.6	52
% Years growing since 1995	66	49
Fertility, babies % pop, 2004	1.20	40
Fertility bounce, 1996-2004	-0.25	57
Family / Youth migration	-1.0	54
Aged migration	4.7	21
Working elderly	29.4	20
Demographic stress	-0	50
Dominant locations	65	46
<b>Sustainability score</b>	<b>50</b>	<b>52</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Murray	74.2	60
Least sustainable LGA – Urana	22.1	623

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	3.51	46	1,484
New medium density and alterations	0.40	52	168

	2001	2004	Difference
Household size	2.68	2.62	-0.06
Household size rank	40	43	43

	New pop.	Existing pop.	Pop. conversion
Dwelling use	504	981	33.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.7	29.2	43
Computer use (%)	39.2	43.8	40
Ratio	57.9	66.5	51
Rank diff, net / computer	-3	0	49
Estimated internet use (%)	23.7	29.2	41
Take-up surplus / shortfall	-1.0	0	50
Av. household income, 2001	42,394	49,086	45

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	77.1	90.4	35
Number of exchanges	121		
Number exchanges enabled	27		
% of exchanges enabled	22.3	34.3	49
Number HIBIS exchanges	3		
Exchanges per 10,000 pop.	11.2	2.7	9
Lowest (%)	0.0	Conargo	
Highest (%)	100.0	Albury	
% children	76.2	89.6	35
% of area covered	1.4	1.2	49

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.388	44	
Staging leaders (%)	3.682	47	305
Expected broadband (%)	32.4	47	2,690
Export elasticity (%)	5.10	16	423
Export x coverage (%)	1.17	25	97
Leaders lost (%)	0.84	31	70

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.47	21
2001	1.28	38
2002	1.22	37
2003	1.14	49
2004	1.20	40
Bounce 2003-04	0.06	9
Actual change 2003-04 (number)	70	30

### NSW Murray

#### ADSL Coverage



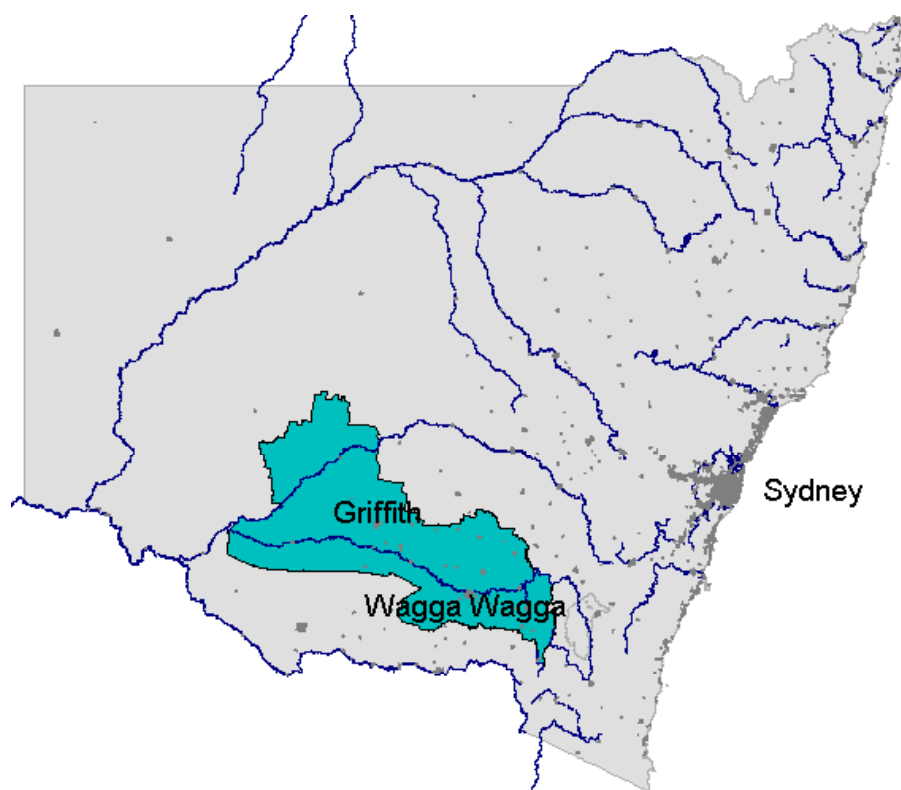
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.88	0.91
Long term Newstart	1.40	1.38
Total Newstart	2.28	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	3.73	3.42
DSP, aged under 25	0.24	0.22
Youth unemployment	0.50	0.47
Parenting Payment Single (PPS)	2.28	2.25
PPS, aged under 25	0.29	0.29

	Social Security % NFOF	Rank
1999	22.78	40
2001	22.83	42
2003	21.45	35
2004	25.83	44
2005	25.25	43

# NSW Murrumbidgee



The Murrumbidgee planning region of NSW is similar to the Murray region in that it comprises a strip of LGAs running east-west, from the ACT, border to Hay; however, it is generally within the hinterland of Sydney. The largest city is Wagga Wagga, which has defence and educational facilities in addition to its role in regional servicing, but there are several other large towns. The pastoral hills east of Wagga are gaining pine plantations, while west of Wagga lies wheat/sheep country and the Murrumbidgee Irrigation Area, with its rice and vines. The outermost part of the region merges with the pastoral Far West. Towns like Wagga, Leeton and Griffith have significant agricultural processing industries.

## Major centres:

Wagga Wagga, Griffith

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	148,784		152,466		153,821		0.2
No. households	53,747		55,712		61,288		2.4
Workforce	74,350	49.9	77,644	50.9	82,449	53.6	1.5
Employment	68,297	–	70,922	–	76,640	–	2.0
Unemployment	6,053	8.1	6,723	8.7	5,809	7.0	-3.6
DEET U/E	4,950	6.7	4,377	5.8	3,377	4.2	-6.3
Structural U/E, % population <sup>1</sup>	8,782	10.0	9,479	10.8	9,262	10.0	-0.6

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,769	11,759	2,068	13,563	2,287	14,870	4.0
Taxes paid	454	3,018	504	3,309	564	3,669	3.3
GST paid	126	838	185	1,211	234	1,522	–
Benefits	364	2,418	394	2,581	490	3,188	4.7
Business income	239	1,587	237	1,551	246	1,597	0.1
Interest/dividends	79	528	98	645	113	734	5.6
Interest paid	154	1,024	219	1,438	312	2,031	12.1
Net property income	35	232	23	154	23	147	-\$84
Net flow of funds	1,751	11,644	1,911	12,537	2,048	13,314	2.3
Rank		41		40		54	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	77.3	25
Population growth rate, 55+	0.3	47
% Years growing since 1995	68	47
Fertility, babies % pop, 2004	1.34	16
Fertility bounce, 1996-2004	-0.23	51
Family / Youth migration	0.0	46
Aged migration	3.0	62
Working elderly	30.5	14
Demographic stress	4	48
Dominant locations	68	40
<b>Sustainability score</b>	<b>52</b>	<b>50</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Griffith	70.5	95
Least sustainable LGA – Hay	28.4	577

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.76	48	1,480
New medium density and alterations	0.58	47	313

	2001	2004	Difference
Household size	2.84	2.78	-0.06
Household size rank	16	18	40

	New pop.	Existing pop.	Pop. conversion
Dwelling use	348	1,131	23.5

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	21.9	29.2	51
Computer use (%)	37.4	43.8	46
Ratio	58.4	66.5	46
Rank diff, net / computer	-5	0	52
Estimated internet use (%)	22.6	29.2	46
Take-up surplus / shortfall	-0.7	0	45
Áv. household income, 2001	44,243	49,086	35

## ADSL COVERAGE

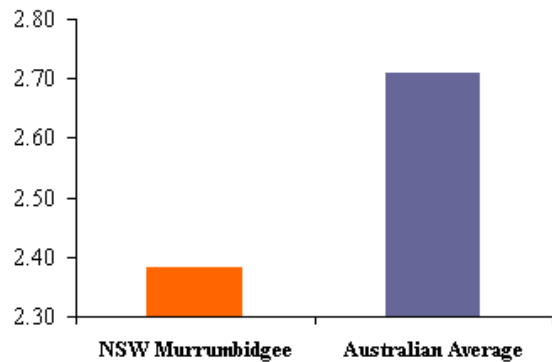
	Rate	Aust. Average	Rank
Coverage, % pop	75.1	90.4	39
Number of exchanges	134		
Number exchanges enabled	26		
% of exchanges enabled	19.4	34.3	52
Number HIBIS exchanges	1		
Exchanges per 10,000 pop.	9.9	2.7	13
Lowest (%)	31.0	Murrumbidgee	
Highest (%)	86.8	Wagga Wagga	
% children	74.8	89.6	40
% of area covered	1.3	1.2	52

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.384	45	
Staging leaders (%)	3.673	48	366
Expected broadband (%)	32.6	46	3,247
Export elasticity (%)	5.24	11	522
Export x coverage (%)	1.30	21	130
Leaders lost (%)	0.91	27	91

### Expected E-staging Level

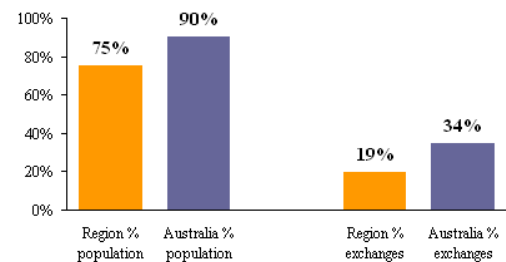


## BABY BOUNCE

	Per cent	Rank
1996	1.58	12
2001	1.52	12
2002	1.33	20
2003	1.35	15
2004	1.34	15
Bounce 2003-04	0.00	47
Actual change 2003-04 (number)	3	50

### NSW Murrumbidgee

#### ADSL Coverage



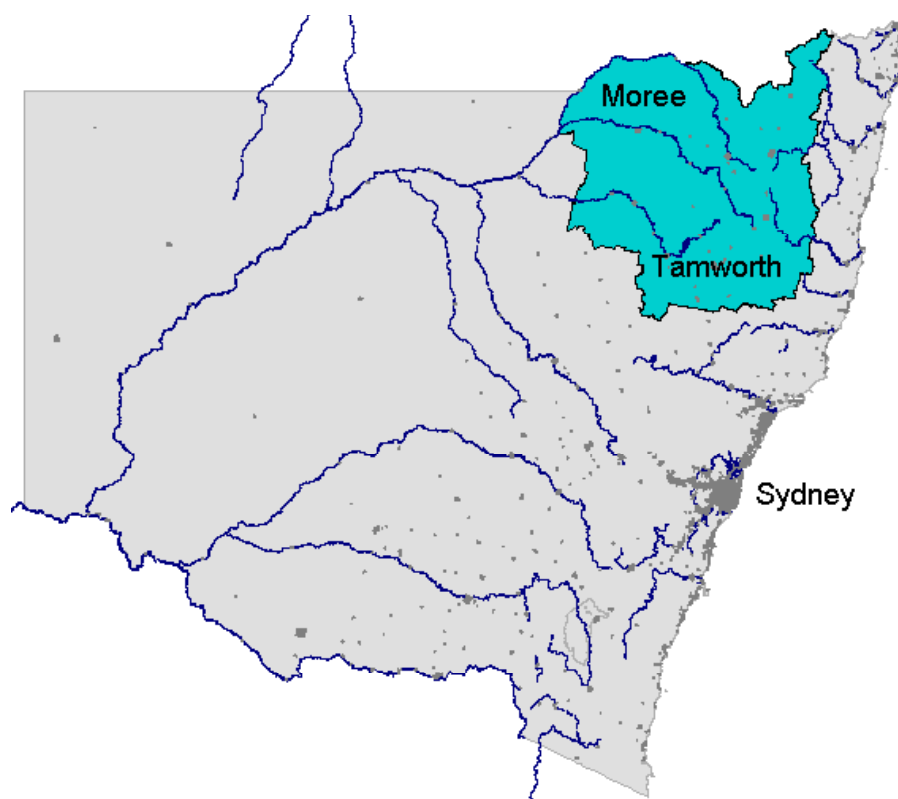
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.74	0.91
Long term Newstart	1.21	1.38
Total Newstart	1.95	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	3.52	3.42
DSP, aged under 25	0.25	0.22
Youth unemployment	0.45	0.47
Parenting Payment Single (PPS)	2.31	2.25
PPS, aged under 25	0.38	0.29

	Social Security % NFOF	Rank
1999	20.76	31
2001	20.59	28
2003	19.92	26
2004	24.03	37
2005	23.95	38

## NSW North



The NSW North comprises three distinct sub-regions.

- Around Tamworth is a mixed-farming region, and Tamworth itself has significant commercial and resource-processing activity.
- The New England sub-region is a high plateau, devoted mainly to pasture for beef and wool. Armidale stands out as an academic centre.
- The North-West plains comprise black-soil country which is farmed quite intensively. Crops include wheat, sorghum and cotton. Much of this agriculture depends on pumping from the local rivers. Sadly, flow is unreliable: the rivers sometimes flood, and in other years run dry.

### Major centres:

Tamworth, Armidale, Moree

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	175,873		180,427		178,840		-0.2
No. households	66,166		67,697		73,904		2.2
Workforce	87,962	50.0	86,109	47.7	90,186	50.4	1.2
Employment	78,478	–	72,709	–	79,525	–	1.6
Unemployment	11,471	13.0	11,337	13.2	10,661	11.8	-1.5
DEET U/E	5,720	6.7	4,775	5.9	5,742	6.6	4.7
Structural U/E, % population <sup>1</sup>	13,132	12.7	14,371	14.2	14,473	13.4	0.2

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,846	10,317	2,128	11,792	2,485	13,894	5.1
Taxes paid	473	2,643	519	2,875	622	3,478	4.7
GST paid	161	899	215	1,191	286	1,600	–
Benefits	490	2,736	539	2,986	671	3,754	5.4
Business income	274	1,533	271	1,504	435	2,432	8.0
Interest/dividends	95	532	118	652	135	755	6.0
Interest paid	150	839	251	1,392	341	1,905	14.6
Net property income	39	220	31	171	29	163	-\$57
Net flow of funds	1,961	10,957	2,102	11,647	2,507	14,015	4.2
Rank		56		58		43	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.4	39
Population growth rate, 55+	-2.0	56
% Years growing since 1995	37	64
Fertility, babies % pop, 2004	1.21	37
Fertility bounce, 1996-2004	-0.26	58
Family / Youth migration	-1.1	55
Aged migration	3.9	42
Working elderly	30.5	13
Demographic stress	-6	58
Dominant locations	64	47
<b>Sustainability score</b>	<b>43</b>	<b>61</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Moree Plains	58.2	254
Least sustainable LGA – Barraba	23.7	615

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.03	63	672
New medium density and alterations	0.33	61	218

	2001	2004	Difference
Household size	2.77	2.73	-0.04
Household size rank	27	25	22

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-235	907	-34.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	20.2	29.2	56
Computer use (%)	35.5	43.8	53
Ratio	56.8	66.5	55
Rank diff, net / computer	-3	0	49
Estimated internet use (%)	20.3	29.2	55
Take-up surplus / shortfall	-0.1	0	33
Áv. household income, 2001	40,660	49,086	51

## ADSL COVERAGE

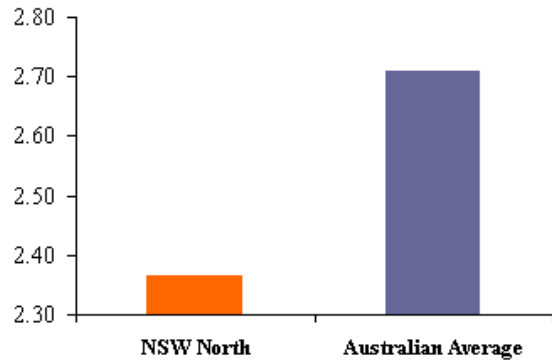
	Rate	Aust. Average	Rank
Coverage, % pop	70.6	90.4	48
Number of exchanges	197		
Number exchanges enabled	35		
% of exchanges enabled	17.8	34.3	54
Number HIBIS exchanges	4		
Exchanges per 10,000 pop.	11.5	2.7	8
Lowest (%)	0.0	Severn	
Highest (%)	100.0	Glen Innes	
% children	71.1	89.6	47
% of area covered	1.4	1.2	48

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.366	53	
Staging leaders (%)	3.682	46	466
Expected broadband (%)	32.2	51	4,075
Export elasticity (%)	5.59	3	707
Export x coverage (%)	1.64	11	208
Leaders lost (%)	1.08	18	137

### Expected E-staging Level

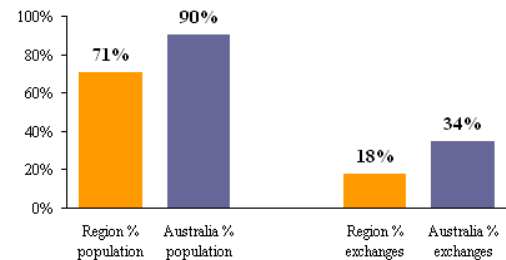


## BABY BOUNCE

	Per cent	Rank
1996	1.48	20
2001	1.36	23
2002	1.22	36
2003	1.22	30
2004	1.21	36
Bounce 2003-04	-0.01	50
Actual change 2003-04 (number)	-13	55

### NSW North

#### ADSL Coverage



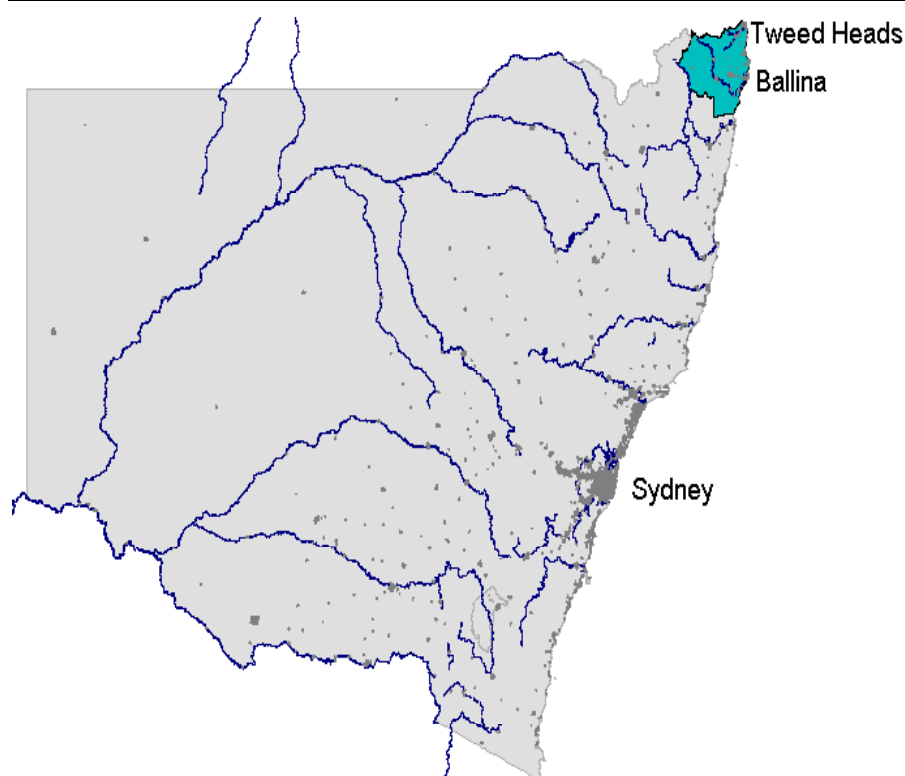
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.97	0.91
Long term Newstart	2.10	1.38
Total Newstart	3.07	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	4.43	3.42
DSP, aged under 25	0.30	0.22
Youth unemployment	0.69	0.47
Parenting Payment Single (PPS)	2.86	2.25
PPS, aged under 25	0.47	0.29

	Social Security % NFOF	Rank
1999	24.97	51
2001	25.64	53
2003	26.34	53
2004	27.96	54
2005	26.78	52

## NSW Richmond-Tweed



Richmond/Tweed is much closer to Brisbane than Sydney, and has increasingly become an extension of the Gold Coast. Its chief centre was and remains Lismore, which is located inland, but recent development has mostly been along the coast and in the nearby high-rainfall hills. Its economic base remains a mixture of retirement and agriculture, but there are signs of employment diversification as the economy of the Gold Coast extends southwards.

### Major centres:

Lismore, Tweed Heads

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	205,974		216,334		226,275		1.1
No. households	83,134		87,580		93,111		1.5
Workforce	91,750	44.4	91,161	42.1	101,521	44.9	2.7
Employment	72,795	–	71,727	–	84,767	–	4.3
Unemployment	18,954	20.7	19,432	21.3	16,754	16.5	-3.6
DEET U/E	12,484	14.0	10,536	12.1	7,810	8.2	-7.2
Structural U/E, % population <sup>1</sup>	21,086	18.2	23,267	19.5	22,885	17.2	-0.4

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,765	8,388	2,086	9,644	2,524	11,156	4.9
Taxes paid	436	2,072	487	2,253	661	2,922	5.9
GST paid	196	929	267	1,232	383	1,692	–
Benefits	711	3,381	780	3,606	998	4,409	4.5
Business income	264	1,255	260	1,201	365	1,614	4.3
Interest/dividends	100	478	124	574	150	663	5.6
Interest paid	158	750	244	1,126	325	1,437	11.5
Net property income	49	233	40	186	56	247	\$14
Net flow of funds	2,101	9,984	2,293	10,600	2,724	12,038	3.2
Rank		62		64		63	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	70.1	62
Population growth rate, 55+	6.2	16
% Years growing since 1995	78	42
Fertility, babies % pop, 2004	1.03	62
Fertility bounce, 1996-2004	-0.17	33
Family / Youth migration	0.7	40
Aged migration	6.7	5
Working elderly	19.2	58
Demographic stress	29	11
Dominant locations	51	58
<b>Sustainability score</b>	<b>59</b>	<b>36</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Byron	71.1	92
Least sustainable LGA – Kyogle	36.9	482

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.75	33	4,000
New medium density and alterations	1.55	28	1,305
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.57	2.54	-0.03
Household size rank	59	56	18

	New pop.	Existing pop.	Pop. conversion
Dwelling use	2,948	1,052	73.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.9	29.2	40
Computer use (%)	36.7	43.8	50
Ratio	62.5	66.5	31
Rank diff, net / computer	10	0	3
Estimated internet use (%)	20.4	29.2	53
Take-up surplus / shortfall	2.5	0	2
Av. household income, 2001	36,722	49,086	62

## ADSL COVERAGE

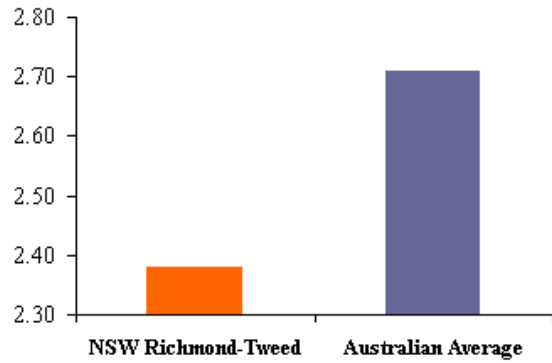
	Rate	Aust. Average	Rank
Coverage, % pop	82.2	90.4	30
Number of exchanges	68		
Number exchanges enabled	32		
% of exchanges enabled	47.1	34.3	27
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	3.6	2.7	31
Lowest (%)	33.8	Kyogle	
Highest (%)	91.2	Tweed	
% children	81.3	89.6	31
% of area covered	20.3	1.2	25

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.381	46	
Staging leaders (%)	3.733	44	408
Expected broadband (%)	32.8	41	3,587
Export elasticity (%)	4.73	25	516
Export x coverage (%)	0.92	34	101
Leaders lost (%)	0.73	35	80

### Expected E-staging Level

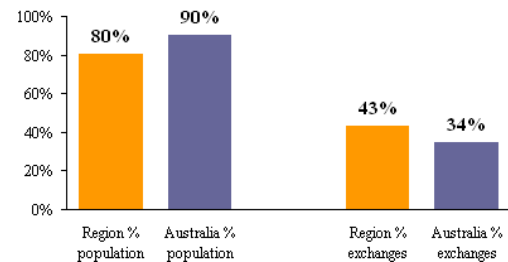


## BABY BOUNCE

	Per cent	Rank
1996	1.21	54
2001	1.18	54
2002	1.06	61
2003	1.04	61
2004	1.03	62
Bounce 2003-04	-0.01	53
Actual change 2003-04 (number)	2	51

### NSW Richmond-Tweed

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.37	0.91
Long term Newstart	2.57	1.38
Total Newstart	3.95	2.29
Mature Age Allowance	0.16	0.11
Disability Support (DSP)	5.59	3.42
DSP, aged under 25	0.33	0.22
Youth unemployment	0.72	0.47
Parenting Payment Single (PPS)	3.41	2.25
PPS, aged under 25	0.36	0.29

	Social Security % NFOF	Rank
1999	33.86	63
2001	34.02	62
2003	33.93	62
2004	35.26	61
2005	36.63	62

## NSW South-East



The South East of NSW is a complex region, with the following major component parts.

- The South Coast, a strip of retirement and tourist developments populated not only from Sydney but from Canberra and to some extent from Melbourne. Behind the beaches country originally cleared for dairy farming is reverting to plantation forestry.
- A belt of high plains stretching from Goulburn to the Victorian Border. Until recently this was fine-wool merino country. It now includes the Canberra suburb of Queanbeyan, the Canberra hobby-farm belt and Sydney's winter playground in the Snowy Mountains.
- An area of 'slopes' country reaching as far as Young. This has much in common with the Central West, but accesses Sydney via Goulburn rather than via the Blue Mountains.

### Major centres:

Goulburn, Queanbeyan, Bega

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	180,412		193,062		203,127		1.3
No. households	72,213		76,719		95,239		5.6
Workforce	96,934	53.7	88,097	45.6	100,822	49.6	3.4
Employment	89,381	–	76,793	–	91,230	–	4.4
Unemployment	7,553	7.8	11,303	12.8	9,593	9.5	-4.0
DEET U/E	7,937	8.4	6,364	7.5	4,324	4.5	-9.2
Structural U/E, % population <sup>1</sup>	10,580	10.0	14,491	13.4	13,672	11.0	-1.4

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,049	13,150	2,577	13,347	3,010	14,817	2.0
Taxes paid	533	3,418	640	3,316	779	3,834	1.9
GST paid	205	1,317	248	1,287	387	1,907	–
Benefits	471	3,022	548	2,838	705	3,472	2.3
Business income	293	1,879	291	1,506	395	1,946	0.6
Interest/dividends	100	644	134	693	159	785	3.3
Interest paid	202	1,296	280	1,451	375	1,846	6.1
Net property income	44	280	33	172	48	234	-\$46
Net flow of funds	2,017	12,945	2,414	12,502	2,776	13,667	0.9
Rank		19		42		49	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	71.8	58
Population growth rate, 55+	4.9	20
% Years growing since 1995	81	36
Fertility, babies % pop, 2004	1.12	59
Fertility bounce, 1996-2004	-0.19	39
Family / Youth migration	0.3	43
Aged migration	6.3	7
Working elderly	27.5	31
Demographic stress	24	18
Dominant locations	51	57
<b>Sustainability score</b>	<b>60</b>	<b>31</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Queanbeyan	77.4	29
Least sustainable LGA – Bombala	21.9	624

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	6.15	15	4,545
New medium density and alterations	1.70	25	1,255
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.61	2.58	-0.03
Household size rank	50	50	20

	New pop.	Existing pop.	Pop. conversion
Dwelling use	3,514	1,030	77.3

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	25.8	29.2	27
Computer use (%)	41.4	43.8	28
Ratio	62.3	66.5	33
Rank diff, net / computer	1	0	21
Estimated internet use (%)	25.6	29.2	31
Take-up surplus / shortfall	0.2	0	24
Áv. household income, 2001	43,145	49,086	42

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	70.6	90.4	47
Number of exchanges	178		
Number exchanges enabled	50		
% of exchanges enabled	28.1	34.3	42
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	8.5	2.7	14
Lowest (%)	9.4	Mulwaree	
Highest (%)	100.0	Goulburn	
% children	69.2	89.6	51
% of area covered	3.7	1.2	40

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.397	39	
Staging leaders (%)	4.066	33	432
Expected broadband (%)	33.2	35	3,536
Export elasticity (%)	4.85	19	516
Export x coverage (%)	1.43	16	152
Leaders lost (%)	1.20	10	127

### Expected E-staging Level

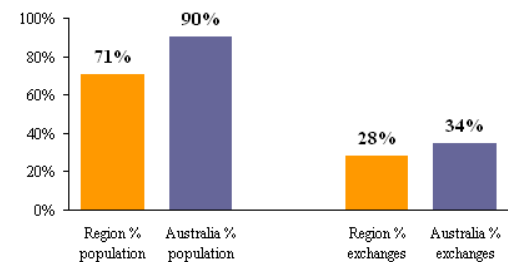


## BABY BOUNCE

	Per cent	Rank
1996	1.32	47
2001	1.24	45
2002	1.11	58
2003	1.06	60
2004	1.12	57
Bounce 2003-04	0.06	6
Actual change 2003-04 (number)	166	18

### NSW South-East

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.96	0.91
Long term Newstart	1.28	1.38
Total Newstart	2.23	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	4.11	3.42
DSP, aged under 25	0.24	0.22
Youth unemployment	0.52	0.47
Parenting Payment Single (PPS)	2.38	2.25
PPS, aged under 25	0.35	0.29

	Social Security % NFOF	Rank
1999	23.35	43
2001	22.70	41
2003	19.20	21
2004	24.74	40
2005	25.41	45

# Melbourne Inner



Since World War II, central city functions in Melbourne have spilled into adjacent LGAs, which have gentrified considerably in the process. Inner Melbourne thus comprises the CBD, the formerly industrial but now largely gentrified inner northern and eastern suburbs, and the formerly residential but now office-invaded inner southern suburbs. Its economic base is mainly city centre functions (administration, finance, cultural and educational services, tourism). However, Inner Melbourne still houses the Port of Melbourne and there is some remaining manufacturing.

## Major centres:

Melbourne, St Kilda

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	281,873		290,150		315,405		2.1
No. households	125,868		139,475		173,441		5.6
Workforce	169,206	59.9	163,474	56.3	181,869	57.7	2.7
Employment	147,051	–	151,600	–	173,345	–	3.4
Unemployment	22,156	13.1	11,874	7.3	8,524	4.7	-8.0
DEET U/E	10,927	6.5	8,808	5.3	9,657	5.3	2.3
Structural U/E, % population <sup>1</sup>	24,790	12.2	19,129	8.6	18,445	7.6	-0.9

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	5,330	19,103	7,421	25,576	8,992	28,510	6.9
Taxes paid	1,815	6,504	2,650	9,133	3,160	10,018	7.5
GST paid	330	1,181	545	1,878	798	2,531	–
Benefits	596	2,137	572	1,970	686	2,174	0.3
Business income	1,014	3,634	1,100	3,792	1,417	4,493	3.6
Interest/dividends	515	1,845	789	2,718	895	2,837	7.4
Interest paid	251	901	270	930	492	1,559	9.6
Net property income	266	954	331	1,140	289	916	-\$38
Net flow of funds	5,326	19,087	6,747	23,255	7,829	24,823	4.5
Rank		1		1		1	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	79.4	18
Population growth rate, 55+	8.9	8
% Years growing since 1995	79	41
Fertility, babies % pop, 2004	1.08	61
Fertility bounce, 1996-2004	0.09	4
Family / Youth migration	11.6	1
Aged migration	5.5	12
Working elderly	31.1	12
Demographic stress	50	5
Dominant locations	100	1
<b>Sustainability score</b>	<b>71</b>	<b>4</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Melbourne	83.7	7
Least sustainable LGA – Stonnington	56.9	267

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	12.79	2	17,097
New medium density and alterations	13.76	1	18,384

	2001	2004	Difference
Household size	2.17	2.04	-0.13
Household size rank	64	64	63

	New pop.	Existing pop.	Pop. conversion
Dwelling use	7,780	9,316	45.5

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	40.4	29.2	4
Computer use (%)	52.8	43.8	4
Ratio	76.6	66.5	2
Rank diff, net / computer	0	0	27
Estimated internet use (%)	37.9	29.2	5
Take-up surplus / shortfall	2.5	0	3
Áv. household income, 2001	58,260	49,086	7

## ADSL COVERAGE

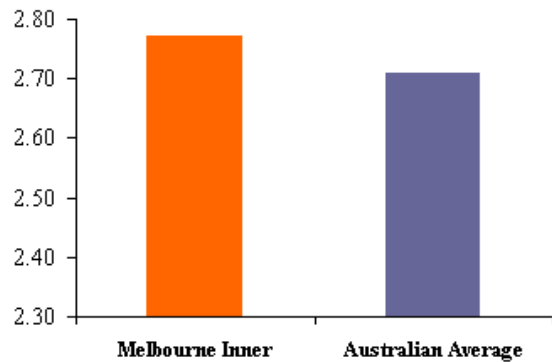
	Rate	Aust. Average	Rank
Coverage, % pop	100.0	90.4	Eq 1
Number of exchanges	16		
Number exchanges enabled	16		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.5	2.7	53
Lowest (%)	100.0		
Highest (%)	100.0		
% children	100.0	89.6	Eq 1
% of area covered	100.0	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.771	2	
Staging leaders (%)	9.119	1	3,423
Expected broadband (%)	49.0	2	18,384
Export elasticity (%)	4.17	50	1,568
Export x coverage (%)	0.00	59	0
Leaders lost (%)	0.00	59	0

### Expected E-staging Level

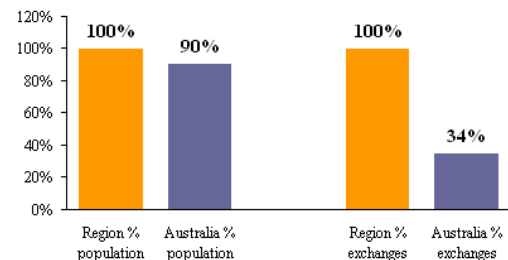


## BABY BOUNCE

	Per cent	Rank
1996	1.00	64
2001	1.04	63
2002	1.03	62
2003	1.04	62
2004	1.07	61
Bounce 2003-04	0.03	23
Actual change 2003-04 (number)	178	15

### Melbourne Inner

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.15	0.91
Long term Newstart	1.75	1.38
Total Newstart	2.90	2.29
Mature Age Allowance	0.10	0.11
Disability Support (DSP)	3.04	3.42
DSP, aged under 25	0.17	0.22
Youth unemployment	0.33	0.47
Parenting Payment Single (PPS)	1.05	2.25
PPS, aged under 25	0.09	0.29

	Social Security % NFOF	Rank
1999	11.19	4
2001	8.47	3
2003	8.33	3
2004	8.81	3
2005	8.76	3

# Melbourne East



The Melbourne East region is solidly suburban. The parts nearest the City date from the nineteenth century land boom, while the parts furthest away were not built up till the 1970s, but most of the region comprises garden suburbs of middle to high socio-economic status. Its economic base is largely commuting, though there has been some infusion of city centre functions, and the region has a major university and a belt of manufacturing.

## Major centres:

Camberwell, Box Hill, Glen Waverley

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	815,485		829,045		830,973		0.1
No. households	289,099		304,391		319,488		1.2
Workforce	439,859	53.9	465,525	56.2	464,594	55.9	-0.1
Employment	414,201	–	442,321	–	443,685	–	0.1
Unemployment	25,658	5.8	23,204	5.0	20,909	4.5	-2.6
DEET U/E	28,901	6.7	21,915	4.8	19,035	4.2	-3.5
Structural U/E, % population <sup>1</sup>	32,522	6.3	31,652	6.0	31,230	5.8	-0.3

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	13,157	16,120	15,917	19,199	18,094	21,775	5.1
Taxes paid	3,937	4,823	4,700	5,669	5,654	6,804	5.9
GST paid	764	937	1,231	1,484	1,572	1,892	–
Benefits	1,485	1,819	1,615	1,948	1,976	2,379	4.6
Business income	2,209	2,706	2,317	2,795	2,859	3,440	4.1
Interest/dividends	858	1,051	1,125	1,357	1,152	1,387	4.7
Interest paid	869	1,065	1,157	1,395	1,826	2,197	12.8
Net property income	471	577	391	471	279	336	-\$242
Net flow of funds	12,609	15,449	14,278	17,222	15,308	18,422	3.0
Rank		7		7		8	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.3	43
Population growth rate, 55+	1.2	41
% Years growing since 1995	75	44
Fertility, babies % pop, 2004	1.12	57
Fertility bounce, 1996-2004	-0.00	11
Family / Youth migration	3.8	11
Aged migration	4.0	39
Working elderly	29.5	19
Demographic stress	5	45
Dominant locations	100	1
<b>Sustainability score</b>	<b>58</b>	<b>38</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Knox	68.6	121
Least sustainable LGA – Monash	47.6	368

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.70	50	7,830
New medium density and alterations	1.77	24	5,129
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.86	2.79	-0.7
Household size rank	13	15	48

	New pop.	Existing pop.	Pop. conversion
Dwelling use	657	7,173	8.4

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	38.4	29.2	5
Computer use (%)	53.6	43.8	3
Ratio	71.7	66.5	9
Rank diff, net / computer	-2	0	42
Estimated internet use (%)	38.5	29.2	4
Take-up surplus / shortfall	0.0	0	31
Av. household income, 2001	57,809	49,086	8

## ADSL COVERAGE

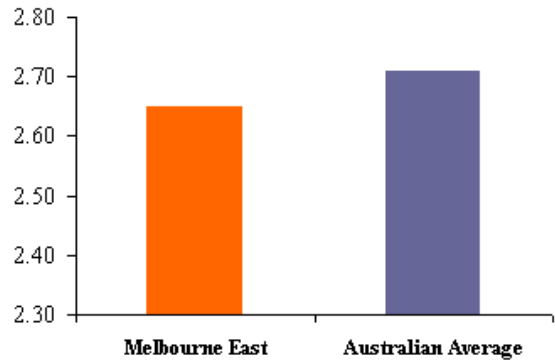
	Rate	Aust. Average	Rank
Coverage, % pop	99.8	90.4	Eq 1
Number of exchanges	36		
Number exchanges enabled	36		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.5	2.7	56
Lowest (%)	98.5		
Highest (%)	100.0		
% children	99.8	89.6	Eq 1
% of area covered	92.5	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.649	7	
Staging leaders (%)	7.672	7	3,483
Expected broadband (%)	45.7	7	20,748
Export elasticity (%)	4.21	48	1,911
Export x coverage (%)	0.01	55	4
Leaders lost (%)	0.02	55	8

### Expected E-staging Level

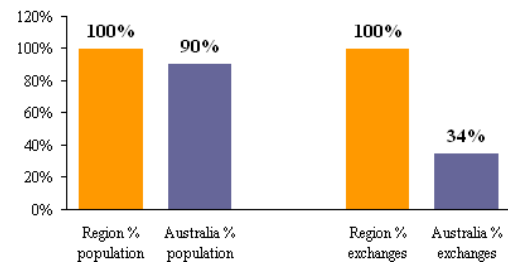


## BABY BOUNCE

	Per cent	Rank
1996	1.12	59
2001	1.13	60
2002	1.11	57
2003	1.12	55
2004	1.12	58
Bounce 2003-04	0.01	44
Actual change 2003-04 (number)	55	38

### Melbourne East

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.64	0.91
Long term Newstart	0.73	1.38
Total Newstart	1.36	2.29
Mature Age Allowance	0.07	0.11
Disability Support (DSP)	2.15	3.42
DSP, aged under 25	0.17	0.22
Youth unemployment	0.23	0.47
Parenting Payment Single (PPS)	1.24	2.25
PPS, aged under 25	0.11	0.29

	Social Security % NFOF	Rank
1999	11.77	5
2001	11.31	6
2003	12.31	6
2004	13.04	7
2005	12.91	7

# Melbourne North



Like Melbourne West, this region begins with suburbs developed during the nineteenth century land boom and extends to the urban fringe. Melbourne airport is located within the region but on the boundary of Melbourne West, and is becoming a nucleus for transport-related industries. The older parts of the region were established manufacturing areas, but with the decline of manufacturing the region is becoming a commuter zone for Central Melbourne. By and large socio-economic status is low to middling with high ethnic mix, but there has been some gentrification, and in Heidelberg-Eltham the region also includes hilly commuter suburbs which, in socio-economic composition, resemble Melbourne East. They are, however, cut off from the Eastern suburbs by a string of nature reserves along the Yarra river.

## Major centres:

Preston, Broadmeadows, Heidelberg

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	680,960		697,854		723,689		0.9
No. households	236,033		250,526		270,082		1.9
Workforce	343,454	50.4	348,668	50.0	370,909	51.3	1.6
Employment	306,237	–	311,970	–	339,220	–	2.1
Unemployment	37,218	10.8	36,700	10.5	31,690	8.5	-3.6
DEET U/E	28,392	8.4	26,213	7.7	22,767	6.3	-3.5
Structural U/E, % population <sup>1</sup>	50,074	11.6	51,619	11.6	51,583	11.0	0.0

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	8,789	12,862	10,332	14,806	12,340	17,052	4.8
Taxes paid	2,394	3,504	2,624	3,760	3,326	4,597	4.6
GST paid	579	847	854	1,223	1,188	1,642	–
Benefits	1,718	2,515	1,873	2,684	2,337	3,229	4.3
Business income	1,311	1,918	1,341	1,922	1,712	2,366	3.6
Interest/dividends	258	377	336	482	372	514	5.3
Interest paid	736	1,076	953	1,366	1,392	1,923	10.2
Net property income	160	234	121	174	73	101	-\$133
Net flow of funds	8,527	12,479	9,574	13,719	10,927	15,099	3.2
Rank		25		18		24	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	78.8	19
Population growth rate, 55+	3.6	29
% Years growing since 1995	68	46
Fertility, babies % pop, 2004	1.37	14
Fertility bounce, 1996-2004	-0.03	12
Family / Youth migration	3.1	20
Aged migration	3.1	61
Working elderly	22.3	50
Demographic stress	14	33
Dominant locations	100	1
<b>Sustainability score</b>	<b>60</b>	<b>32</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Hume	72.5	81
Least sustainable LGA – Banyule	48.0	361

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.64	21	13,476
New medium density and alterations	1.99	22	4,756

	2001	2004	Difference
Household size	2.92	2.83	-0.09
Household size rank	7	11	58

	New pop.	Existing pop.	Pop. conversion
Dwelling use	6,041	7,435	44.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	27.6	29.2	21
Computer use (%)	41.8	43.8	26
Ratio	66.0	66.5	18
Rank diff, net / computer	5	0	9
Estimated internet use (%)	27.5	29.2	22
Take-up surplus / shortfall	0.1	0	26
Av. household income, 2001	50,742	49,086	18

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	98.5	90.4	13
Number of exchanges	39		
Number exchanges enabled	37		
% of exchanges enabled	94.9	34.3	9
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.6	2.7	52
Lowest (%)	96.4	Nillumbik	
Highest (%)	100.0		
% children	98.2	89.6	14
% of area covered	52.8	1.2	19

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.602	13	
Staging leaders (%)	7.302	12	2,147
Expected broadband (%)	43.2	13	12,711
Export elasticity (%)	4.36	40	1,281
Export x coverage (%)	0.06	51	19
Leaders lost (%)	0.11	50	31

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.39	36
2001	1.34	25
2002	1.34	19
2003	1.34	16
2004	1.37	13
Bounce 2003-04	0.04	21
Actual change 2003-04 (number)	336	9

### Melbourne North

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.96	0.91
Long term Newstart	1.57	1.38
Total Newstart	2.53	2.29
Mature Age Allowance	0.09	0.11
Disability Support (DSP)	3.96	3.42
DSP, aged under 25	0.23	0.22
Youth unemployment	0.45	0.47
Parenting Payment Single (PPS)	2.05	2.25
PPS, aged under 25	0.20	0.29

	Social Security % NFOF	Rank
1999	20.15	29
2001	19.57	26
2003	20.57	31
2004	21.57	24
2005	21.39	26

# Melbourne South

Melbourne South is very similar to Melbourne East. Its older parts date from the nineteenth century, and its newest were developed a mere 20 or 30 years ago. The parts nearer the city are high status commuter suburbs, but further away the status gradient declines and there are manufacturing areas as well as golf courses.

## Major centres:

Brighton, Cheltenham



## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	343,346		345,800		349,189		0.2
No. households	131,497		138,524		147,076		1.5
Workforce	177,353	51.6	175,578	50.8	189,411	54.2	1.9
Employment	164,452	–	164,712	–	180,189	–	2.3
Unemployment	12,900	7.3	10,865	6.2	9,222	4.9	-4.0
DEET U/E	10,651	6.1	7,902	4.6	8,069	4.3	0.5
Structural U/E, % population <sup>1</sup>	16,618	7.8	15,900	7.3	15,094	6.8	-1.3

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	5,400	15,814	6,790	19,637	8,246	23,615	6.9
Taxes paid	1,647	4,825	2,120	6,132	2,588	7,413	7.4
GST paid	351	1,029	535	1,547	739	2,116	–
Benefits	705	2,065	751	2,173	888	2,543	3.5
Business income	932	2,729	978	2,827	1,260	3,607	4.8
Interest/dividends	392	1,148	563	1,629	577	1,651	6.3
Interest paid	353	1,034	410	1,185	721	2,065	12.2
Net property income	215	630	245	709	180	515	-\$116
Net flow of funds	5,292	15,499	6,262	18,110	7,102	20,339	4.6
Rank		6		5		3	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	73.6	52
Population growth rate, 55+	3.1	32
% Years growing since 1995	81	35
Fertility, babies % pop, 2004	1.23	31
Fertility bounce, 1996-2004	0.08	7
Family / Youth migration	3.4	16
Aged migration	4.5	23
Working elderly	25.8	40
Demographic stress	12	36
Dominant locations	100	1
<b>Sustainability score</b>	<b>63</b>	<b>25</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Kingston	62.7	199
Least sustainable LGA – Bayside	61.7	211

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.40	52	3,171
New medium density and alterations	2.03	19	2,681
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.62	2.58	-0.04
Household size rank	47	49	23

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,186	1,985	37.4

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	36.4	29.2	7
Computer use (%)	50.3	43.8	6
Ratio	72.4	66.5	6
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	35.2	29.2	6
Take-up surplus / shortfall	1.2	0	14
Av. household income, 2001	54,891	49,086	13

## ADSL COVERAGE

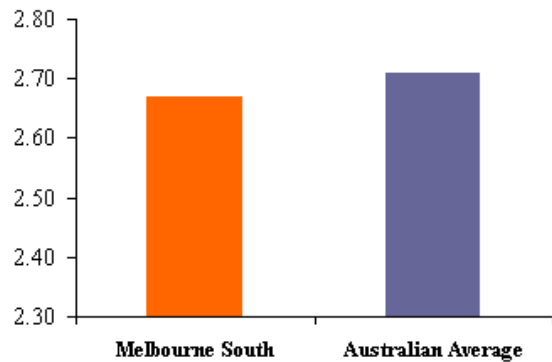
	Rate	Aust. Average	Rank
Coverage, % pop	100.0	90.4	Eq 1
Number of exchanges	13		
Number exchanges enabled	13		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.4	2.7	61
Lowest (%)	100.0		
Highest (%)	100.0		
% children	100.0	89.6	Eq 1
% of area covered	100.0	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.668	4	
Staging leaders (%)	7.800	5	1,564
Expected broadband (%)	45.9	6	9,195
Export elasticity (%)	4.47	37	895
Export x coverage (%)	0.00	59	0
Leaders lost (%)	0.00	59	0

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.15	56
2001	1.17	55
2002	1.18	45
2003	1.21	32
2004	1.23	30
Bounce 2003-04	0.02	31
Actual change 2003-04 (number)	89	26

### Melbourne South

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.68	0.91
Long term Newstart	0.90	1.38
Total Newstart	1.58	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	2.46	3.42
DSP, aged under 25	0.15	0.22
Youth unemployment	0.22	0.47
Parenting Payment Single (PPS)	1.30	2.25
PPS, aged under 25	0.11	0.29

	Social Security % NFOF	Rank
1999	13.32	9
2001	12.00	8
2003	12.40	7
2004	12.79	6
2005	12.50	6

# Melbourne West



Melbourne West starts the other side of the Port from the CBD, and extends to the edge of the metropolitan area. Its economic base emphasises manufacturing industries (particularly chemicals and engineering) and it is also known for transport depots. In the twentieth century many of its residents worked locally, and in the post-war period the region became decidedly multicultural, a tradition which is maintained. Some parts have gentrified, partly by the social mobility of post-war immigrants. The decline of manufacturing as an employer has led to an increase in commuting to Inner Melbourne, which is conveniently close.

## Major centres:

Footscray, Werribee, Sunshine

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	538,892		563,322		623,824		2.6
No. households	185,033		202,581		230,133		3.2
Workforce	266,748	49.4	283,629	50.3	310,641	49.8	2.3
Employment	234,653	–	250,543	–	281,828	–	3.0
Unemployment	32,095	12.0	33,086	11.7	28,813	9.3	-3.4
DEET U/E	25,260	9.6	22,182	8.0	22,362	7.4	0.2
Structural U/E, % population <sup>1</sup>	42,565	12.3	45,878	12.6	46,299	11.3	0.2

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	7,156	13,156	8,335	14,796	10,963	17,574	4.9
Taxes paid	1,939	3,565	2,089	3,708	2,861	4,586	4.3
GST paid	443	814	685	1,216	1,118	1,793	–
Benefits	1,392	2,559	1,537	2,729	2,004	3,212	3.9
Business income	1,009	1,854	1,032	1,831	1,409	2,259	3.3
Interest/dividends	161	295	217	385	264	423	6.2
Interest paid	573	1,053	747	1,327	1,077	1,727	8.6
Net property income	97	178	56	99	28	44	-\$134
Net flow of funds	6,859	12,610	7,656	13,591	9,611	15,406	3.4
Rank		23		19		21	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	80.3	16
Population growth rate, 55+	7.6	12
% Years growing since 1995	82	32
Fertility, babies % pop, 2004	1.42	9
Fertility bounce, 1996-2004	-0.04	14
Family / Youth migration	3.4	15
Aged migration	3.4	57
Working elderly	21.8	54
Demographic stress	26	16
Dominant locations	100	1
<b>Sustainability score</b>	<b>66</b>	<b>16</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Melton	83.6	8
Least sustainable LGA – Moonee Valley	48.5	356

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	10.00	5	19,324
New medium density and alterations	2.43	15	4,697
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.91	2.86	-0.05
Household size rank	9	8	36

	New pop.	Existing pop.	Pop. conversion
Dwelling use	15,598	3,726	80.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	26.9	29.2	23
Computer use (%)	40.8	43.8	31
Ratio	65.9	66.5	19
Rank diff, net / computer	8	0	5
Estimated internet use (%)	26.6	29.2	24
Take-up surplus / shortfall	0.3	0	23
Av. household income, 2001	50,551	49,086	19

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	98.5	90.4	14
Number of exchanges	26		
Number exchanges enabled	22		
% of exchanges enabled	84.6	34.3	14
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.5	2.7	55
Lowest (%)	92.2	Melton	
Highest (%)	100.0		
% children	98.2	89.6	15
% of area covered	26.9	1.2	23

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.611	11	
Staging leaders (%)	7.460	8	1,588
Expected broadband (%)	43.3	11	9,205
Export elasticity (%)	4.28	44	911
Export x coverage (%)	0.06	50	14
Leaders lost (%)	0.11	49	24

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.44	27
2001	1.37	21
2002	1.43	10
2003	1.39	12
2004	1.42	9
Bounce 2003-04	0.04	22
Actual change 2003-04 (number)	428	6

### Melbourne West

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.10	0.91
Long term Newstart	1.77	1.38
Total Newstart	2.88	2.29
Mature Age Allowance	0.11	0.11
Disability Support (DSP)	3.59	3.42
DSP, aged under 25	0.22	0.22
Youth unemployment	0.50	0.47
Parenting Payment Single (PPS)	2.51	2.25
PPS, aged under 25	0.25	0.29

	Social Security % NFOF	Rank
1999	20.29	30
2001	20.08	27
2003	19.72	25
2004	20.87	20
2005	20.85	24

# Melbourne Westernport



The Westernport region lies more than 25 km from Melbourne CBD, and includes three distinct segments:

- the ranges east of Melbourne, with their conservation areas, water reserves, hobby farms and wine industry,
- the industrial area centred on Dandenong and extending to the Western shore of Westernport Bay, with its attendant new industrial suburbs and considerable ethnic mix, and
- the Mornington Peninsula, with its regional centre at Frankston, its commuters and large retired population.

## Major centres:

Dandenong, Frankston, Lilydale

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	709,562		746,036		806,824		2.0
No. households	245,973		268,035		314,941		4.1
Workforce	353,038	49.8	386,563	51.8	406,146	50.3	1.2
Employment	321,294	–	349,302	–	372,064	–	1.6
Unemployment	31,744	9.0	37,260	9.6	34,081	8.4	-2.2
DEET U/E	30,599	8.8	24,889	6.6	19,946	5.1	-5.4
Structural U/E, % population <sup>1</sup>	41,238	9.5	48,000	10.4	48,780	9.6	0.4

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	8,974	12,526	10,705	14,349	13,102	16,239	4.4
Taxes paid	2,386	3,330	2,656	3,560	3,510	4,350	4.6
GST paid	595	830	927	1,242	1,405	1,741	–
Benefits	1,694	2,364	1,883	2,524	2,523	3,127	4.8
Business income	1,279	1,786	1,303	1,747	1,691	2,096	2.7
Interest/dividends	326	456	447	599	497	616	5.2
Interest paid	886	1,236	1,164	1,560	1,562	1,936	7.8
Net property income	166	232	110	148	97	120	-\$112
Net flow of funds	8,574	11,967	9,702	13,005	11,433	14,171	2.9
Rank		33		27		42	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	78.0	21
Population growth rate, 55+	6.7	14
% Years growing since 1995	85	25
Fertility, babies % pop, 2004	1.34	18
Fertility bounce, 1996-2004	-0.11	19
Family / Youth migration	2.4	23
Aged migration	4.8	19
Working elderly	27.5	32
Demographic stress	24	17
Dominant locations	100	1
<b>Sustainability score</b>	<b>66</b>	<b>15</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Casey	81.5	15
Least sustainable LGA – Gr. Dandenong	40.1	439

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	8.11	8	20,730
New medium density and alterations	0.95	37	2,431

	2001	2004	Difference
Household size	2.92	2.88	-0.04
Household size rank	8	6	24

	New pop.	Existing pop.	Pop. conversion
Dwelling use	17,015	3,715	82.1

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	27.8	29.2	20
Computer use (%)	43.8	43.8	19
Ratio	63.3	66.5	27
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	28.7	29.2	19
Take-up surplus / shortfall	-0.9	0	49
Av. household income, 2001	48,622	49,086	22

## ADSL COVERAGE

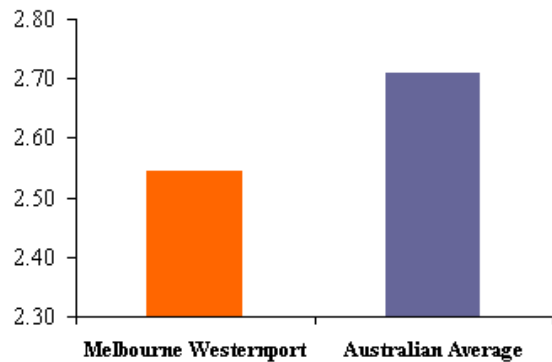
	Rate	Aust. Average	Rank
Coverage, % pop	96.6	90.4	18
Number of exchanges	87		
Number exchanges enabled	67		
% of exchanges enabled	77.0	34.3	20
Number HIBIS exchanges	10		
Exchanges per 10,000 pop.	1.2	2.7	44
Lowest (%)	73.1	Cardinia	
Highest (%)	100.0		
% children	96.2	89.6	17
% of area covered	55.2	1.2	17

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.543	20	
Staging leaders (%)	6.840	18	2,325
Expected broadband (%)	41.1	20	13,955
Export elasticity (%)	4.38	39	1,490
Export x coverage (%)	0.15	46	51
Leaders lost (%)	0.23	45	80

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.44	24
2001	1.34	26
2002	1.37	16
2003	1.30	20
2004	1.34	17
Bounce 2003-04	0.04	16
Actual change 2003-04 (number)	556	2

### Melbourne Westernport

#### ADSL Coverage



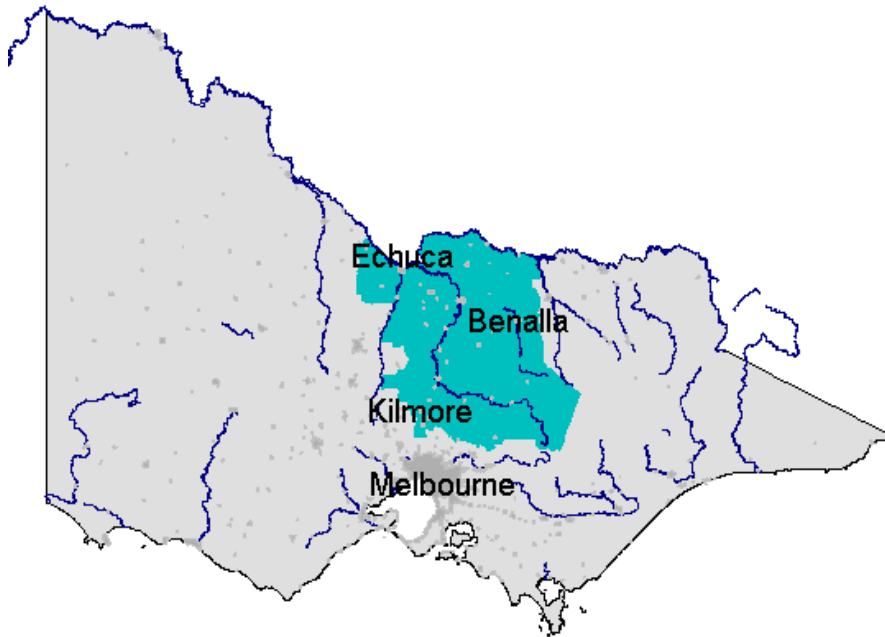
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.95	0.91
Long term Newstart	1.27	1.38
Total Newstart	2.23	2.29
Mature Age Allowance	0.10	0.11
Disability Support (DSP)	3.10	3.42
DSP, aged under 25	0.20	0.22
Youth unemployment	0.44	0.47
Parenting Payment Single (PPS)	2.52	2.25
PPS, aged under 25	0.26	0.29

	Social Security % NFOF	Rank
1999	19.76	28
2001	19.41	24
2003	20.47	30
2004	21.86	26
2005	22.07	28

# VIC Goulburn



The Goulburn region has two main parts.

- The hill country 'north of the divide' includes the headwaters of the Goulburn. Economic activity is a mixture between high-rainfall grazing and forest reserves, with some tourism. The area is within the Melbourne hobby-farm belt, and indeed some of it is within commuter range.
- The Goulburn Valley proper is the plain north of Seymour. The important agricultural areas are irrigated, with intensive dairy and orchard production. The chief city of the Valley, Shepparton, is noted for its food processing industries. Food processing also takes place in other towns in the region, and Echuca adds tourism based on its old river port.

## Major centres:

Shepparton, Benalla, Echuca

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	185,207		193,999		202,906		1.1
No. households	68,789		72,869		83,819		3.6
Workforce	93,237	50.2	96,761	49.9	103,803	51.2	1.8
Employment	82,997	–	86,402	–	94,357	–	2.2
Unemployment	10,238	11.0	10,358	10.7	9,447	9.1	-2.3
DEET U/E	6,584	7.3	6,455	6.9	4,455	4.4	-8.9
Structural U/E, % population <sup>1</sup>	12,341	11.5	13,217	12.0	13,478	11.1	0.5

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,972	10,462	2,374	12,236	2,939	14,487	5.6
Taxes paid	482	2,559	554	2,856	700	3,451	5.1
GST paid	152	805	221	1,140	342	1,685	–
Benefits	493	2,615	537	2,767	708	3,487	4.9
Business income	385	2,044	388	2,003	560	2,762	5.1
Interest/dividends	90	479	115	595	137	676	5.9
Interest paid	198	1,052	271	1,396	367	1,810	9.5
Net property income	42	225	27	139	28	140	-\$85
Net flow of funds	2,150	11,409	2,395	12,347	2,964	14,606	4.2
Rank		49		45		32	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	74.2	49
Population growth rate, 55+	3.6	28
% Years growing since 1995	89	13
Fertility, babies % pop, 2004	1.21	38
Fertility bounce, 1996-2004	-0.19	44
Family / Youth migration	0.1	45
Aged migration	4.4	26
Working elderly	28.3	29
Demographic stress	19	25
Dominant locations	38	62
<b>Sustainability score</b>	<b>60</b>	<b>34</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Mitchell	70.3	101
Least sustainable LGA – Strathbogie	47.8	363

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.45	24	3,785
New medium density and alterations	0.35	58	245

	2001	2004	Difference
Household size	2.79	2.75	-0.04
Household size rank	20	20	28

	New pop.	Existing pop.	Pop. conversion
Dwelling use	2,670	1,115	70.5

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	21.9	29.2	50
Computer use (%)	39.1	43.8	41
Ratio	56.0	66.5	57
Rank diff, net / computer	-9	0	60
Estimated internet use (%)	23.6	29.2	42
Take-up surplus / shortfall	-1.7	0	58
Av. household income, 2001	42,782	49,086	44

## ADSL COVERAGE

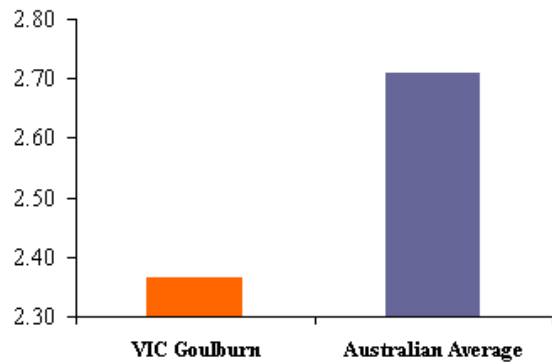
	Rate	Aust. Average	Rank
Coverage, % pop	67.5	90.4	55
Number of exchanges	130		
Number exchanges enabled	34		
% of exchanges enabled	26.2	34.3	47
Number HIBIS exchanges	8		
Exchanges per 10,000 pop.	7.0	2.7	18
Lowest (%)	50.4	Murrindindi	
Highest (%)	85.6	Greater Shepparton	
% children	67.6	89.6	54
% of area covered	9.2	1.2	32

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.365	54	
Staging leaders (%)	3.504	56	444
Expected broadband (%)	31.9	56	4,042
Export elasticity (%)	5.15	13	652
Export x coverage (%)	1.67	9	212
Leaders lost (%)	1.14	13	144

### Expected E-staging Level

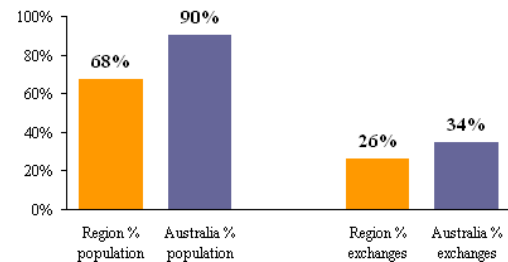


## BABY BOUNCE

	Per cent	Rank
1996	1.40	33
2001	1.27	40
2002	1.24	33
2003	1.22	29
2004	1.21	37
Bounce 2003-04	-0.01	52
Actual change 2003-04 (number)	16	47

### VIC Goulburn

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.84	0.91
Long term Newstart	1.40	1.38
Total Newstart	2.24	2.29
Mature Age Allowance	0.10	0.11
Disability Support (DSP)	3.88	3.42
DSP, aged under 25	0.25	0.22
Youth unemployment	0.54	0.47
Parenting Payment Single (PPS)	2.40	2.25
PPS, aged under 25	0.28	0.29

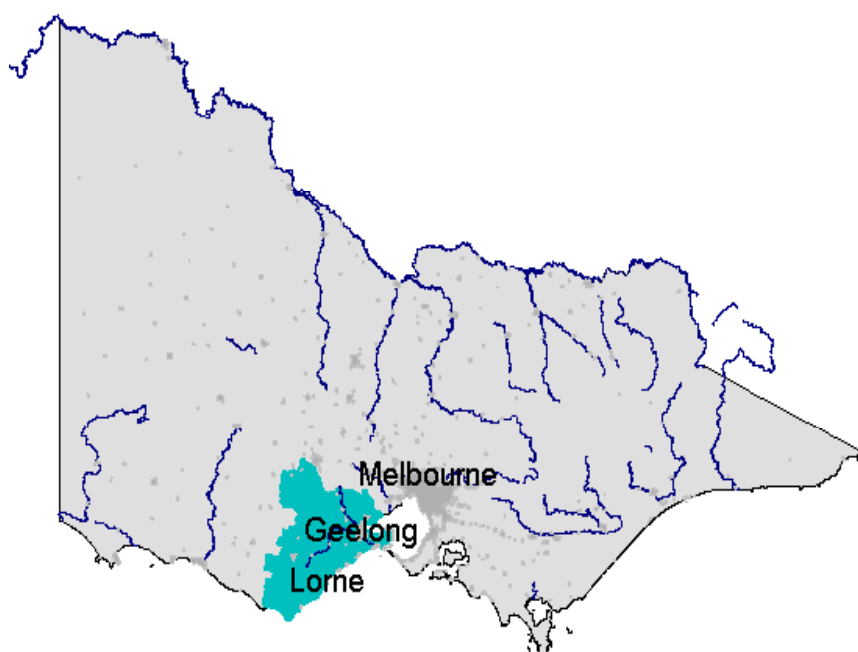
	Social Security % NFOF	Rank
1999	22.92	41
2001	22.41	40
2003	22.36	40
2004	24.72	39
2005	23.87	37

## VIC Barwon

Much of the Barwon region, including its urban centre in Geelong, is within commuting range of Melbourne, and the commuter traffic has increased considerably over the past several decades. Even so, Geelong is a manufacturing centre in its own right, though it has suffered from the decline of the textile industry, and is exposed to the fortunes of the chemical and automotive industries. Along the coast, around the Belarine Peninsula and extending down the Great Ocean Road there are resort and retirement communities, while inland there are agricultural areas. The region includes the Otway forests in its south-west corner.

### Major centres:

Geelong



### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	243,376		254,732		269,365		1.4
No. households	90,588		97,707		120,168		5.3
Workforce	117,308	48.3	118,682	46.6	128,840	47.8	2.1
Employment	102,953	–	103,608	–	116,982	–	3.1
Unemployment	14,355	12.2	15,074	12.7	11,858	9.2	-5.8
DEET U/E	11,540	10.0	9,126	7.9	9,376	7.5	0.7
Structural U/E, % population <sup>1</sup>	16,617	11.5	18,416	12.2	17,261	10.4	-1.6

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,927	11,885	3,454	13,560	4,180	15,517	4.5
Taxes paid	780	3,165	868	3,407	1,090	4,045	4.2
GST paid	217	882	314	1,234	467	1,736	–
Benefits	665	2,700	728	2,856	928	3,446	4.2
Business income	416	1,688	424	1,663	552	2,050	3.3
Interest/dividends	140	567	174	682	194	720	4.1
Interest paid	231	937	310	1,218	442	1,641	9.8
Net property income	64	259	44	173	48	177	-\$82
Net flow of funds	2,983	12,114	3,331	13,075	3,903	14,490	3.0
Rank		32		25		35	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	73.7	51
Population growth rate, 55+	4.4	22
% Years growing since 1995	96	6
Fertility, babies % pop, 2004	1.17	49
Fertility bounce, 1996-2004	-0.09	17
Family / Youth migration	1.6	32
Aged migration	3.9	40
Working elderly	21.0	56
Demographic stress	16	29
Dominant locations	86	27
<b>Sustainability score</b>	<b>61</b>	<b>28</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Surf Coast	76.3	41
Least sustainable LGA – Queenscliffe	29.4	568

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	7.50	9	6,990
New medium density and alterations	1.00	35	936

	2001	2004	Difference
Household size	2.73	2.66	-0.07
Household size rank	32	36	49

	New pop.	Existing pop.	Pop. conversion
Dwelling use	4,397	2,593	62.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	26.6	29.2	25
Computer use (%)	43.1	43.8	20
Ratio	61.6	66.5	37
Rank diff, net / computer	-5	0	52
Estimated internet use (%)	27.2	29.2	23
Take-up surplus / shortfall	-0.7	0	43
Áv. household income, 2001	44,353	49,086	34

## ADSL COVERAGE

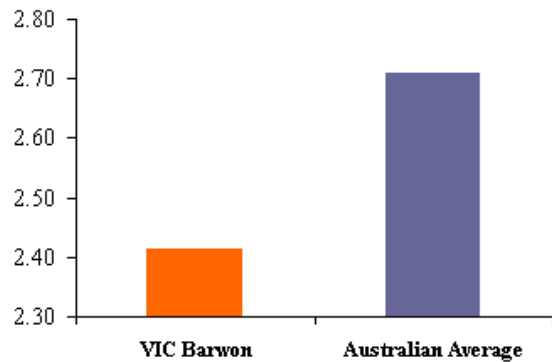
	Rate	Aust. Average	Rank
Coverage, % pop	86.7	90.4	28
Number of exchanges	76		
Number exchanges enabled	28		
% of exchanges enabled	36.8	34.3	37
Number HIBIS exchanges	6		
Exchanges per 10,000 pop.	3.2	2.7	35
Lowest (%)	35.6	Golden Plains	
Highest (%)	100.0	Queenscliffe	
% children	85.7	89.6	28
% of area covered	11.7	1.2	28

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.412	34	
Staging leaders (%)	4.042	35	461
Expected broadband (%)	34.0	31	3,875
Export elasticity (%)	4.34	41	495
Export x coverage (%)	0.58	37	66
Leaders lost (%)	0.54	37	61

### Expected E-staging Level

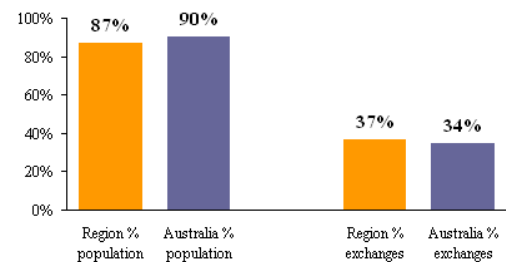


## BABY BOUNCE

	Per cent	Rank
1996	1.27	52
2001	1.19	53
2002	1.21	39
2003	1.15	48
2004	1.17	49
Bounce 2003-04	0.03	26
Actual change 2003-04 (number)	124	23

### VIC Barwon

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.87	0.91
Long term Newstart	1.45	1.38
Total Newstart	2.32	2.29
Mature Age Allowance	0.14	0.11
Disability Support (DSP)	3.58	3.42
DSP, aged under 25	0.32	0.22
Youth unemployment	0.53	0.47
Parenting Payment Single (PPS)	2.29	2.25
PPS, aged under 25	0.27	0.29

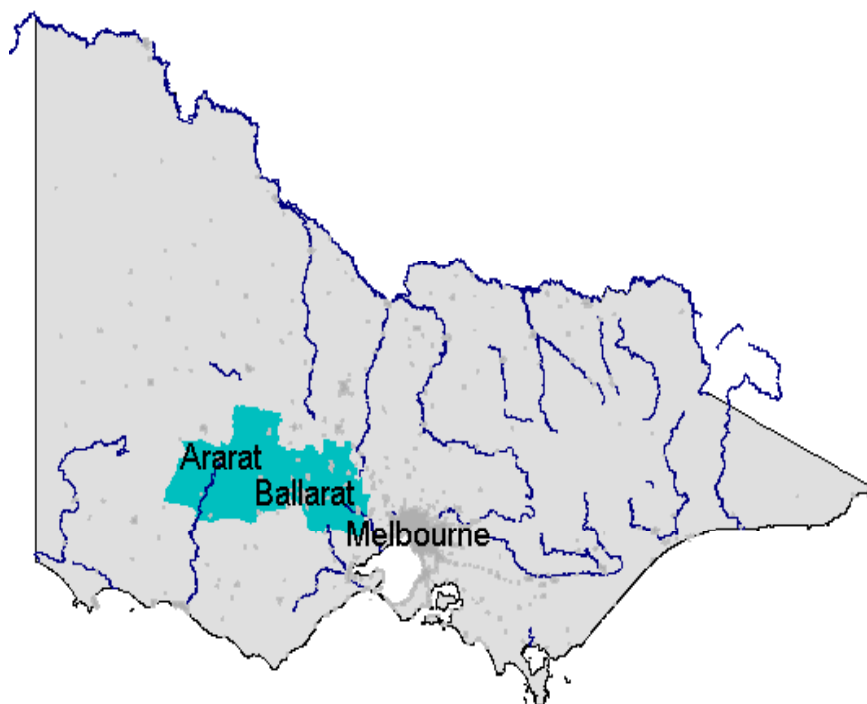
	Social Security % NFOF	Rank
1999	22.28	39
2001	21.85	38
2003	20.36	29
2004	23.44	32
2005	23.78	35

## VIC Central Highlands

The Central Highlands are centred on Ballarat. The urban structure of the region dates from the gold rushes 150 years ago; Ballarat itself and many of the smaller towns were kept going by industries and institutions (such as psychiatric hospitals) founded in the nineteenth century, and now in a state of gradual decay. The region includes areas of intensive farming, and its nineteenth century heritage has become the basis of a tourism, hobby farm and retirement revival. Ballarat has also diversified its economic base.

### Major centres:

Ballarat, Ararat



### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	136,458		141,536		147,451		1.0
No. households	51,026		53,648		60,491		3.0
Workforce	67,411	49.4	77,507	54.8	70,847	48.0	-2.2
Employment	58,489	–	68,849	–	63,761	–	-1.9
Unemployment	8,923	13.2	8,658	11.2	7,087	10.0	-4.9
DEET U/E	8,117	12.8	6,028	7.9	5,555	8.1	-2.0
Structural U/E, % population <sup>1</sup>	10,595	13.0	11,191	13.5	10,842	12.0	-0.8

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,497	10,817	1,786	12,621	2,277	15,445	6.1
Taxes paid	384	2,776	429	3,033	623	4,225	7.3
GST paid	100	724	167	1,182	254	1,724	–
Benefits	390	2,820	421	2,974	536	3,635	4.3
Business income	216	1,558	219	1,544	290	1,968	4.0
Interest/dividends	66	477	79	556	88	596	3.8
Interest paid	126	912	179	1,267	243	1,648	10.4
Net property income	40	288	17	123	19	130	-\$159
Net flow of funds	1,598	11,549	1,746	12,337	2,090	14,177	3.5
Rank		44		47		41	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.6	34
Population growth rate, 55+	2.9	33
% Years growing since 1995	86	23
Fertility, babies % pop, 2004	1.16	52
Fertility bounce, 1996-2004	-0.22	50
Family / Youth migration	1.6	33
Aged migration	4.2	34
Working elderly	23.7	48
Demographic stress	14	34
Dominant locations	77	33
<b>Sustainability score</b>	<b>59</b>	<b>35</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Moorabool	66.6	147
Least sustainable LGA – Pyrenees	27.6	588

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.85	32	2,477
New medium density and alterations	0.70	41	359

	2001	2004	Difference
Household size	2.77	2.73	-0.04
Household size rank	25	23	27

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,682	795	67.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	24.4	29.2	34
Computer use (%)	42.2	43.8	23
Ratio	57.8	66.5	52
Rank diff, net / computer	-11	0	62
Estimated internet use (%)	26.0	29.2	26
Take-up surplus / shortfall	-1.7	0	57
Áv. household income, 2001	42,209	49,086	46

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	76.6	90.4	36
Number of exchanges	71		
Number exchanges enabled	19		
% of exchanges enabled	26.8	34.3	45
Number HIBIS exchanges	1		
Exchanges per 10,000 pop.	5.3	2.7	22
Lowest (%)	30.2	Pyrenees	
Highest (%)	90.5	Ballarat	
% children	76.1	89.6	36
% of area covered	4.7	1.2	35

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.396	40	
Staging leaders (%)	3.773	43	256
Expected broadband (%)	32.9	39	2,234
Export elasticity (%)	4.52	34	306
Export x coverage (%)	1.06	28	72
Leaders lost (%)	0.88	30	60

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.39	37
2001	1.23	47
2002	1.16	50
2003	1.16	43
2004	1.16	52
Bounce 2003-04	0.01	43
Actual change 2003-04 (number)	30	42

### VIC Central Highlands

#### ADSL Coverage



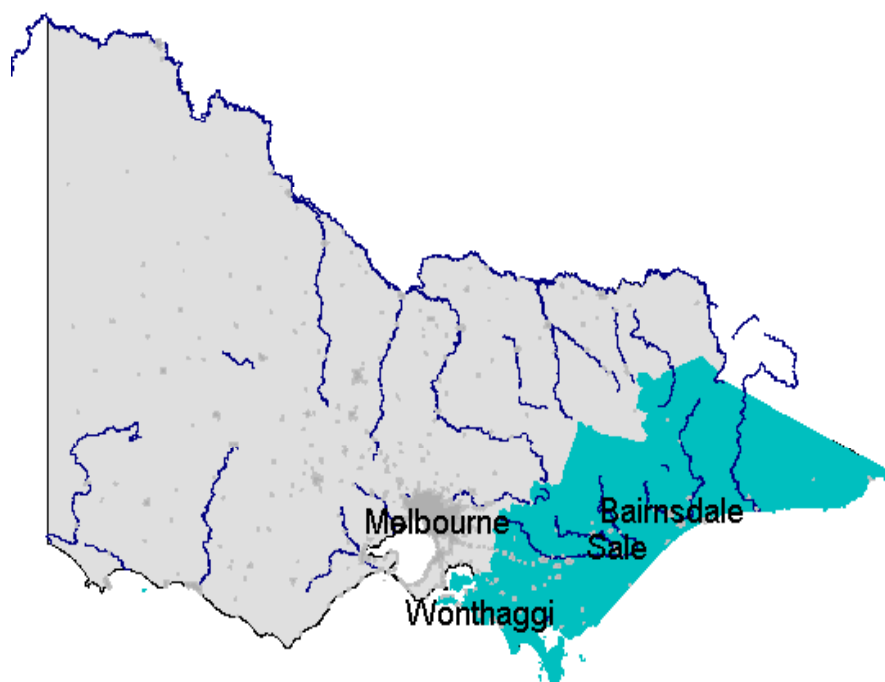
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.93	0.91
Long term Newstart	1.51	1.38
Total Newstart	2.43	2.29
Mature Age Allowance	0.14	0.11
Disability Support (DSP)	4.39	3.42
DSP, aged under 25	0.34	0.22
Youth unemployment	0.62	0.47
Parenting Payment Single (PPS)	2.60	2.25
PPS, aged under 25	0.30	0.29

	Social Security % NFOF	Rank
1999	24.42	46
2001	24.11	47
2003	27.27	56
2004	25.11	41
2005	25.64	47

# VIC Gippsland



Gippsland is a clearly-defined region east of Melbourne and south of the ranges. Its production statistics are dominated by oil and gas from Bass Strait, but these yield little in the way of local employment or income. It has four sub-regions.

- ❑ West Gippsland – intensive dairy farming, some timber milling and commuting to Melbourne. Its main centre is Warragul.
- ❑ South Gippsland – intensive dairy farming, timber plantations, coastal retirement areas and resorts.
- ❑ The Latrobe Valley – centre of Victorian power and an important plantation based paper industry. The Valley has suffered a difficult transition following the cessation of construction of new power plants.
- ❑ East Gippsland – patches of intensive agriculture with retirement areas around the Lakes and along the coast. The forested hills support a timber industry with an uncertain future.

## Major centres:

Warragul, Traralgon, Bairnsdale

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	233,546		239,829		248,213		0.9
No. households	89,219		93,830		118,087		5.9
Workforce	109,994	46.9	100,576	41.9	125,780	50.7	5.7
Employment	96,442	–	84,799	–	112,144	–	7.2
Unemployment	13,582	12.3	15,776	15.7	13,636	10.8	-3.6
DEET U/E	11,009	10.2	9,041	9.4	8,293	6.9	-2.1
Structural U/E, % population <sup>1</sup>	16,703	17.9	19,309	20.6	18,799	12.7	-0.7

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,464	10,389	2,821	11,767	3,839	15,468	6.9
Taxes paid	630	2,655	675	2,815	843	3,395	4.2
GST paid	222	935	276	1,153	463	1,866	–
Benefits	672	2,833	739	3,082	940	3,787	5.0
Business income	405	1,708	411	1,713	635	2,559	7.0
Interest/dividends	101	424	132	550	160	646	7.3
Interest paid	222	934	302	1,262	428	1,723	10.7
Net property income	46	194	33	139	33	133	-\$61
Net flow of funds	2,615	11,024	2,882	12,022	3,874	15,609	6.0
Rank		55		52		20	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	72.6	56
Population growth rate, 55+	-0.5	51
% Years growing since 1995	66	50
Fertility, babies % pop, 2004	1.14	55
Fertility bounce, 1996-2004	-0.20	45
Family / Youth migration	-1.0	53
Aged migration	5.1	16
Working elderly	23.9	46
Demographic stress	6	43
Dominant locations	28	64
<b>Sustainability score</b>	<b>48</b>	<b>55</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Bass Coast	69.6	109
Least sustainable LGA – Latrobe	39.1	453

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.28	26	4,727
New medium density and alterations	0.54	48	487
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.68	2.60	-0.08
Household size rank	41	45	54
	<b>New pop.</b>	<b>Existing pop.</b>	<b>Pop. conversion</b>
Dwelling use	1,898	2,829	40.1

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	24.1	29.2	37
Computer use (%)	41.3	43.8	29
Ratio	58.4	66.5	47
Rank diff, net / computer	-8	0	58
Estimated internet use (%)	24.8	29.2	34
Take-up surplus / shortfall	-0.7	0	44
Av. household income, 2001	39,837	49,086	55

## ADSL COVERAGE

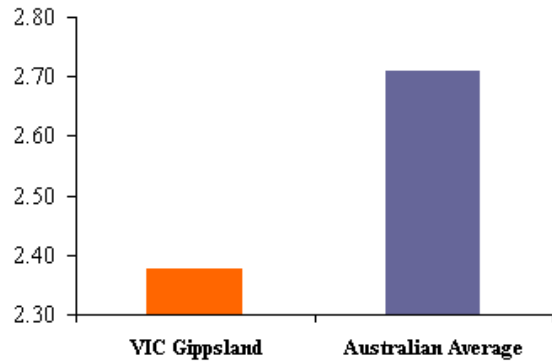
	Rate	Aust. Average	Rank
Coverage, % pop	69.1	90.4	52
Number of exchanges	173		
Number exchanges enabled	38		
% of exchanges enabled	22.0	34.3	50
Number HIBIS exchanges	12		
Exchanges per 10,000 pop.	7.6	2.7	16
Lowest (%)	46.4	South Gippsland	
Highest (%)	89.4	Latrobe	
% children	68.9	89.6	52
% of area covered	3.9	1.2	39

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.376	49
Staging leaders (%)	3.577	51
Expected broadband (%)	32.4	49
Export elasticity (%)	4.94	17
Export x coverage (%)	1.53	14
Leaders lost (%)	1.10	16

### Expected E-staging Level

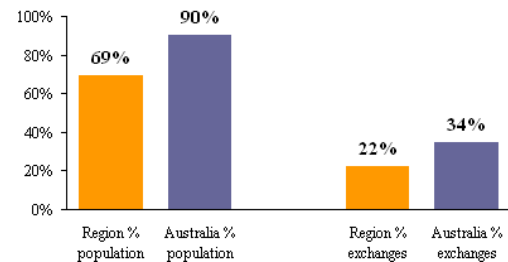


## BABY BOUNCE

	Per cent	Rank
1996	1.35	42
2001	1.14	59
2002	1.11	59
2003	1.12	54
2004	1.14	55
Bounce 2003-04	0.03	28
Actual change 2003-04 (number)	85	28

### VIC Gippsland

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.88	0.91
Long term Newstart	1.54	1.38
Total Newstart	2.43	2.29
Mature Age Allowance	0.13	0.11
Disability Support (DSP)	4.58	3.42
DSP, aged under 25	0.35	0.22
Youth unemployment	0.56	0.47
Parenting Payment Single (PPS)	2.54	2.25
PPS, aged under 25	0.31	0.29
	<b>Social Security % NFOF</b>	<b>Rank</b>
1999	25.69	55
2001	25.64	52
2003	21.76	36
2004	25.15	42
2005	24.26	40

## VIC Loddon



The Loddon region has much in common with the Central Highlands, but is centred on Bendigo. In Bendigo itself and in many other towns the region has a heritage of nineteenth century architecture. Its engineering industries were originally started to serve the mining industry, the railways and latterly defence; recent times have not been kind to them. However, the heritage buildings underpin tourism, and proximity to Melbourne keeps land values up for hobby farms. North of Bendigo the plains are devoted to mixed farming similar to that carried out in the Mallee-Wimmera.

### Major centres:

Bendigo, Castlemaine

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	159,933		166,954		175,238		1.2
No. households	60,251		63,480		71,331		3.0
Workforce	74,778	46.7	73,155	43.8	84,203	48.1	3.6
Employment	65,306	–	63,503	–	76,048	–	4.6
Unemployment	9,471	12.7	9,653	13.2	8,155	9.7	-4.1
DEET U/E	6,785	9.2	5,818	8.2	6,034	7.4	0.9
Structural U/E, % population <sup>1</sup>	11,514	12.2	12,574	13.0	12,335	11.5	-0.5

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,687	10,349	2,037	12,201	2,294	13,093	4.0
Taxes paid	428	2,624	493	2,951	558	3,183	3.3
GST paid	143	876	196	1,177	285	1,628	–
Benefits	448	2,748	485	2,906	625	3,566	4.4
Business income	258	1,583	262	1,567	313	1,789	2.1
Interest/dividends	70	432	97	582	109	620	6.2
Interest paid	160	981	215	1,289	294	1,676	9.3
Net property income	37	225	24	144	31	179	-\$45
Net flow of funds	1,769	10,856	2,001	11,983	2,236	12,762	2.7
Rank		58		55		60	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	74.5	45
Population growth rate, 55+	3.7	26
% Years growing since 1995	87	16
Fertility, babies % pop, 2004	1.17	50
Fertility bounce, 1996-2004	-0.13	22
Family / Youth migration	0.9	37
Aged migration	4.4	25
Working elderly	23.8	47
Demographic stress	17	27
Dominant locations	67	42
<b>Sustainability score</b>	<b>60</b>	<b>30</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Macedon Ranges	67.1	141
Least sustainable LGA – Loddon	24.6	609

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.60	22	3,392
New medium density and alterations	0.47	49	286

	2001	2004	Difference
Household size	2.76	2.71	-0.05
Household size rank	31	26	35

	New pop.	Existing pop.	Pop. conversion
Dwelling use	2,232	1,159	65.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	24.4	29.2	33
Computer use (%)	42.2	43.8	24
Ratio	57.9	66.5	50
Rank diff, net / computer	-9	0	60
Estimated internet use (%)	26.0	29.2	27
Take-up surplus / shortfall	-1.6	0	56
Av. household income, 2001	42,029	49,086	48

## ADSL COVERAGE

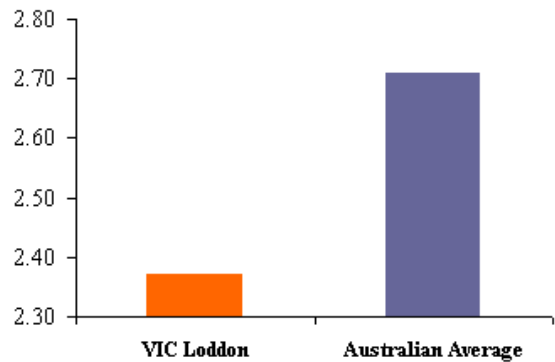
	Rate	Aust. Average	Rank
Coverage, % pop	72.0	90.4	45
Number of exchanges	73		
Number exchanges enabled	27		
% of exchanges enabled	37.0	34.3	36
Number HIBIS exchanges	1		
Exchanges per 10,000 pop.	4.6	2.7	27
Lowest (%)	20.1	Loddon	
Highest (%)	83.0	Greater Bendigo	
% children	71.6	89.6	46
% of area covered	9.6	1.2	31

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.372	50	
Staging leaders (%)	3.560	53	281
Expected broadband (%)	32.3	50	2,556
Export elasticity (%)	4.61	30	364
Export x coverage (%)	1.29	23	102
Leaders lost (%)	1.00	24	79

### Expected E-staging Level

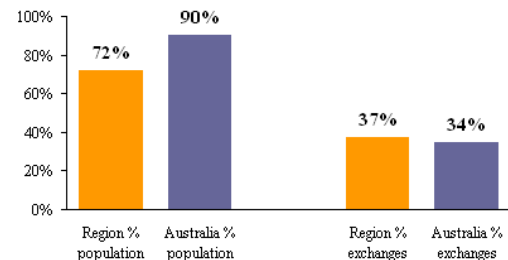


## BABY BOUNCE

	Per cent	Rank
1996	1.29	50
2001	1.23	48
2002	1.16	48
2003	1.15	47
2004	1.17	50
Bounce 2003-04	0.02	36
Actual change 2003-04 (number)	57	37

### VIC Loddon

#### ADSL Coverage



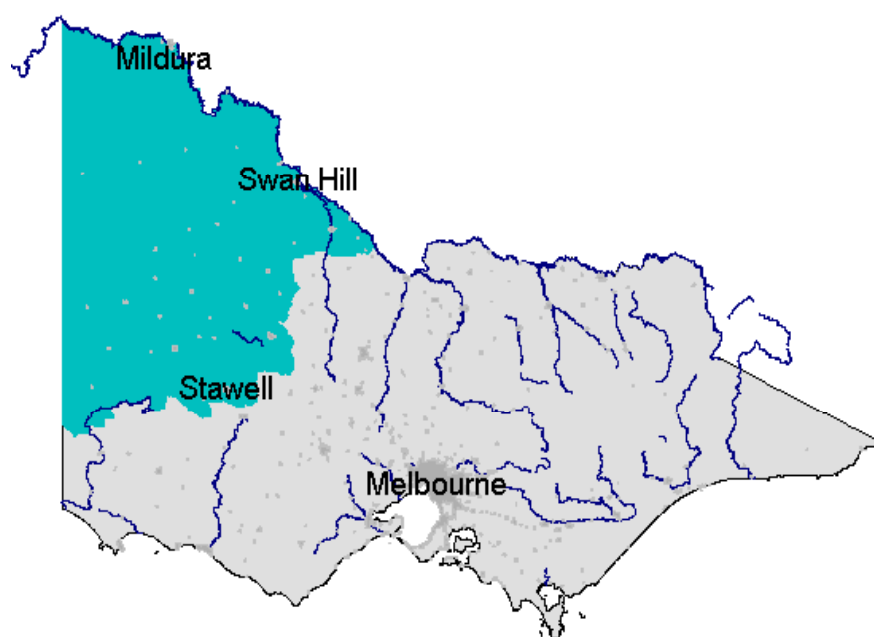
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.86	0.91
Long term Newstart	1.57	1.38
Total Newstart	2.43	2.29
Mature Age Allowance	0.14	0.11
Disability Support (DSP)	4.09	3.42
DSP, aged under 25	0.31	0.22
Youth unemployment	0.58	0.47
Parenting Payment Single (PPS)	2.46	2.25
PPS, aged under 25	0.30	0.29

	Social Security % NFOF	Rank
1999	25.31	53
2001	24.25	49
2003	21.34	34
2004	26.81	50
2005	27.95	56

## VIC Mallee-Wimmera



The Mallee-Wimmera comprises the plains north of the Grampians and the Dundas hills. The region is classic wheat/sheep country. Rainfall diminishes northward, as does the reliability of the harvest. The region includes several dry-country national parks. The region's rain-fed agriculture, originally concentrating on wheat, has diversified considerably. Intensive viticulture is practised in several irrigation areas which pump water from the Murray. Horsham is the chief town in the Wimmera, and Swan Hill and Mildura serve irrigation areas along the Murray, including adjacent parts of NSW.

### Major centres:

Mildura, Swan Hill, Horsham

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	139,486		141,781		142,724		0.2
No. households	53,264		55,357		59,998		2.0
Workforce	69,862	50.0	73,915	52.1	72,710	50.9	-0.4
Employment	62,786	–	66,910	–	65,875	–	-0.4
Unemployment	7,076	10.1	7,006	9.5	6,835	9.4	-0.6
DEET U/E	4,996	7.3	3,969	5.5	4,850	6.9	5.1
Structural U/E, % population <sup>1</sup>	9,364	11.8	9,688	12.2	10,049	12.1	0.9

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,306	9,276	1,597	11,263	1,781	12,477	5.1
Taxes paid	309	2,196	369	2,599	399	2,795	4.1
GST paid	108	767	157	1,110	202	1,412	–
Benefits	376	2,674	404	2,847	514	3,604	5.1
Business income	294	2,085	295	2,078	191	1,341	-7.1
Interest/dividends	65	463	89	629	107	746	8.3
Interest paid	140	991	194	1,370	276	1,933	11.8
Net property income	32	226	22	156	20	142	-\$84
Net flow of funds	1,516	10,770	1,686	11,894	1,737	12,170	2.1
Rank		60		56		62	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	73.3	53
Population growth rate, 55+	0.7	44
% Years growing since 1995	64	52
Fertility, babies % pop, 2004	1.18	48
Fertility bounce, 1996-2004	-0.24	55
Family / Youth migration	-1.7	58
Aged migration	3.5	55
Working elderly	28.4	27
Demographic stress	3	49
Dominant locations	50	59
<b>Sustainability score</b>	<b>49</b>	<b>54</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Mildura	66.3	153
Least sustainable LGA – Buloke	21.3	626

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.37	53	1,253
New medium density and alterations	0.39	55	205

	2001	2004	Difference
Household size	2.68	2.63	-0.05
Household size rank	39	40	37

	New pop.	Existing pop.	Pop. conversion
Dwelling use	166	1,087	13.3

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	19.9	29.2	57
Computer use (%)	35.9	43.8	52
Ratio	55.4	66.5	59
Rank diff, net / computer	-5	0	52
Estimated internet use (%)	20.5	29.2	52
Take-up surplus / shortfall	-0.6	0	42
Av. household income, 2001	40,058	49,086	54

## ADSL COVERAGE

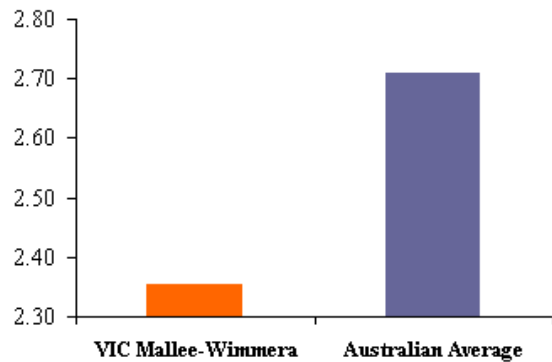
	Rate	Aust. Average	Rank
Coverage, % pop	68.8	90.4	53
Number of exchanges	175		
Number exchanges enabled	33		
% of exchanges enabled	18.9	34.3	53
Number HIBIS exchanges	6		
Exchanges per 10,000 pop.	12.9	2.7	6
Lowest (%)	34.4	West Wimmera	
Highest (%)	78.2	Horsham	
% children	68.9	89.6	53
% of area covered	2.5	1.2	43

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.353	61
Staging leaders (%)	3.305	63
Expected broadband (%)	31.5	62
Export elasticity (%)	5.57	4
Export x coverage (%)	1.74	8
Leaders lost (%)	1.03	20

### Expected E-staging Level

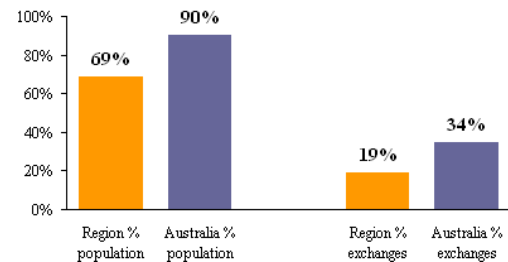


## BABY BOUNCE

	Per cent	Rank
1996	1.43	29
2001	1.37	22
2002	1.20	43
2003	1.17	40
2004	1.18	47
Bounce 2003-04	0.01	42
Actual change 2003-04 (number)	15	48

### VIC Mallee-Wimmera

#### ADSL Coverage



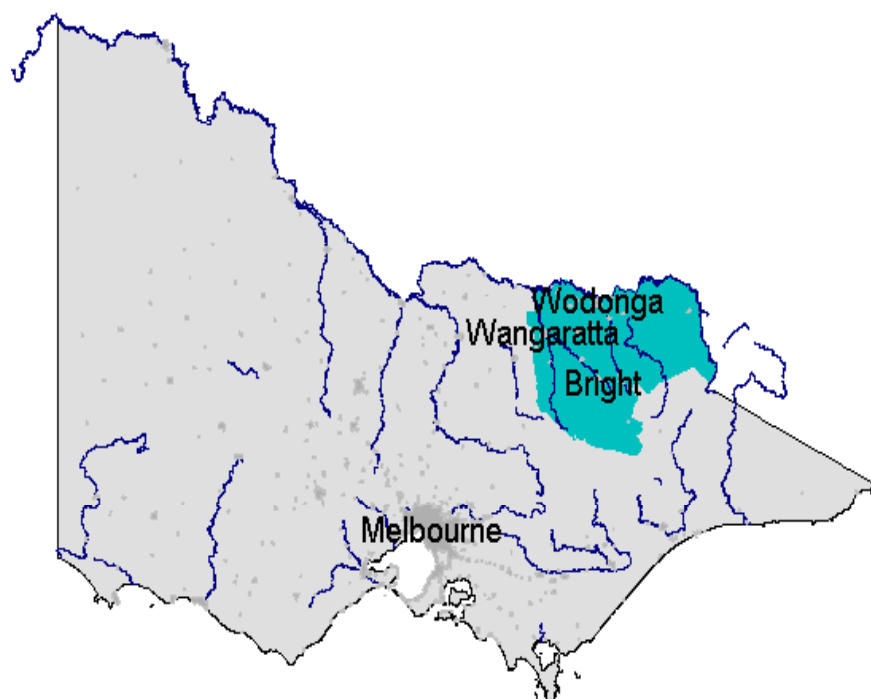
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.97	0.91
Long term Newstart	1.65	1.38
Total Newstart	2.62	2.29
Mature Age Allowance	0.10	0.11
Disability Support (DSP)	4.06	3.42
DSP, aged under 25	0.27	0.22
Youth unemployment	0.53	0.47
Parenting Payment Single (PPS)	2.25	2.25
PPS, aged under 25	0.28	0.29

	Social Security % NFOF	Rank
1999	24.83	50
2001	23.94	46
2003	24.02	48
2004	29.83	58
2005	29.61	58

## VIC Ovens-Hume



The Ovens-Hume region lies on the other side of the ranges from Gippsland, and includes high country with winter snowfields, hills with plantation forestry, intensively-cultivated valleys and Victoria's share of the upper part of the Murray River plains. The major towns, Wangaratta and Wodonga (Victoria's counterpart to Albury) have significant manufacturing, mainly based on rural inputs, and the region's centrality on Australia's road system is generating investments in wholesale distribution. Though the region is beyond commuting range from Melbourne, its natural attractions, in addition to old towns like Beechworth, form the basis of a growing tourist industry.

### Major centres:

Wodonga, Wangaratta

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	89,993		93,214		97,008		1.0
No. households	34,031		35,778		41,136		3.6
Workforce	50,816	56.4	53,392	57.3	51,440	53.0	-0.9
Employment	46,759	–	48,569	–	47,314	–	-0.7
Unemployment	4,058	8.0	4,823	9.0	4,126	8.0	-3.8
DEET U/E	3,241	6.4	3,080	5.9	1,913	3.8	-11.2
Structural U/E, % population <sup>1</sup>	5,381	10.1	5,885	10.8	5,765	9.8	-0.5

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,039	11,345	1,225	13,139	1,523	15,698	5.6
Taxes paid	258	2,813	287	3,075	398	4,103	6.5
GST paid	75	814	109	1,173	175	1,808	–
Benefits	233	2,541	256	2,742	323	3,334	4.6
Business income	160	1,743	161	1,732	224	2,313	4.8
Interest/dividends	40	432	50	533	59	604	5.8
Interest paid	90	982	125	1,337	169	1,746	10.1
Net property income	20	219	13	136	14	145	-\$74
Net flow of funds	1,069	11,671	1,184	12,697	1,401	14,438	3.6
Rank		39		38		37	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.5	36
Population growth rate, 55+	1.2	42
% Years growing since 1995	86	19
Fertility, babies % pop, 2004	1.21	36
Fertility bounce, 1996-2004	-0.17	37
Family / Youth migration	-0.1	47
Aged migration	4.1	35
Working elderly	28.6	26
Demographic stress	12	37
Dominant locations	56	54
<b>Sustainability score</b>	<b>57</b>	<b>41</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Wodonga	69.6	110
Least sustainable LGA – Towong	31.3	545

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.74	34	1,621
New medium density and alterations	0.37	56	127

	2001	2004	Difference
Household size	2.73	2.67	-0.06
Household size rank	33	32	38

	New pop.	Existing pop.	Pop. conversion
Dwelling use	887	734	54.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	25.5	29.2	28
Computer use (%)	44.0	43.8	17
Ratio	58.0	66.5	48
Rank diff, net / computer	-11	0	62
Estimated internet use (%)	27.6	29.2	21
Take-up surplus / shortfall	-2.1	0	62
Av. household income, 2001	42,956	49,086	43

## ADSL COVERAGE

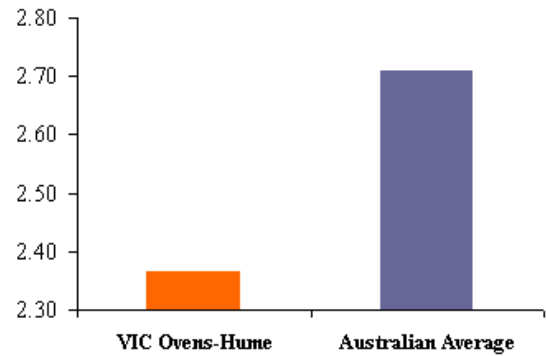
	Rate	Aust. Average	Rank
Coverage, % pop	70.3	90.4	49
Number of exchanges	65		
Number exchanges enabled	20		
% of exchanges enabled	30.8	34.3	41
Number HIBIS exchanges	3		
Exchanges per 10,000 pop.	6.9	2.7	19
Lowest (%)	45.0	Towong	
Highest (%)	95.4	Wodonga	
% children	70.3	89.6	50
% of area covered	11.4	1.2	29

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.364	55	
Staging leaders (%)	3.433	58	185
Expected broadband (%)	31.9	57	1,716
Export elasticity (%)	4.78	23	257
Export x coverage (%)	1.42	17	76
Leaders lost (%)	1.02	23	55

### Expected E-staging Level

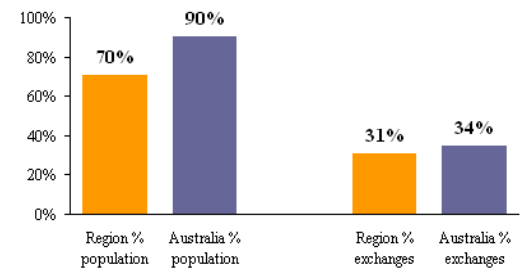


## BABY BOUNCE

	Per cent	Rank
1996	1.39	38
2001	1.32	28
2002	1.17	46
2003	1.16	42
2004	1.21	35
Bounce 2003-04	0.05	11
Actual change 2003-04 (number)	60	36

### VIC Ovens-Hume

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.75	0.91
Long term Newstart	1.24	1.38
Total Newstart	1.99	2.29
Mature Age Allowance	0.09	0.11
Disability Support (DSP)	3.43	3.42
DSP, aged under 25	0.27	0.22
Youth unemployment	0.52	0.47
Parenting Payment Single (PPS)	2.31	2.25
PPS, aged under 25	0.28	0.29

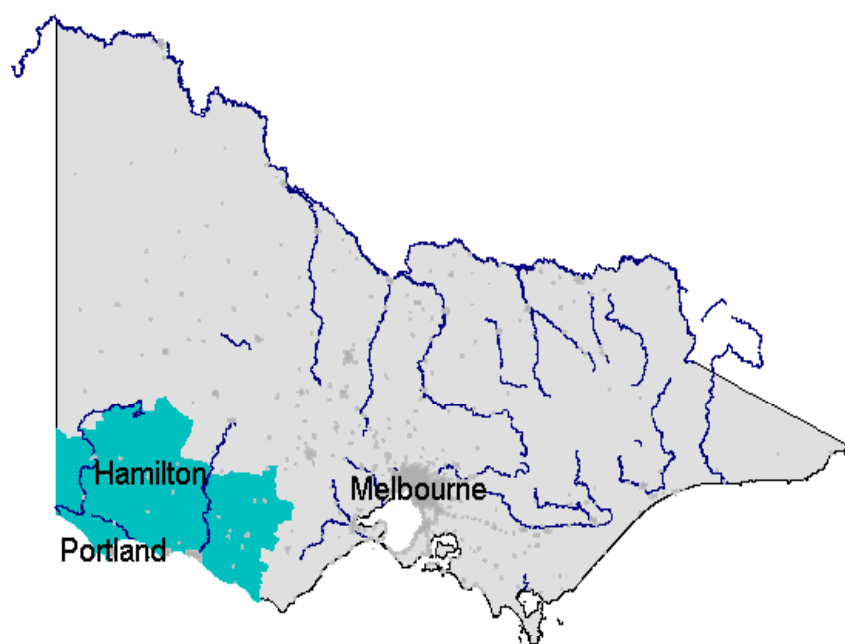
	Social Security % NFOF	Rank
1999	21.77	36
2001	21.60	37
2003	23.65	45
2004	23.63	36
2005	23.09	31

## VIC West

The Western District in Victoria is beyond commuter range from Melbourne, and is hence primarily an agricultural region. The plains were renowned as fine wool country, but with falling wool prices there has been pressure to diversify. The southern part of the region, in Colac, Corangamite and Moyne Shires, has long engaged in more intensive agriculture, including dairying. The region has three main centres, Warrnambool, which following the decline of the textile and clothing industry is mainly a commercial centre, Portland, which combines a bulk port, heavy industry and tourism, and Hamilton, a gracious town founded on old wealth.

### Major centres:

Warrnambool, Hamilton, Portland



### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	99,246		100,474		101,220		0.2
No. households	37,593		38,728		43,236		2.8
Workforce	50,489	50.8	51,474	51.2	52,206	51.6	0.4
Employment	45,915	–	46,368	–	47,887	–	0.8
Unemployment	4,574	9.1	5,106	9.9	4,319	8.3	-4.1
DEET U/E	3,832	7.7	3,127	6.2	3,262	6.4	1.1
Structural U/E, % population <sup>1</sup>	6,136	10.7	6,549	11.6	6,139	10.3	-1.6

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,045	10,417	1,277	12,705	1,509	14,907	6.2
Taxes paid	259	2,578	306	3,048	345	3,413	4.8
GST paid	82	815	116	1,154	169	1,672	–
Benefits	256	2,550	279	2,772	342	3,378	4.8
Business income	214	2,133	216	2,149	288	2,842	4.9
Interest/dividends	55	550	75	746	89	877	8.1
Interest paid	102	1,019	140	1,392	196	1,935	11.3
Net property income	25	249	21	207	19	186	-\$63
Net flow of funds	1,152	11,487	1,305	12,984	1,536	15,170	4.7
Rank		45		28		23	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	74.5	46
Population growth rate, 55+	-1.3	55
% Years growing since 1995	55	57
Fertility, babies % pop, 2004	1.19	46
Fertility bounce, 1996-2004	-0.22	48
Family / Youth migration	-1.4	57
Aged migration	3.8	45
Working elderly	29.6	18
Demographic stress	-6	57
Dominant locations	53	56
<b>Sustainability score</b>	<b>45</b>	<b>60</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Warrnambool	66.1	158
Least sustainable LGA – Sth Grampians	34.8	505

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.70	49	999
New medium density and alterations	0.63	45	231

	2001	2004	Difference
Household size	2.72	2.66	-0.06
Household size rank	35	37	46

	New pop.	Existing pop.	Pop. conversion
Dwelling use	132	866	13.2

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.2	29.2	47
Computer use (%)	40.0	43.8	35
Ratio	55.5	66.5	58
Rank diff, net / computer	-12	0	64
Estimated internet use (%)	24.1	29.2	38
Take-up surplus / shortfall	-1.9	0	60
Av. household income, 2001	41,663	49,086	50

## ADSL COVERAGE

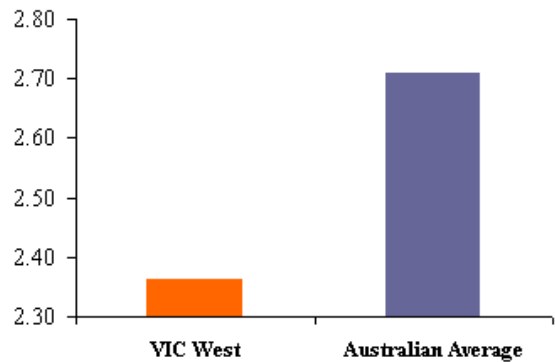
	Rate	Aust. Average	Rank
Coverage, % pop	65.2	90.4	58
Number of exchanges	125		
Number exchanges enabled	13		
% of exchanges enabled	10.4	34.3	60
Number HIBIS exchanges	4		
Exchanges per 10,000 pop.	13.0	2.7	5
Lowest (%)	32.2	Moyne	
Highest (%)	95.0	Warrnambool	
% children	64.3	89.6	58
% of area covered	0.7	1.2	55

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.363	58	
Staging leaders (%)	3.405	59	259
Expected broadband (%)	31.8	58	2,415
Export elasticity (%)	5.47	7	416
Export x coverage (%)	1.91	6	145
Leaders lost (%)	1.19	11	90

### Expected E-staging Level

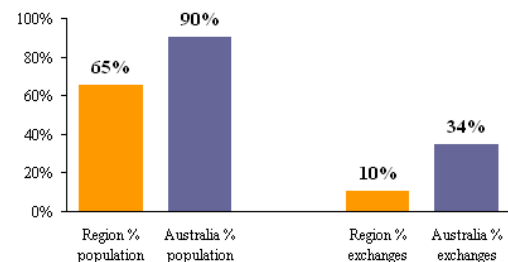


## BABY BOUNCE

	Per cent	Rank
1996	1.41	31
2001	1.29	34
2002	1.18	44
2003	1.20	37
2004	1.19	45
Bounce 2003-04	-0.01	54
Actual change 2003-04 (number)	-8	54

### VIC West

#### ADSL Coverage



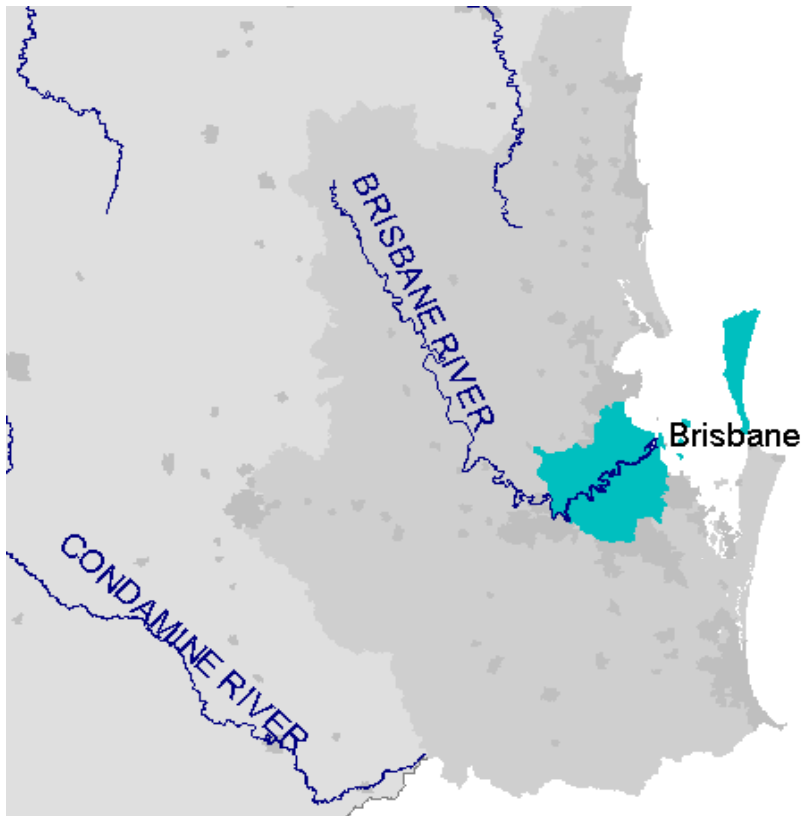
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.76	0.91
Long term Newstart	1.29	1.38
Total Newstart	2.05	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	3.62	3.42
DSP, aged under 25	0.27	0.22
Youth unemployment	0.55	0.47
Parenting Payment Single (PPS)	2.15	2.25
PPS, aged under 25	0.21	0.29

	Social Security % NFOF	Rank
1999	22.20	38
2001	21.35	33
2003	18.46	19
2004	22.51	28
2005	22.27	29

# Brisbane City



Given the choice not to split LGAs in defining regions, it is inevitable that Brisbane will form a region of its own. Had Brisbane been divided among LGAs in the same way as the other state capitals, it would have been possible to distinguish a smaller CBD region. Even so, the geography of Brisbane, with its alternation of hills and marshy flats, would have created different patterns of development from all other Australian capitals: Brisbane is unique, even without its metropolitan local government. In comparing the City of Brisbane with other central city regions, it should be remembered that the region is more diverse than most, with rather more manufacturing activity and low-status suburbs than the others. Even so, central city functions are an important part of its economic base.

## Major centres:

Brisbane

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	852,967		896,649		972,418		2.0
No. households	329,094		353,630		397,020		2.9
Workforce	463,017	54.6	482,935	53.9	545,304	56.1	3.1
Employment	424,465	–	442,329	–	518,518	–	4.1
Unemployment	38,552	8.3	40,606	8.4	26,786	4.9	-9.9
DEET U/E	31,138	6.8	31,556	6.6	27,556	5.1	-3.3
Structural U/E, % population <sup>1</sup>	45,133	8.2	49,266	8.5	45,747	7.0	-1.8

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	12,832	14,824	15,516	17,305	19,845	20,408	5.5
Taxes paid	3,691	4,264	4,268	4,760	5,836	6,001	5.9
GST paid	809	935	1,226	1,367	1,730	1,779	–
Benefits	1,814	2,096	1,952	2,177	2,437	2,506	3.0
Business income	2,020	2,334	2,094	2,335	2,432	2,501	1.2
Interest/dividends	689	796	873	974	921	947	2.9
Interest paid	743	859	995	1,110	1,561	1,605	11.0
Net property income	252	291	177	197	284	292	\$1
Net flow of funds	12,363	14,282	14,123	15,751	16,794	17,270	3.2
Rank		14		13		12	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	77.4	24
Population growth rate, 55+	8.0	10
% Years growing since 1995	100	1
Fertility, babies % pop, 2004	1.25	30
Fertility bounce, 1996-2004	0.08	5
Family / Youth migration	7.3	3
Aged migration	3.0	63
Working elderly	27.0	34
Demographic stress	21	22
Dominant locations	100	1
<b>Sustainability score</b>	<b>70</b>	<b>9</b>

Local government level	Score	Rank, of 632
Most sustainable LGA –	–	–
Least sustainable LGA –	–	–

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	7.31	12	24,904
New medium density and alterations	4.79	4	16,320

	2001	2004	Difference
Household size	2.63	2.63	-0.01
Household size rank	46	42	5

	New pop.	Existing pop.	Pop. conversion
Dwelling use	24,088	816	96.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	36.7	29.2	6
Computer use (%)	50.3	43.8	7
Ratio	72.9	66.5	5
Rank diff, net / computer	1	0	21
Estimated internet use (%)	34.7	29.2	8
Take-up surplus / shortfall	2.0	0	7
Av. household income, 2001	52,368	49,086	15

## ADSL COVERAGE

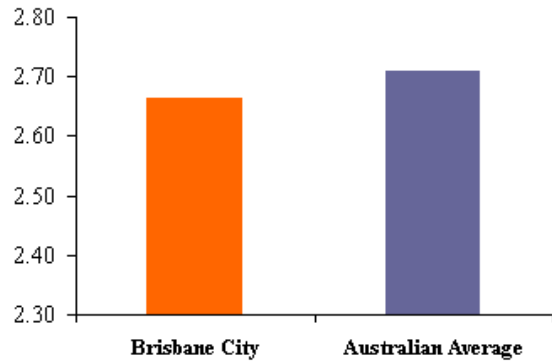
	Rate	Aust. Average	Rank
Coverage, % pop	100.0	90.4	Eq 1
Number of exchanges	46		
Number exchanges enabled	42		
% of exchanges enabled	91.3	34.3	12
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.5	2.7	54
Lowest (%)	100.0		
Highest (%)	100.0		
% children	100.0	89.6	Eq 1
% of area covered	100.0	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.663	5	
Staging leaders (%)	7.764	6	3,872
Expected broadband (%)	45.9	5	22,894
Export elasticity (%)	4.22	47	2,107
Export x coverage (%)	0.00	59	0
Leaders lost (%)	0.00	59	0

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.16	55
2001	1.26	43
2002	1.24	32
2003	1.21	31
2004	1.25	29
Bounce 2003-04	0.03	25
Actual change 2003-04 (number)	565	1

### Brisbane City

#### ADSL Coverage



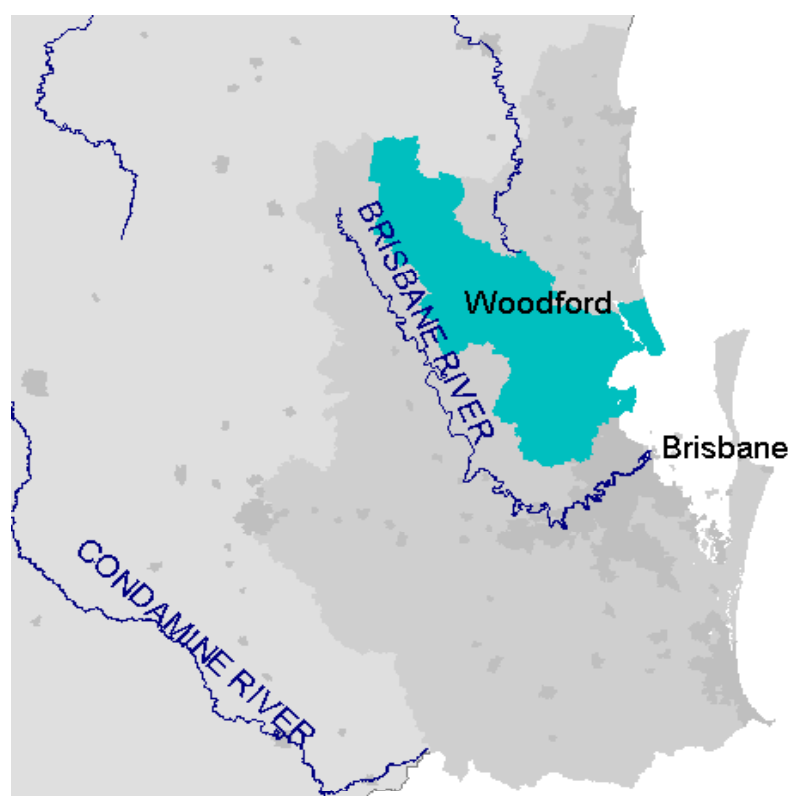
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.80	0.91
Long term Newstart	0.95	1.38
Total Newstart	1.74	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	2.65	3.42
DSP, aged under 25	0.19	0.22
Youth unemployment	0.36	0.47
Parenting Payment Single (PPS)	1.70	2.25
PPS, aged under 25	0.21	0.29

	Social Security % NFOF	Rank
1999	14.68	13
2001	13.82	10
2003	14.46	9
2004	14.54	9
2005	14.51	10

# Brisbane North



Over the past few decades the population of Brisbane has spilled beyond the City boundaries. The spill to the north is now large enough to generate two regions: North Brisbane and the Sunshine Coast. North Brisbane is largely a commuter area, with a few surviving rural industries and some manufacturing. Redcliffe, on the coast, was originally a seaside retirement area somewhat like the Central Coast in NSW, but has become incorporated into suburban Brisbane.

## Major centres:

Caboolture, Redcliffe

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	271,372		289,844		332,708		3.5
No. households	99,561		105,674		123,610		4.0
Workforce	132,706	48.7	141,280	48.7	156,977	47.2	2.7
Employment	118,523	–	124,457	–	143,809	–	3.7
Unemployment	14,184	10.7	16,823	11.9	13,168	8.4	-5.9
DEET U/E	7,180	6.9	10,795	7.9	7,910	5.2	-7.5
Structural U/E, % population <sup>1</sup>	17,286	10.6	20,675	12.0	20,229	9.7	-0.5

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	3,295	11,838	3,911	13,492	5,000	15,027	4.1
Taxes paid	853	3,063	943	3,253	1,221	3,670	3.1
GST paid	227	817	336	1,158	494	1,486	–
Benefits	700	2,515	785	2,708	1,083	3,254	4.4
Business income	486	1,747	496	1,712	578	1,736	-0.1
Interest/dividends	101	364	149	512	142	426	2.6
Interest paid	286	1,029	382	1,320	576	1,732	9.1
Net property income	26	94	5	17	32	97	\$2
Net flow of funds	3,242	11,648	3,684	12,711	4,542	13,651	2.7
Rank		40		37		51	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	77.6	23
Population growth rate, 55+	7.6	13
% Years growing since 1995	93	10
Fertility, babies % pop, 2004	1.32	19
Fertility bounce, 1996-2004	-0.11	20
Family / Youth migration	2.8	21
Aged migration	5.8	9
Working elderly	25.8	39
Demographic stress	32	8
Dominant locations	99	19
<b>Sustainability score</b>	<b>70</b>	<b>6</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Pine Rivers	76.5	36
Least sustainable LGA – Redcliffe	50.2	350

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	12.14	3	12,376
New medium density and alterations	1.90	23	1,941

	2001	2004	Difference
Household size	2.84	2.80	-0.05
Household size rank	15	14	34

	New pop.	Existing pop.	Pop. conversion
Dwelling use	10,483	1,892	84.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	28.3	29.2	18
Computer use (%)	44.6	43.8	16
Ratio	63.4	66.5	26
Rank diff, net / computer	-2	0	42
Estimated internet use (%)	28.9	29.2	18
Take-up surplus / shortfall	-0.6	0	40
Av. household income, 2001	46,614	49,086	29

## ADSL COVERAGE

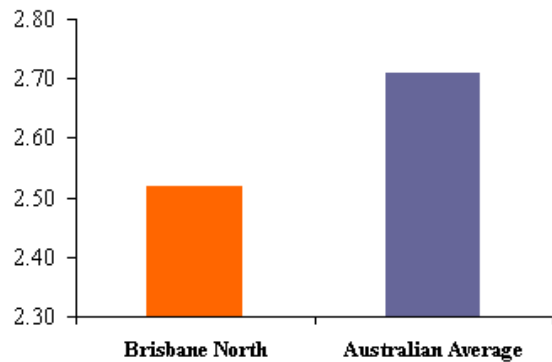
	Rate	Aust. Average	Rank
Coverage, % pop	98.4	90.4	15
Number of exchanges	39		
Number exchanges enabled	26		
% of exchanges enabled	66.7	34.3	23
Number HIBIS exchanges	5		
Exchanges per 10,000 pop.	1.4	2.7	43
Lowest (%)	44.4	Kilcoy	
Highest (%)	100.0	Redcliffe	
% children	98.3	89.6	13
% of area covered	56.9	1.2	15

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.519	22	
Staging leaders (%)	6.434	21	683
Expected broadband (%)	40.7	21	4,326
Export elasticity (%)	4.29	43	456
Export x coverage (%)	0.07	49	7
Leaders lost (%)	0.10	51	11

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.42	30
2001	1.40	19
2002	1.36	17
2003	1.30	19
2004	1.32	18
Bounce 2003-04	0.01	39
Actual change 2003-04 (number)	159	19

### Brisbane North

#### ADSL Coverage



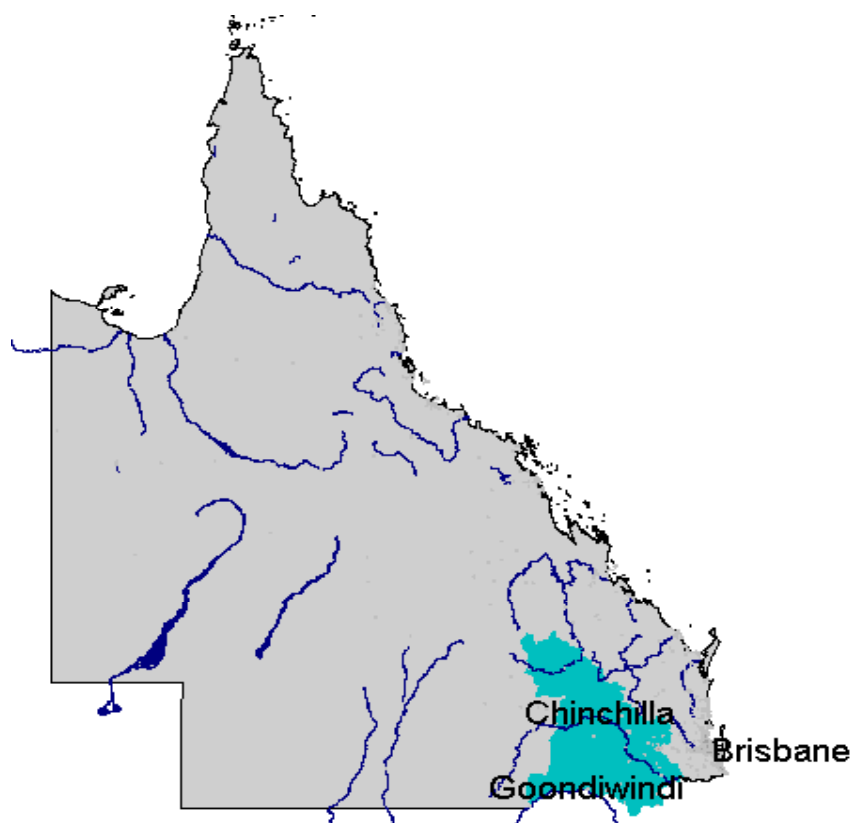
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.88	0.91
Long term Newstart	1.04	1.38
Total Newstart	1.91	2.29
Mature Age Allowance	0.14	0.11
Disability Support (DSP)	3.48	3.42
DSP, aged under 25	0.26	0.22
Youth unemployment	0.48	0.47
Parenting Payment Single (PPS)	2.71	2.25
PPS, aged under 25	0.38	0.29

	Social Security % NFOF	Rank
1999	21.59	33
2001	21.30	32
2003	19.65	23
2004	23.62	35
2005	23.83	36

## QLD Agricultural SW



The Agricultural South West of Queensland is centred on the Darling Downs, but the cropping frontier now extends well beyond the Downs into former brigalow country. Toowoomba is the main regional centre, but Warwick and Dalby are also important. The Darling Downs is one of Australia's premier agricultural regions, with a wide variety of crops grown. The New England massif extends across the Queensland border into the region, and the resulting granite belt is known for its orchards. The main towns of the region have agricultural processing industries. Export coal mining has commenced, and the region hosts several new coal-fired power stations.

### Major centres:

Toowoomba, Warwick, Dalby

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	200,713		210,344		220,273		1.2
No. households	74,499		77,806		86,821		2.8
Workforce	100,548	50.1	108,677	51.7	114,052	51.8	1.2
Employment	91,267	–	98,346	–	105,132	–	1.7
Unemployment	9,281	9.2	10,332	9.5	8,920	7.8	-3.6
DEET U/E	5,918	6.1	4,762	4.5	5,102	4.6	1.7
Structural U/E, % population <sup>1</sup>	12,223	10.4	13,483	11.3	13,953	10.5	0.9

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,240	10,938	2,563	12,183	3,316	15,055	5.5
Taxes paid	554	2,705	600	2,851	823	3,737	5.5
GST paid	151	738	226	1,075	328	1,489	–
Benefits	525	2,561	577	2,745	752	3,415	4.9
Business income	384	1,873	389	1,848	522	2,371	4.0
Interest/dividends	84	412	108	513	121	550	4.9
Interest paid	165	803	223	1,058	358	1,627	12.5
Net property income	43	211	28	131	25	113	-\$98
Net flow of funds	2,406	11,749	2,616	12,436	3,227	14,651	3.7
Rank		37		44		31	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	76.3	29
Population growth rate, 55+	3.7	25
% Years growing since 1995	81	33
Fertility, babies % pop, 2004	1.27	24
Fertility bounce, 1996-2004	-0.16	29
Family / Youth migration	1.7	29
Aged migration	4.7	22
Working elderly	30.2	15
Demographic stress	24	19
Dominant locations	68	39
<b>Sustainability score</b>	<b>62</b>	<b>26</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Cambooya	79.0	22
Least sustainable LGA – Inglewood	26.5	597

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.17	37	3,131
New medium density and alterations	1.24	30	930

	2001	2004	Difference
Household size	2.80	2.80	0.00
Household size rank	18	13	2

	New pop.	Existing pop.	Pop. conversion
Dwelling use	3,158	-27	100.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.0	29.2	48
Computer use (%)	38.9	43.8	42
Ratio	56.5	66.5	56
Rank diff, net / computer	-6	0	55
Estimated internet use (%)	23.3	29.2	43
Take-up surplus / shortfall	-1.3	0	55
Av. household income, 2001	41,950	49,086	49

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	74.7	90.4	41
Number of exchanges	149		
Number exchanges enabled	26		
% of exchanges enabled	17.4	34.3	56
Number HIBIS exchanges	4		
Exchanges per 10,000 pop.	7.4	2.7	17
Lowest (%)	0.0	Taroom	
Highest (%)	100.0	Dalby	
% children	73.9	89.6	41
% of area covered	1.9	1.2	46

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.364	57	
Staging leaders (%)	3.572	52	496
Expected broadband (%)	32.0	52	4,454
Export elasticity (%)	5.37	9	746
Export x coverage (%)	1.36	20	189
Leaders lost (%)	0.90	29	125

### Expected E-staging Level

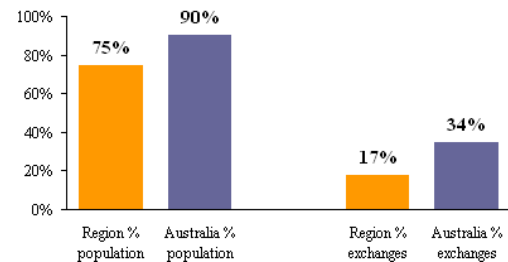


## BABY BOUNCE

	Per cent	Rank
1996	1.44	25
2001	1.45	17
2002	1.33	21
2003	1.26	23
2004	1.27	23
Bounce 2003-04	0.01	40
Actual change 2003-04 (number)	67	32

### QLD Agricultural SW

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.73	0.91
Long term Newstart	1.14	1.38
Total Newstart	1.87	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	3.90	3.42
DSP, aged under 25	0.27	0.22
Youth unemployment	0.55	0.47
Parenting Payment Single (PPS)	2.35	2.25
PPS, aged under 25	0.34	0.29

	Social Security % NFOF	Rank
1999	21.80	37
2001	22.07	39
2003	23.98	47
2004	23.44	33
2005	23.31	33

## QLD Far North



The Far North of Queensland comprises Cairns and its hinterland. Around Cairns retirement and resort developments are crowding out the established sugar industry, but further south around Innisfail and Tully the industry remains the dominant land use. Intensive agriculture is pursued on the Atherton Tableland above Cairns, but beyond this the pastoral zone extends west to the Gulf of Carpentaria and north to the tip of Cape York. With its high indigenous population this sparsely-populated area has affinities with NW Queensland, but is included here in deference to the Queensland planning regions and because it is serviced from Cairns rather than Mt Isa.

### Major centres:

Cairns

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	218,254		222,514		237,434		1.6
No. households	84,938		89,167		97,369		2.2
Workforce	122,552	55.9	112,377	50.5	126,651	53.3	3.0
Employment	108,518	–	97,094	–	113,847	–	4.1
Unemployment	14,034	11.5	15,283	13.6	12,804	10.1	-4.3
DEET U/E	9,820	8.1	7,982	7.3	5,873	4.7	-7.4
Structural U/E, % population <sup>1</sup>	15,420	12.1	17,475	13.1	16,712	11.0	-1.1

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,455	11,195	2,785	12,516	3,770	15,877	6.0
Taxes paid	618	2,818	641	2,879	885	3,726	4.8
GST paid	226	1,029	282	1,269	418	1,760	–
Benefits	539	2,457	597	2,684	754	3,175	4.4
Business income	482	2,199	491	2,207	642	2,703	3.5
Interest/dividends	81	369	98	441	106	446	3.2
Interest paid	212	964	289	1,301	423	1,781	10.8
Net property income	35	161	24	107	19	79	-\$82
Net flow of funds	2,537	11,570	2,783	12,505	3,565	15,013	4.4
Rank		42		41		28	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	81.6	9
Population growth rate, 55+	-2.5	60
% Years growing since 1995	87	17
Fertility, babies % pop, 2004	1.36	15
Fertility bounce, 1996-2004	-0.22	49
Family / Youth migration	1.9	28
Aged migration	4.2	32
Working elderly	29.2	22
Demographic stress	-15	61
Dominant locations	56	53
<b>Sustainability score</b>	<b>55</b>	<b>44</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Aurukun	76.5	35
Least sustainable LGA – Cook	39.4	445

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.96	17	5,121
New medium density and alterations	2.13	18	1,830

	2001	2004	Difference
Household size	2.59	2.55	-0.04
Household size rank	55	53	26

	New pop.	Existing pop.	Pop. conversion
Dwelling use	3,730	1,391	72.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.8	29.2	42
Computer use (%)	34.8	43.8	58
Ratio	65.5	66.5	20
Rank diff, net / computer	16	0	2
Estimated internet use (%)	20.4	29.2	54
Take-up surplus / shortfall	2.4	0	5
Av. household income, 2001	44,017	49,086	36

## ADSL COVERAGE

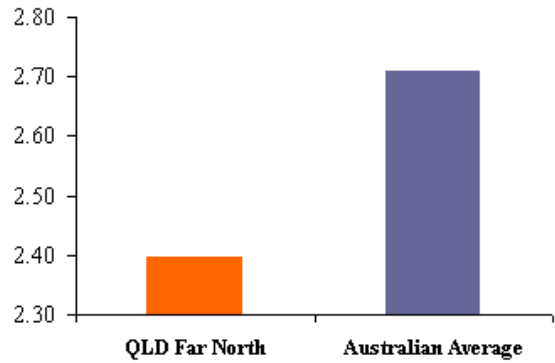
	Rate	Aust. Average	Rank
Coverage, % pop	79.1	90.4	31
Number of exchanges	110		
Number exchanges enabled	49		
% of exchanges enabled	44.5	34.3	30
Number HIBIS exchanges	3		
Exchanges per 10,000 pop.	4.8	2.7	25
Lowest (%)	0.0	Aurukun	
Highest (%)	98.5	Cairns	
% children	78.5	89.6	32
% of area covered	2.4	1.2	44

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.398	38	
Staging leaders (%)	3.849	39	537
Expected broadband (%)	32.8	43	4,570
Export elasticity (%)	4.58	32	638
Export x coverage (%)	0.96	33	133
Leaders lost (%)	0.80	32	112

### Expected E-staging Level

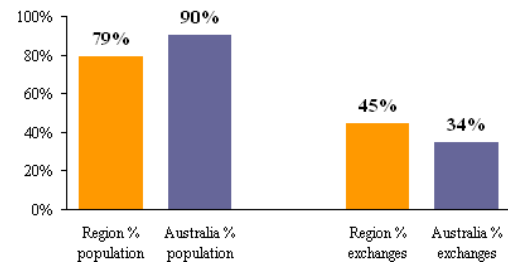


## BABY BOUNCE

	Per cent	Rank
1996	1.58	11
2001	1.54	9
2002	1.40	11
2003	1.38	13
2004	1.36	14
Bounce 2003-04	-0.02	57
Actual change 2003-04 (number)	-21	56

### QLD Far North

#### ADSL Coverage



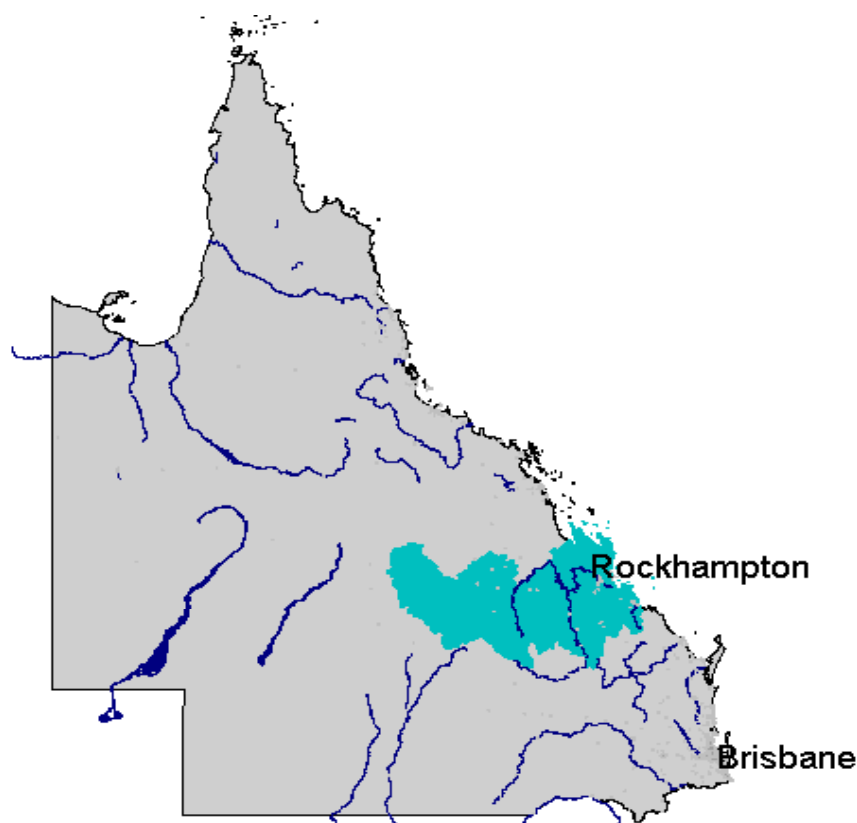
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.47	0.91
Long term Newstart	2.04	1.38
Total Newstart	3.50	2.29
Mature Age Allowance	0.11	0.11
Disability Support (DSP)	3.21	3.42
DSP, aged under 25	0.17	0.22
Youth unemployment	0.59	0.47
Parenting Payment Single (PPS)	3.11	2.25
PPS, aged under 25	0.49	0.29

	Social Security % NFOF	Rank
1999	21.23	32
2001	21.46	35
2003	22.11	38
2004	23.07	29
2005	21.15	25

# QLD Fitzroy



The Fitzroy region comprises the Eastern part of Central Queensland. In the nineteenth century much of the Fitzroy region was regarded as useless scrub, but it is now more intensively developed. The region includes two belts of productive downs (Peak Downs and much of Banana Shire) and much of the rest of it has been cleared for extensive grazing. Production statistics are, however, dominated by black coal mining and power production, for the region includes the southern part of the Bowen Basin. Rockhampton is its oldest town and administrative and commercial capital, but Gladstone, with its natural harbour, continues to develop as a coal export port and heavy industrial centre.

## Major centres:

Rockhampton, Gladstone

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	179,918		181,747		189,531		1.1
No. households	66,054		68,392		75,114		2.4
Workforce	94,871	52.6	97,863	53.8	102,799	54.2	1.2
Employment	84,340	–	97,957	–	94,357	–	1.8
Unemployment	10,532	11.1	9,905	10.1	8,443	8.2	-3.9
DEET U/E	8,934	9.6	8,684	9.0	6,050	6.0	-8.6
Structural U/E, % population <sup>1</sup>	11,620	10.7	12,177	11.1	11,789	10.0	-0.8

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,333	12,945	2,646	14,558	3,387	17,869	5.5
Taxes paid	642	3,564	674	3,706	957	5,047	6.0
GST paid	151	837	227	1,248	328	1,730	–
Benefits	419	2,327	457	2,514	580	3,062	4.7
Business income	396	2,196	410	2,256	480	2,532	2.4
Interest/dividends	57	315	72	397	79	419	4.9
Interest paid	172	952	236	1,297	346	1,825	11.4
Net property income	15	82	-1	-8	12	66	-\$16
Net flow of funds	2,255	12,511	2,447	13,465	2,909	15,347	3.5
Rank		24		21		22	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	80.4	14
Population growth rate, 55+	-0.0	50
% Years growing since 1995	67	48
Fertility, babies % pop, 2004	1.38	12
Fertility bounce, 1996-2004	-0.17	34
Family / Youth migration	0.9	38
Aged migration	3.9	43
Working elderly	27.9	30
Demographic stress	-2	52
Dominant locations	70	38
<b>Sustainability score</b>	<b>54</b>	<b>46</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Livingstone	73.2	73
Least sustainable LGA – Duaringa	30.5	552

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.04	40	2,658
New medium density and alterations	0.75	39	495

	2001	2004	Difference
Household size	2.76	2.73	-0.03
Household size rank	30	24	19

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,879	779	70.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	24.3	29.2	35
Computer use (%)	40.5	43.8	33
Ratio	60.0	66.5	40
Rank diff, net / computer	-2	0	42
Estimated internet use (%)	25.6	29.2	30
Take-up surplus / shortfall	-1.3	0	54
Av. household income, 2001	46,926	49,086	27

## ADSL COVERAGE

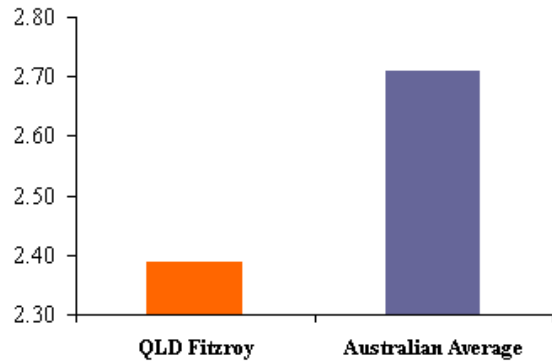
	Rate	Aust. Average	Rank
Coverage, % pop	79.0	90.4	32
Number of exchanges	84		
Number exchanges enabled	23		
% of exchanges enabled	27.4	34.3	43
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	4.6	2.7	26
Lowest (%)	29.9	Bauhinia	
Highest (%)	100.0	Rockhampton	
% children	78.2	89.6	33
% of area covered	1.6	1.2	47

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.389	42	
Staging leaders (%)	3.794	41	371
Expected broadband (%)	33.0	38	3,227
Export elasticity (%)	4.87	18	477
Export x coverage (%)	1.02	31	100
Leaders lost (%)	0.79	33	78

### Expected E-staging Level

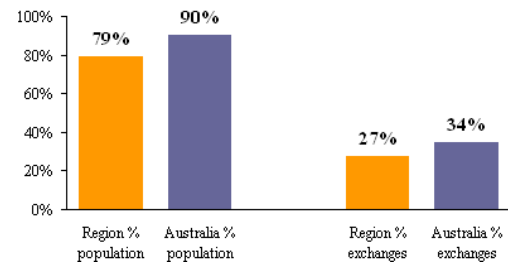


## BABY BOUNCE

	Per cent	Rank
1996	1.57	13
2001	1.52	13
2002	1.40	12
2003	1.36	14
2004	1.38	12
Bounce 2003-04	0.02	29
Actual change 2003-04 (number)	70	30

### QLD Fitzroy

#### ADSL Coverage



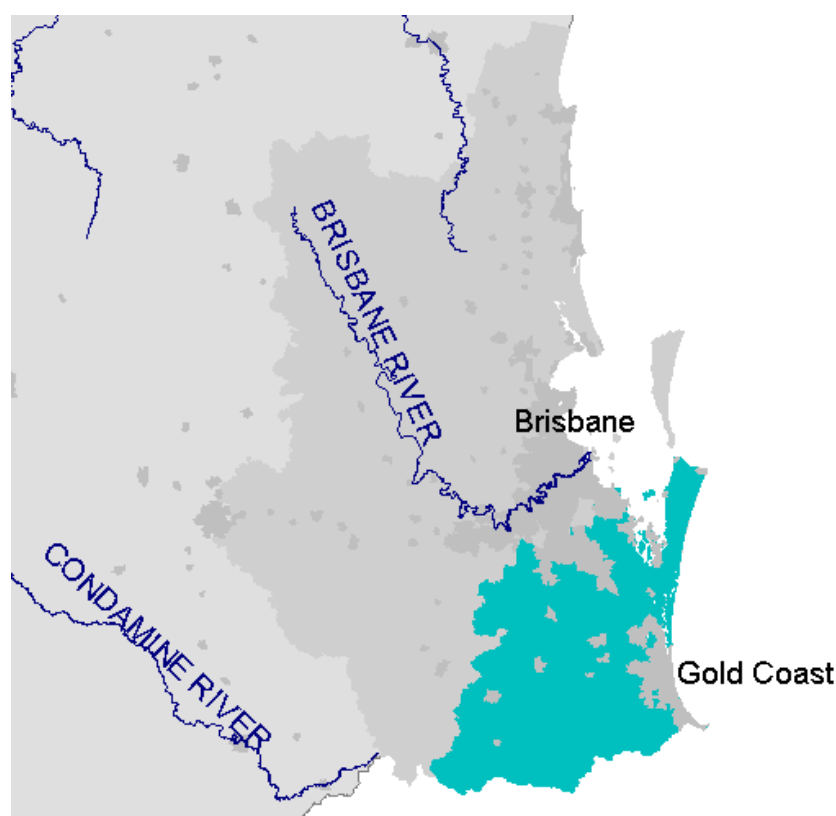
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.90	0.91
Long term Newstart	1.55	1.38
Total Newstart	2.45	2.29
Mature Age Allowance	0.14	0.11
Disability Support (DSP)	3.16	3.42
DSP, aged under 25	0.24	0.22
Youth unemployment	0.61	0.47
Parenting Payment Single (PPS)	2.68	2.25
PPS, aged under 25	0.47	0.29

	Social Security % NFOF	Rank
1999	18.60	23
2001	18.67	20
2003	20.97	33
2004	21.18	23
2005	19.95	21

## QLD Gold Coast



The Gold Coast region comprises two main sub-regions.

- The Gold Coast proper began as a tourist and retirement strip, but has diversified its economic base and has a fairly youthful population. The urban area now extends across the backwaters into the rain-forested ranges which complement the beaches as a tourist attraction.
- Between Brisbane City and the Gold Coast proper lies a belt of outer suburbs, fading into hobby farms in the valleys round Beaudesert. In this area manufacturing contributes to the economic base, but commuting to Brisbane is also very important.

### Major centres:

Surfers Paradise, Coolangatta, Beenleigh

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	703,662		762,455		849,533		2.7
No. households	271,933		296,665		343,951		3.8
Workforce	345,733	49.1	390,303	51.6	429,129	50.5	2.4
Employment	301,526	–	341,181	–	394,036	–	3.7
Unemployment	44,207	12.8	49,121	12.6	35,093	8.2	-8.1
DEET U/E	35,396	10.4	33,805	8.9	24,808	5.9	-7.4
Structural U/E, % population <sup>1</sup>	46,965	11.0	55,690	12.1	51,709	9.5	-1.8

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	8,216	11,592	10,019	13,140	13,484	15,872	5.4
Taxes paid	2,162	3,050	2,500	3,278	3,693	4,347	6.1
GST paid	585	825	931	1,221	1,419	1,670	–
Benefits	1,839	2,595	2,054	2,694	2,717	3,198	3.5
Business income	1,365	1,926	1,390	1,823	1,674	1,971	0.4
Interest/dividends	391	552	525	689	619	729	4.7
Interest paid	723	1,020	918	1,204	1,418	1,669	8.6
Net property income	139	196	157	206	204	241	\$45
Net flow of funds	8,480	11,966	9,796	12,848	12,169	14,324	3.0
Rank		34		34		39	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.8	33
Population growth rate, 55+	11.9	6
% Years growing since 1995	100	1
Fertility, babies % pop, 2004	1.22	32
Fertility bounce, 1996-2004	-0.09	16
Family / Youth migration	5.6	6
Aged migration	5.6	11
Working elderly	25.4	41
Demographic stress	33	6
Dominant locations	100	1
<b>Sustainability score</b>	<b>73</b>	<b>2</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Gold Coast	76.9	33
Least sustainable LGA – Logan	61.4	214

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	9.83	6	28,132
New medium density and alterations	4.14	6	11,840

	2001	2004	Difference
Household size	2.66	2.65	-0.01
Household size rank	44	38	6

	New pop.	Existing pop.	Pop. conversion
Dwelling use	26,982	1,150	95.9

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	29.6	29.2	16
Computer use (%)	43.9	43.8	18
Ratio	67.4	66.5	12
Rank diff, net / computer	2	0	18
Estimated internet use (%)	28.2	29.2	20
Take-up surplus / shortfall	1.4	0	12
Av. household income, 2001	46,096	49,086	30

## ADSL COVERAGE

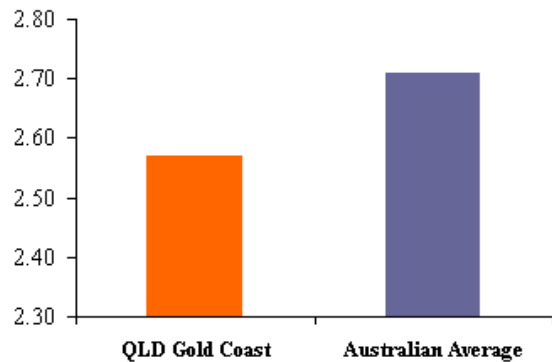
	Rate	Aust. Average	Rank
Coverage, % pop	96.1	90.4	19
Number of exchanges	72		
Number exchanges enabled	50		
% of exchanges enabled	69.4	34.3	22
Number HIBIS exchanges	5		
Exchanges per 10,000 pop.	1.0	2.7	47
Lowest (%)	53.9	Beaudesert	
Highest (%)	100.0	Gold Coast	
% children	95.4	89.6	19
% of area covered	60.8	1.2	14

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.569	17	
Staging leaders (%)	6.838	19	2,608
Expected broadband (%)	42.5	16	16,198
Export elasticity (%)	4.14	53	1,580
Export x coverage (%)	0.16	45	62
Leaders lost (%)	0.27	44	102

### Expected E-staging Level

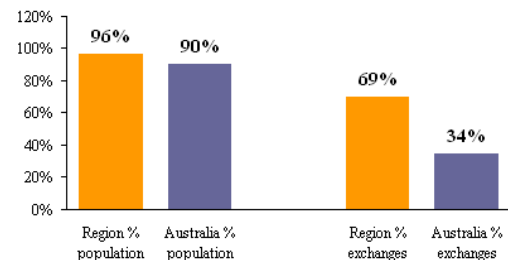


## BABY BOUNCE

	Per cent	Rank
1996	1.33	45
2001	1.31	31
2002	1.26	27
2003	1.21	34
2004	1.23	32
Bounce 2003-04	0.02	34
Actual change 2003-04 (number)	480	4

### QLD Gold Coast

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.05	0.91
Long term Newstart	1.20	1.38
Total Newstart	2.25	2.29
Mature Age Allowance	0.11	0.11
Disability Support (DSP)	3.23	3.42
DSP, aged under 25	0.23	0.22
Youth unemployment	0.48	0.47
Parenting Payment Single (PPS)	2.83	2.25
PPS, aged under 25	0.37	0.29

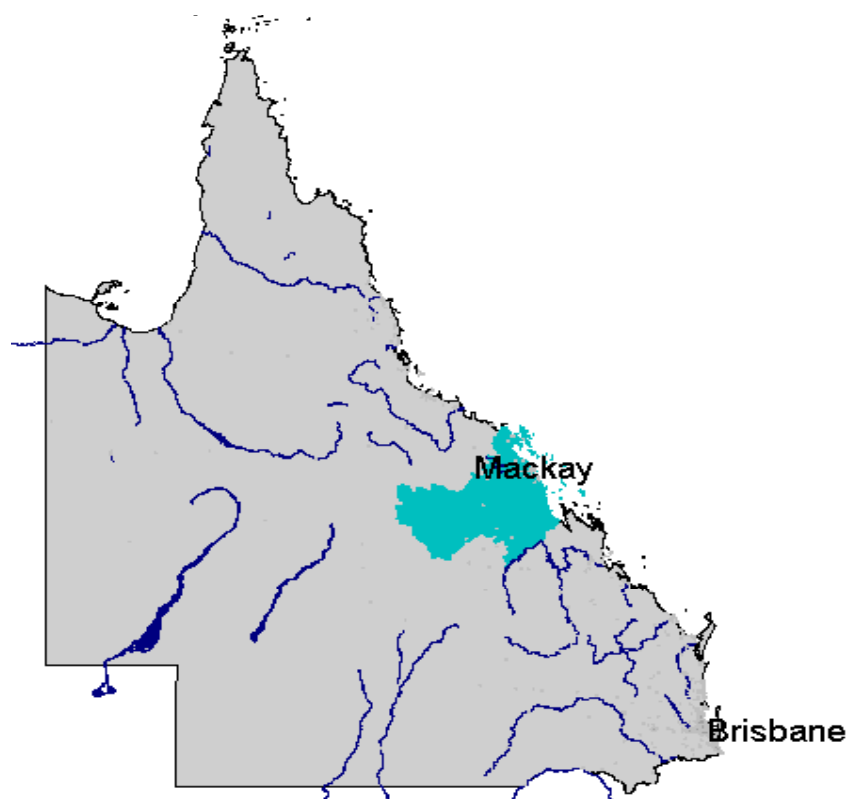
	Social Security % NFOF	Rank
1999	21.69	34
2001	20.97	30
2003	22.14	39
2004	22.09	27
2005	22.32	30

## QLD Mackay

Production statistics for the Mackay region are dominated by coal mines in the Bowen Basin, but even after including rail transport and the export port (Hay Point) these generate relatively little employment and income. The immediate hinterland of Mackay is high-rainfall sugar country, while Whitsunday Shire adds tourism to the basic sugar of its economic base. Given the uncertain future of the sugar industry, there is pressure to diversify, with the high-rainfall fields capable of growing a variety of alternative crops.

### Major centres:

Mackay



### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	123,918		125,130		132,824		1.5
No. households	45,027		47,803		53,033		2.6
Workforce	68,760	55.3	70,708	56.5	72,753	54.8	0.7
Employment	61,674	–	64,022	–	67,386	–	1.3
Unemployment	7,087	10.3	6,686	9.5	5,367	7.4	-5.3
DEET U/E	5,747	8.5	5,729	8.3	4,297	6.0	-6.9
Structural U/E, % population <sup>1</sup>	6,995	9.2	7,792	9.8	7,409	8.7	-1.3

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,839	14,959	1,904	15,213	2,525	19,012	4.1
Taxes paid	508	4,131	483	3,864	719	5,409	4.6
GST paid	110	897	167	1,334	246	1,851	–
Benefits	260	2,114	290	2,316	368	2,773	4.6
Business income	317	2,574	332	2,656	407	3,067	3.0
Interest/dividends	57	461	67	537	77	580	3.9
Interest paid	121	987	162	1,293	254	1,912	11.7
Net property income	13	106	0	3	14	106	-\$1
Net flow of funds	1,746	14,200	1,781	14,233	2,174	16,367	2.4
Rank		15		14		17	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	81.4	10
Population growth rate, 55+	2.5	34
% Years growing since 1995	83	30
Fertility, babies % pop, 2004	1.34	17
Fertility bounce, 1996-2004	-0.19	41
Family / Youth migration	0.3	42
Aged migration	3.7	49
Working elderly	28.7	25
Demographic stress	8	40
Dominant locations	60	51
<b>Sustainability score</b>	<b>59</b>	<b>33</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Whitsunday	74.2	61
Least sustainable LGA – Broadsound	27.6	586

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.31	25	2,448
New medium density and alterations	1.03	34	476
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.71	2.68	-0.03
Household size rank	36	28	16

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,950	498	79.6

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	24.3	29.2	36
Computer use (%)	39.7	43.8	37
Ratio	61.1	66.5	39
Rank diff, net / computer	1	0	21
Estimated internet use (%)	25.2	29.2	32
Take-up surplus / shortfall	-0.9	0	48
Áv. household income, 2001	47,689	49,086	25

## ADSL COVERAGE

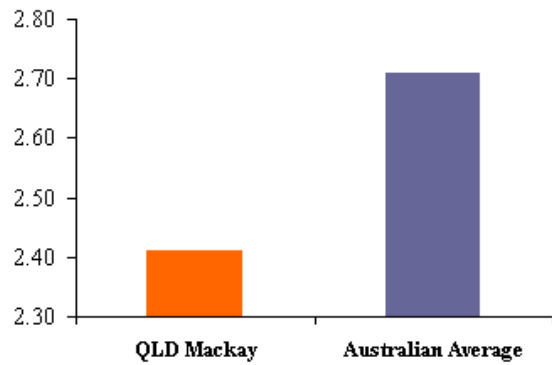
	Rate	Aust. Average	Rank
Coverage, % pop	72.7	90.4	43
Number of exchanges	64		
Number exchanges enabled	21		
% of exchanges enabled	32.8	34.3	40
Number HIBIS exchanges	1		
Exchanges per 10,000 pop.	5.1	2.7	23
Lowest (%)	0.0	Mirani	
Highest (%)	83.2	Mackay	
% children	72.6	89.6	43
% of area covered	2.8	1.2	42

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.410	35
Staging leaders (%)	3.844	40
Expected broadband (%)	33.2	37
Export elasticity (%)	4.73	26
Export x coverage (%)	1.29	22
Leaders lost (%)	1.05	19
		84

### Expected E-staging Level

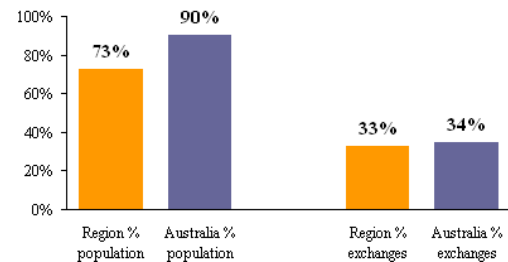


## BABY BOUNCE

	Per cent	Rank
1996	1.55	15
2001	1.52	11
2002	1.37	14
2003	1.39	11
2004	1.34	16
Bounce 2003-04	-0.05	61
Actual change 2003-04 (number)	-47	61

### QLD Mackay

#### ADSL Coverage



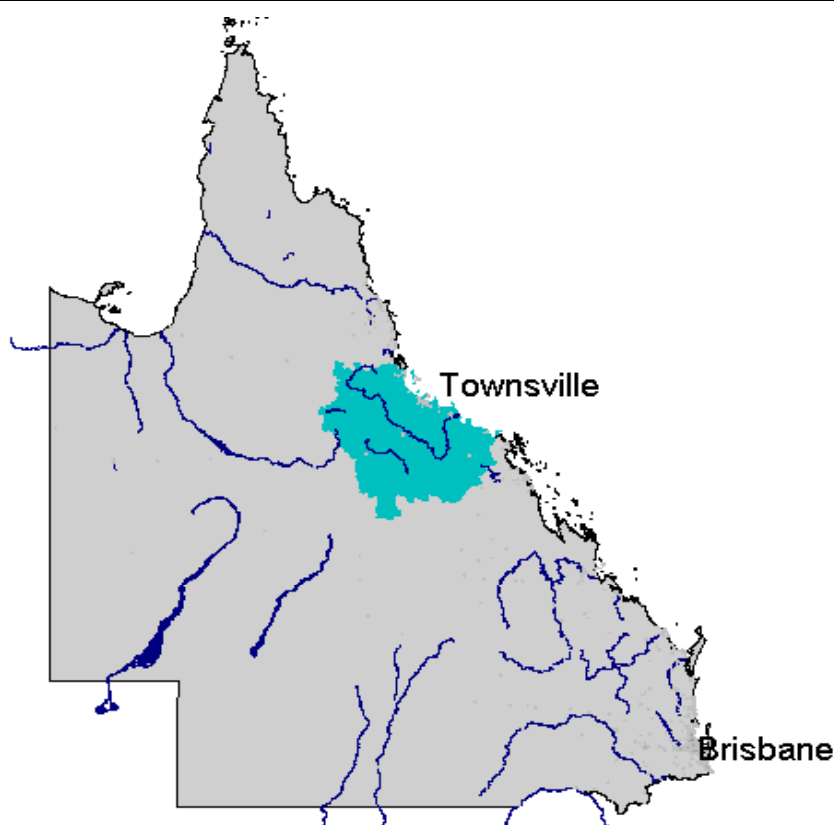
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.98	0.91
Long term Newstart	1.24	1.38
Total Newstart	2.22	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	3.07	3.42
DSP, aged under 25	0.24	0.22
Youth unemployment	0.52	0.47
Parenting Payment Single (PPS)	2.23	2.25
PPS, aged under 25	0.31	0.29

	Social Security % NFOF	Rank
1999	14.89	14
2001	16.27	13
2003	17.82	16
2004	18.33	13
2005	16.95	13

## QLD North



North Queensland is centred on Townsville. The region has two intensive agricultural areas, both originally developed for sugar: the Burdekin Delta (Home Hill, Ayr) and the Herbert River Valley (Ingham). Much of the rest of the region has recently been cleared to provide low-quality pasture. The region produces coal from the north end of the Bowen Basin, and has its own coal export port at Abbot Point. The economic base of Townsville includes education, defence and the processing of minerals originating in NW Queensland. Despite the existence of Magnetic Island, the region is less involved in tourism than the other Queensland east coast regions.

### Major centres:

Townsville, Bowen, Charters Towers

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	195,349		202,675		216,690		1.7
No. households	71,837		75,926		84,344		2.7
Workforce	108,228	55.5	92,571	45.7	114,980	53.1	5.6
Employment	96,854	–	81,227	–	105,314	–	6.7
Unemployment	11,374	10.5	11,343	12.3	9,666	8.4	-3.9
DEET U/E	8,648	8.1	7,481	8.2	6,418	5.7	-3.8
Structural U/E, % population <sup>1</sup>	12,149	10.1	12,986	10.4	12,871	9.3	-0.2

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,678	13,221	2,920	14,409	4,025	18,576	5.8
Taxes paid	701	3,459	694	3,423	943	4,351	3.9
GST paid	209	1,030	249	1,228	383	1,768	–
Benefits	456	2,250	493	2,433	642	2,963	4.7
Business income	400	1,975	410	2,025	529	2,443	3.6
Interest/dividends	85	419	96	475	102	469	1.9
Interest paid	177	874	236	1,163	372	1,718	11.9
Net property income	24	117	12	61	9	41	-\$76
Net flow of funds	2,556	12,619	2,754	13,588	3,609	16,655	4.7
Rank		22		20		15	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	81.2	11
Population growth rate, 55+	3.7	27
% Years growing since 1995	85	26
Fertility, babies % pop, 2004	1.27	27
Fertility bounce, 1996-2004	-0.24	53
Family / Youth migration	3.8	10
Aged migration	3.6	53
Working elderly	26.8	36
Demographic stress	28	13
Dominant locations	74	36
<b>Sustainability score</b>	<b>63</b>	<b>22</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Thuringowa	79.4	20
Least sustainable LGA – Hinchinbrook	24.4	610

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	6.51	14	4,765
New medium density and alterations	1.61	26	1,180

	2001	2004	Difference
Household size	2.77	2.74	-0.03
Household size rank	26	21	13

	New pop.	Existing pop.	Pop. conversion
Dwelling use	4,039	726	84.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	24.6	29.2	31
Computer use (%)	39.4	43.8	39
Ratio	62.6	66.5	30
Rank diff, net / computer	8	0	5
Estimated internet use (%)	24.8	29.2	35
Take-up surplus / shortfall	-0.1	0	35
Av. household income, 2001	47,114	49,086	26

## ADSL COVERAGE

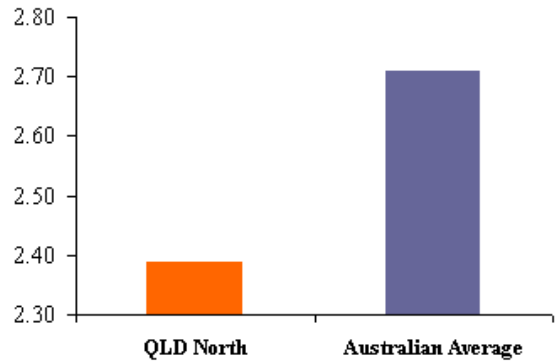
	Rate	Aust. Average	Rank
Coverage, % pop	87.2	90.4	27
Number of exchanges	59		
Number exchanges enabled	22		
% of exchanges enabled	37.3	34.3	35
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	2.9	2.7	36
Lowest (%)	0.0	Drymple	
Highest (%)	100.0	Charters Towers	
% children	87.1	89.6	27
% of area covered	2.3	1.2	45

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.388	43	
Staging leaders (%)	3.721	45	389
Expected broadband (%)	32.7	44	3,416
Export elasticity (%)	4.66	28	487
Export x coverage (%)	0.60	36	63
Leaders lost (%)	0.48	38	50

### Expected E-staging Level

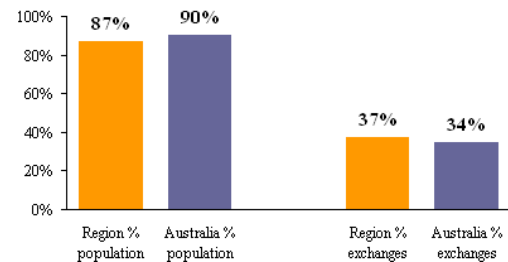


## BABY BOUNCE

	Per cent	Rank
1996	1.52	16
2001	1.47	16
2002	1.37	15
2003	1.40	10
2004	1.27	24
Bounce 2003-04	-0.13	63
Actual change 2003-04 (number)	-219	64

### QLD North

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.20	0.91
Long term Newstart	1.46	1.38
Total Newstart	2.66	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	3.01	3.42
DSP, aged under 25	0.22	0.22
Youth unemployment	0.58	0.47
Parenting Payment Single (PPS)	2.58	2.25
PPS, aged under 25	0.43	0.29

	Social Security % NFOF	Rank
1999	17.83	20
2001	17.91	18
2003	17.40	15
2004	19.08	16
2005	17.79	14

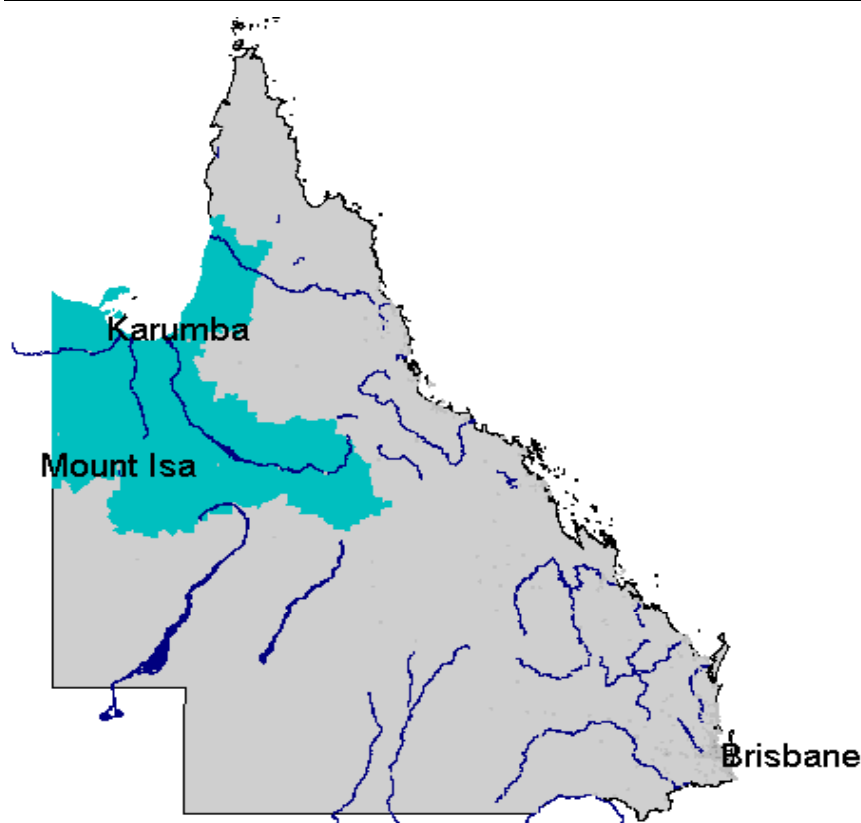
## QLD North West

North West Queensland is a belt of tropical savannah divided into hard country and soft. The hard country, with rock underfoot, has proved to be a major mineral province. Mt Isa is the main city and supply centre. There are few other towns since the newer mines are mostly fly-in fly-out, and mining now generates few jobs in relation to the value of output. The soft country supports extensive grazing, but has sufficient rainfall to give potential for intensification in some places. There is a significant Aboriginal population.

N.B Unemployment figures in remote regions can display excess variation.

### Major centres:

Mt Isa, Hughenden



### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	35,727		35,932		35,252		-0.5
No. households	12,744		12,918		12,469		-0.9
Workforce	21,410	59.8	19,314	53.8	20,562	58.3	1.6
Employment	20,991	–	17,420	–	18,715	–	1.8
Unemployment	419	2.0	1,895	9.8	1,846	9.0	-0.7
DEET U/E	1,391	6.4	1,424	7.4	1,225	6.0	-3.7
Structural U/E, % population <sup>1</sup>	1,069	4.7	2,443	10.6	2,373	10.5	-0.7

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	544	15,747	561	15,603	610	17,307	1.6
Taxes paid	150	4,326	137	3,807	143	4,049	-1.1
GST paid	38	1,094	46	1,285	53	1,506	–
Benefits	74	2,141	121	3,381	140	3,981	10.9
Business income	110	3,184	115	3,208	120	3,418	1.2
Interest/dividends	9	253	9	260	10	290	2.3
Interest paid	39	1,124	53	1,471	77	2,197	11.8
Net property income	0	-14	-3	-90	-1	-18	-\$4
Net flow of funds	510	14,766	568	15,799	607	17,224	2.6
Rank		11		12		13	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	88.2	3
Population growth rate, 55+	-8.6	64
% Years growing since 1995	39	62
Fertility, babies % pop, 2004	1.72	3
Fertility bounce, 1996-2004	-0.26	60
Family / Youth migration	-2.3	60
Aged migration	3.2	59
Working elderly	35.7	4
Demographic stress	-58	64
Dominant locations	78	31
<b>Sustainability score</b>	<b>40</b>	<b>62</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Cloncurry	81.9	13
Least sustainable LGA – Flinders	30.5	551

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	-0.34	64	-42
New medium density and alterations	0.22	62	27

	2001	2004	Difference
Household size	2.87	2.87	0.00
Household size rank	11	7	3

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-49	7	116.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	17.4	29.2	62
Computer use (%)	28.0	43.8	63
Ratio	62.3	66.5	32
Rank diff, net / computer	1	0	21
Estimated internet use (%)	17.5	29.2	62
Take-up surplus / shortfall	0.0	0	30
Av. household income, 2001	56,429	49,086	10

## ADSL COVERAGE

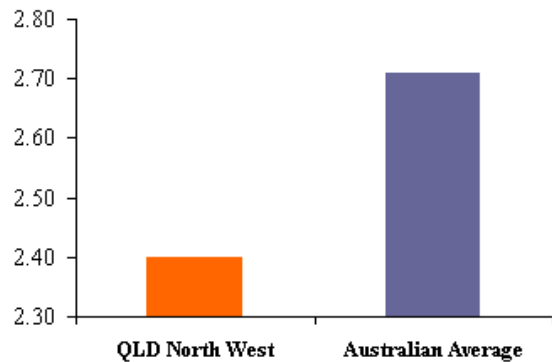
	Rate	Aust. Average	Rank
Coverage, % pop	78.6	90.4	33
Number of exchanges	30		
Number exchanges enabled	16		
% of exchanges enabled	53.3	34.3	25
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	7.8	2.7	15
Lowest (%)	0.0	Mornington	
Highest (%)	96.6	Mount Isa	
% children	81.7	89.6	30
% of area covered	0.9	1.2	54

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.399	37	
Staging leaders (%)	3.648	49	70
Expected broadband (%)	32.4	48	622
Export elasticity (%)	4.85	20	93
Export x coverage (%)	1.04	30	20
Leaders lost (%)	0.78	34	15

### Expected E-staging Level

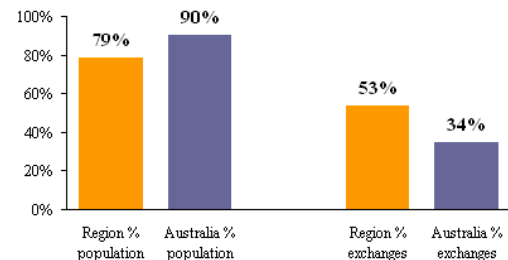


## BABY BOUNCE

	Per cent	Rank
1996	2.05	1
2001	2.26	1
2002	1.71	2
2003	1.63	3
2004	1.69	3
Bounce 2003-04	0.06	5
Actual change 2003-04 (number)	22	45

### QLD North West

#### ADSL Coverage



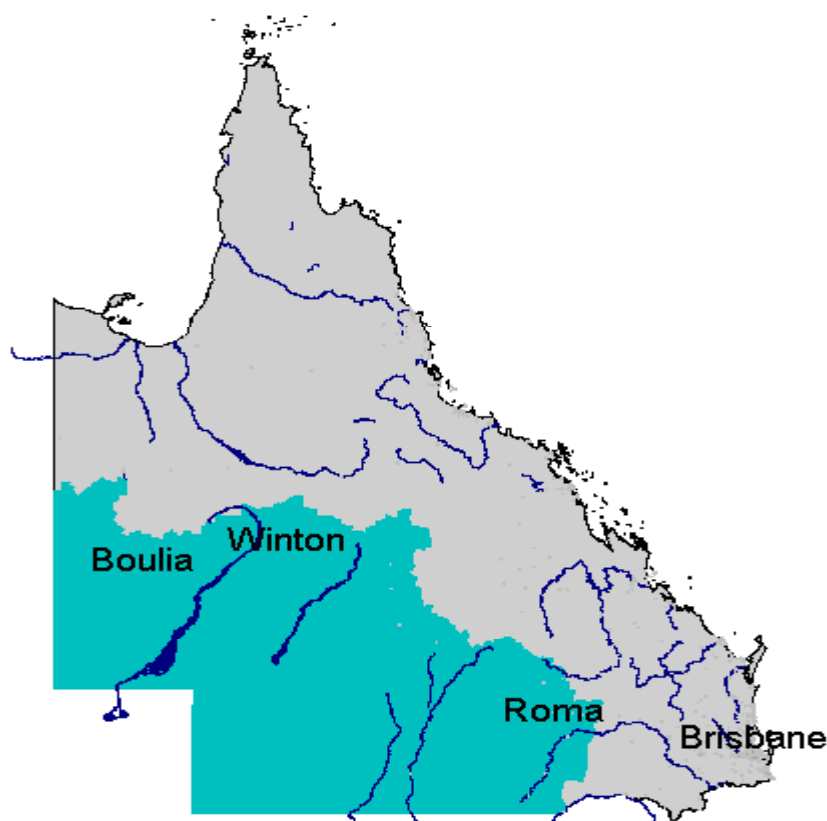
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.39	0.91
Long term Newstart	2.47	1.38
Total Newstart	3.86	2.29
Mature Age Allowance	0.06	0.11
Disability Support (DSP)	2.67	3.42
DSP, aged under 25	0.18	0.22
Youth unemployment	0.69	0.47
Parenting Payment Single (PPS)	3.02	2.25
PPS, aged under 25	0.69	0.29

	Social Security % NFOF	Rank
1999	14.50	12
2001	21.40	34
2003	23.44	44
2004	29.00	56
2005	23.11	32

# QLD Pastoral



Pastoral Queensland comprises two state planning zones, grouped together because of low population and similarity of economic base. The region has no large towns, though it is gradually developing an 'outback' tourist trade. Much of the region is alluvial Channel country or low-rainfall black-soil downs, divided into extensive pastoral stations. Unlike the region to the north, this pastoral zone is not known for hard-rock mining, but has natural gas fields. North of Roma, extending into the Fitzroy region, coal seam methane fields are rising in importance.

## Major centres:

Roma, Longreach, Charleville

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	38,272		39,499		39,130		-0.2
No. households	15,238		15,480		16,772		2.0
Workforce	23,292	60.9	24,291	61.5	24,466	62.5	0.2
Employment	21,229	-	22,798	-	23,296	-	0.5
Unemployment	2,063	8.9	1,491	6.1	1,170	4.8	-5.9
DEET U/E	917	4.1	891	3.7	685	2.8	-6.3
Structural U/E, % population <sup>1</sup>	2,366	10.0	2,199	9.5	1,972	8.0	-2.7

Note: 1. Population aged 18-65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	423	10,857	508	12,859	526	13,446	3.6
Taxes paid	105	2,690	117	2,962	113	2,900	1.3
GST paid	28	712	42	1,057	47	1,209	-
Benefits	86	2,209	98	2,471	124	3,162	6.2
Business income	95	2,428	96	2,436	88	2,252	-1.2
Interest/dividends	15	378	17	443	21	529	5.8
Interest paid	36	929	51	1,288	76	1,937	13.0
Net property income	7	171	3	65	3	89	-\$82
Net flow of funds	457	11,710	512	12,967	526	13,432	2.3
Rank		38		30		53	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	80.5	13
Population growth rate, 55+	1.8	38
% Years growing since 1995	42	60
Fertility, babies % pop, 2004	1.40	11
Fertility bounce, 1996-2004	-0.24	52
Family / Youth migration	-3.9	64
Aged migration	3.8	44
Working elderly	37.6	1
Demographic stress	23	21
Dominant locations	63	48
<b>Sustainability score</b>	<b>51</b>	<b>51</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Balonne	72.1	85
Least sustainable LGA – Aramac	26.3	599

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.23	61	184
New medium density and alterations	0.07	64	11

	2001	2004	Difference
Household size	2.64	2.61	-0.02
Household size rank	45	44	11

	New pop.	Existing pop.	Pop. conversion
Dwelling use	47	137	25.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	16.3	29.2	63
Computer use (%)	30.6	43.8	62
Ratio	53.2	66.5	64
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	17.1	29.2	63
Take-up surplus / shortfall	-0.8	0	47
Av. household income, 2001	44,545	49,086	32

## ADSL COVERAGE

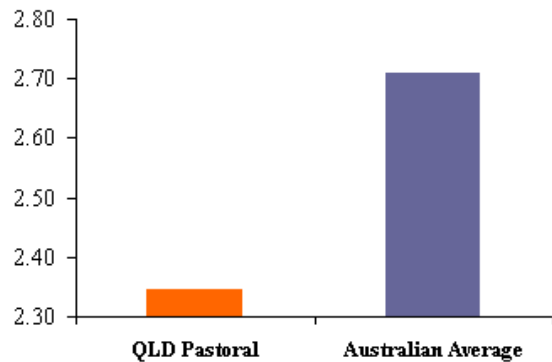
	Rate	Aust. Average	Rank
Coverage, % pop	64.3	90.4	59
Number of exchanges	64		
Number exchanges enabled	29		
% of exchanges enabled	45.3	34.3	29
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	15.8	2.7	2
Lowest (%)	0.0	Diamantina	
Highest (%)	92.7	Roma	
% children	67.2	89.6	56
% of area covered	0.7	1.2	56

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.345	63	
Staging leaders (%)	3.247	64	126
Expected broadband (%)	30.8	64	1,198
Export elasticity (%)	5.69	2	221
Export x coverage (%)	2.03	5	79
Leaders lost (%)	1.16	12	45

### Expected E-staging Level

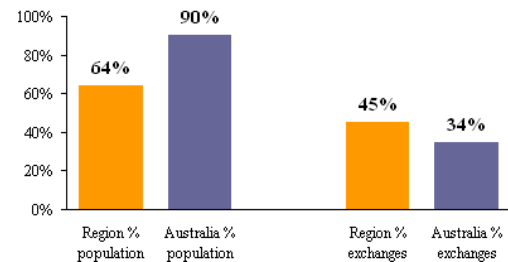


## BABY BOUNCE

	Per cent	Rank
1996	1.74	6
2001	1.74	4
2002	1.48	7
2003	1.53	7
2004	1.40	11
Bounce 2003-04	-0.13	64
Actual change 2003-04 (number)	-47	61

### QLD Pastoral

#### ADSL Coverage



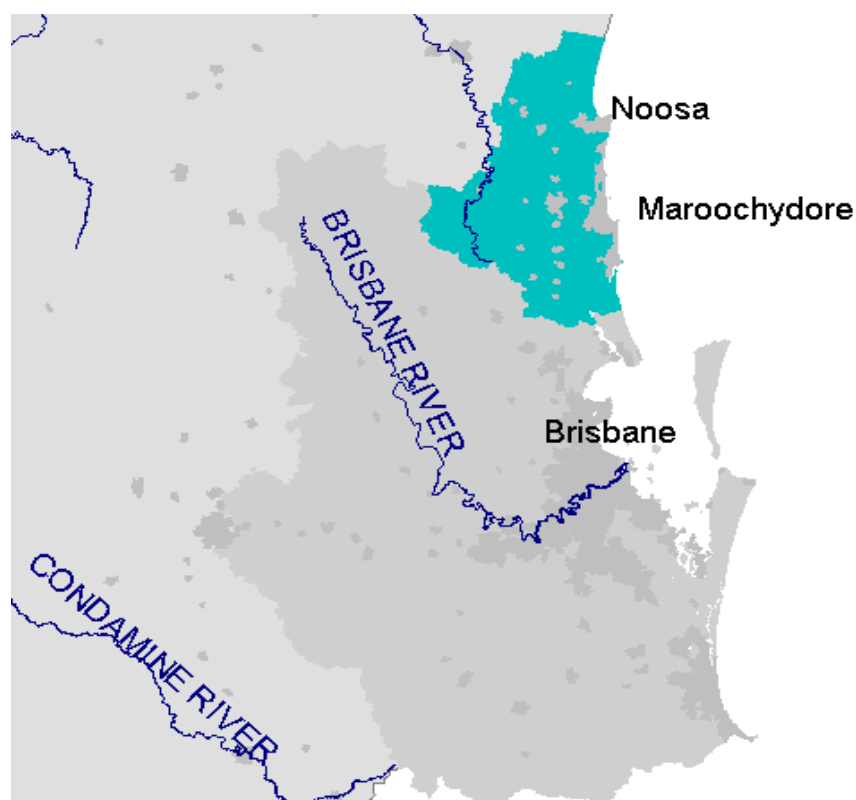
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.71	0.91
Long term Newstart	1.06	1.38
Total Newstart	1.77	2.29
Mature Age Allowance	0.05	0.11
Disability Support (DSP)	2.75	3.42
DSP, aged under 25	0.23	0.22
Youth unemployment	0.29	0.47
Parenting Payment Single (PPS)	2.35	2.25
PPS, aged under 25	0.27	0.29

	Social Security % NFOF	Rank
1999	18.86	24
2001	19.05	23
2003	21.78	37
2004	26.41	47
2005	23.54	34

## QLD Sunshine Coast



The Sunshine Coast is a resort and retirement strip, newer than the Gold Coast and with more room; hence not so intensively developed, but growing much more rapidly. Back from the strip is a row of older towns, the chief of which is Nambour. Some intensive farming survives (including pineapples), but the region's sugar industry has recently collapsed. This has increased the supply of land available for urban conversion.

### Major centres:

Caloundra, Nambour, Noosa

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	223,868		247,167		284,402		3.6
No. households	93,819		103,491		125,012		4.8
Workforce	105,285	46.8	122,430	49.5	134,097	47.2	2.3
Employment	87,871	–	102,889	–	120,903	–	4.1
Unemployment	17,413	16.5	19,541	16.0	13,194	9.8	-9.4
DEET U/E	11,664	13.4	13,735	11.5	8,932	6.8	-10.2
Structural U/E, % population <sup>1</sup>	17,826	14.0	21,073	15.2	18,225	10.5	-3.6

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,248	9,665	2,766	11,192	3,985	14,012	6.4
Taxes paid	568	2,443	656	2,654	1,024	3,602	6.7
GST paid	187	805	303	1,227	514	1,806	–
Benefits	704	3,028	788	3,187	1,057	3,717	3.5
Business income	401	1,726	407	1,645	537	1,887	1.5
Interest/dividends	146	628	180	730	232	814	4.4
Interest paid	169	726	230	930	323	1,136	7.7
Net property income	73	314	45	181	98	343	\$29
Net flow of funds	2,648	11,387	2,997	12,124	4,047	14,229	3.8
Rank		50		49		40	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	68.4	63
Population growth rate, 55+	14.3	3
% Years growing since 1995	100	1
Fertility, babies % pop, 2004	1.09	60
Fertility bounce, 1996-2004	-0.05	15
Family / Youth migration	3.6	12
Aged migration	8.5	1
Working elderly	18.7	60
Demographic stress	62	1
Dominant locations	67	41
<b>Sustainability score</b>	<b>75</b>	<b>1</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Noosa	77.4	30
Least sustainable LGA – Caloundra	72.1	84

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	12.05	4	12,001
New medium density and alterations	4.77	5	4,748

	2001	2004	Difference
Household size	2.48	2.47	-0.02
Household size rank	60	60	7

	New pop.	Existing pop.	Pop. conversion
Dwelling use	11,281	720	94.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	28.7	29.2	17
Computer use (%)	43.0	43.8	21
Ratio	66.6	66.5	16
Rank diff, net / computer	4	0	11
Estimated internet use (%)	26.2	29.2	25
Take-up surplus / shortfall	2.5	0	4
Av. household income, 2001	39,813	49,086	56

## ADSL COVERAGE

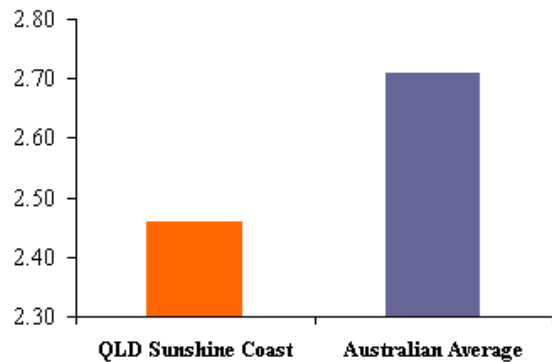
	Rate	Aust. Average	Rank
Coverage, % pop	93.3	90.4	23
Number of exchanges	39		
Number exchanges enabled	28		
% of exchanges enabled	71.8	34.3	21
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	1.6	2.7	39
Lowest (%)	86.9	Noosa	
Highest (%)	97.5	Maroochy	
% children	93.5	89.6	23
% of area covered	67.3	1.2	12

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.458	27
Staging leaders (%)	5.328	27
Expected broadband (%)	37.1	27
Export elasticity (%)	4.17	51
Export x coverage (%)	0.28	41
Leaders lost (%)	0.35	40

### Expected E-staging Level

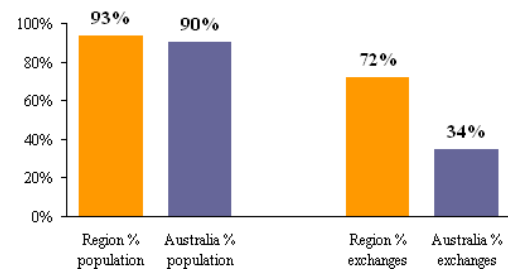


## BABY BOUNCE

	Per cent	Rank
1996	1.14	57
2001	1.15	56
2002	1.12	55
2003	1.10	56
2004	1.09	60
Bounce 2003-04	-0.01	55
Actual change 2003-04 (number)	71	29

### QLD Sunshine Coast

#### ADSL Coverage



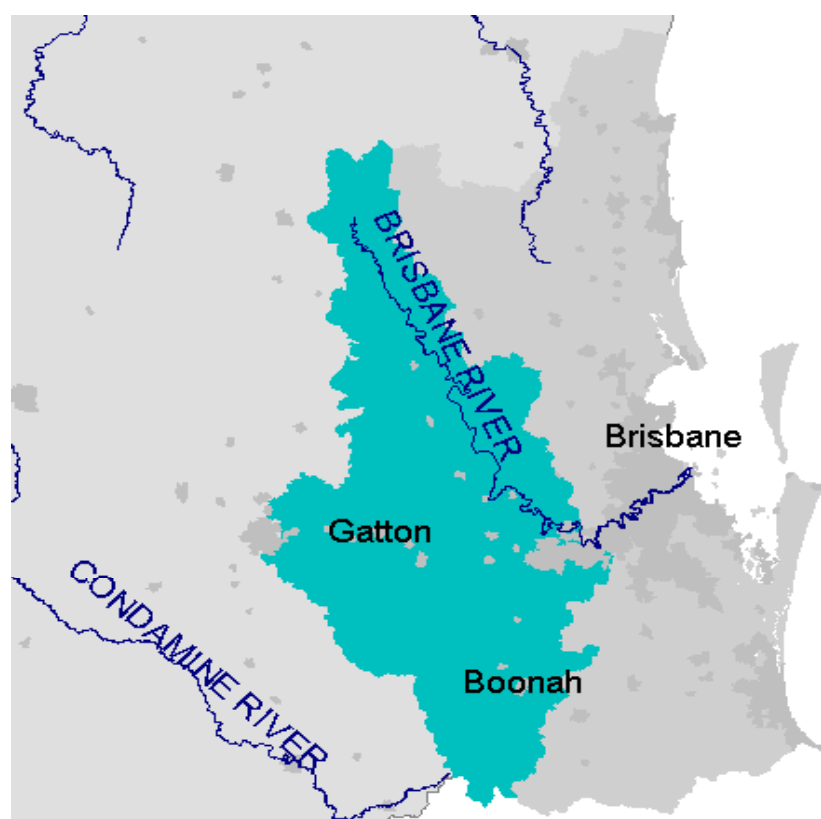
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.26	0.91
Long term Newstart	1.48	1.38
Total Newstart	2.74	2.29
Mature Age Allowance	0.19	0.11
Disability Support (DSP)	3.25	3.42
DSP, aged under 25	0.19	0.22
Youth unemployment	0.56	0.47
Parenting Payment Single (PPS)	2.87	2.25
PPS, aged under 25	0.30	0.29

	Social Security % NFOF	Rank
1999	26.59	57
2001	26.29	56
2003	23.97	46
2004	26.79	49
2005	26.13	50

## QLD West Moreton



The West Moreton region centres on Ipswich, which has long regarded itself as independent of Brisbane 40 km to the east. Manufacturing industry and power production were originally based on local coal mines, and the region also attracted defence facilities. In more recent times commuting has increased, but the hills are hot in summer and have not proved attractive to hobby farmers. Intensive agriculture is practised in the several fertile valleys of tributaries of the Brisbane river, though drought has threatened their groundwater supply.

### Major centres:

Ipswich

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	175,610		178,498		192,200		1.9
No. households	61,370		63,743		71,070		2.8
Workforce	90,470	49.9	98,935	55.4	97,650	50.8	-0.3
Employment	79,848	–	87,011	–	87,027	–	0.0
Unemployment	10,621	11.7	11,924	12.1	10,623	10.9	-2.8
DEET U/E	8,422	9.6	7,472	7.9	5,374	5.8	-7.9
Structural U/E, % population <sup>1</sup>	13,661	12.9	15,942	14.7	16,114	13.4	0.3

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,953	11,124	2,210	12,382	2,724	14,172	4.1
Taxes paid	485	2,764	497	2,783	656	3,411	3.6
GST paid	134	765	204	1,140	283	1,470	–
Benefits	484	2,758	530	2,968	700	3,642	4.7
Business income	305	1,735	310	1,736	378	1,968	2.1
Interest/dividends	37	210	46	259	48	252	3.1
Interest paid	188	1,069	252	1,413	361	1,877	9.8
Net property income	6	33	-2	-12	6	31	-\$2
Net flow of funds	1,978	11,261	2,141	11,996	2,558	13,307	2.8
Rank		52		54		55	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	80.3	15
Population growth rate, 55+	-0.8	53
% Years growing since 1995	83	31
Fertility, babies % pop, 2004	1.41	10
Fertility bounce, 1996-2004	-0.27	63
Family / Youth migration	1.2	35
Aged migration	3.7	48
Working elderly	25.1	43
Demographic stress	-2	53
Dominant locations	78	32
<b>Sustainability score</b>	<b>54</b>	<b>48</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Esk	58.6	251
Least sustainable LGA – Boonah	51.0	340

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	7.41	11	4,554
New medium density and alterations	0.67	42	414

	2001	2004	Difference
Household size	2.90	2.82	-0.08
Household size rank	10	12	55

	New pop.	Existing pop.	Pop. conversion
Dwelling use	2,691	1,863	59.1

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	23.1	29.2	39
Computer use (%)	38.9	43.8	43
Ratio	59.4	66.5	42
Rank diff, net / computer	4	0	11
Estimated internet use (%)	23.7	29.2	40
Take-up surplus / shortfall	-0.6	0	41
Áv. household income, 2001	43,830	49,086	37

## ADSL COVERAGE

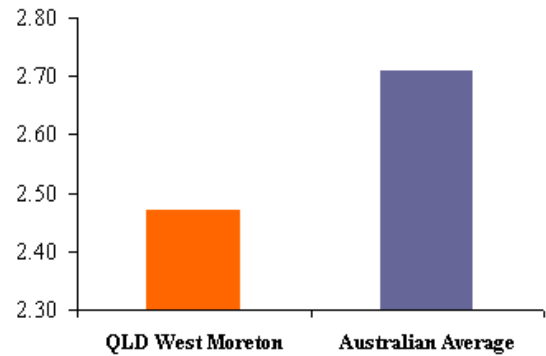
	Rate	Aust. Average	Rank
Coverage, % pop	78.4	90.4	34
Number of exchanges	56		
Number exchanges enabled	19		
% of exchanges enabled	33.9	34.3	39
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	3.2	2.7	34
Lowest (%)	32.7	Boonah	
Highest (%)	95.5	Ipswich	
% children	78.0	89.6	34
% of area covered	17.0	1.2	27

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.470	26	
Staging leaders (%)	5.550	26	387
Expected broadband (%)	37.2	26	2,594
Export elasticity (%)	4.67	27	326
Export x coverage (%)	1.01	32	70
Leaders lost (%)	1.20	9	83

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.68	8
2001	1.49	15
2002	1.39	13
2003	1.33	17
2004	1.41	10
Bounce 2003-04	0.08	3
Actual change 2003-04 (number)	169	17

### QLD West Moreton

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.95	0.91
Long term Newstart	1.22	1.38
Total Newstart	2.18	2.29
Mature Age Allowance	0.09	0.11
Disability Support (DSP)	5.35	3.42
DSP, aged under 25	0.45	0.22
Youth unemployment	0.61	0.47
Parenting Payment Single (PPS)	3.27	2.25
PPS, aged under 25	0.55	0.29

	Social Security % NFOF	Rank
1999	24.49	48
2001	24.74	50
2003	25.25	50
2004	27.67	53
2005	27.37	54

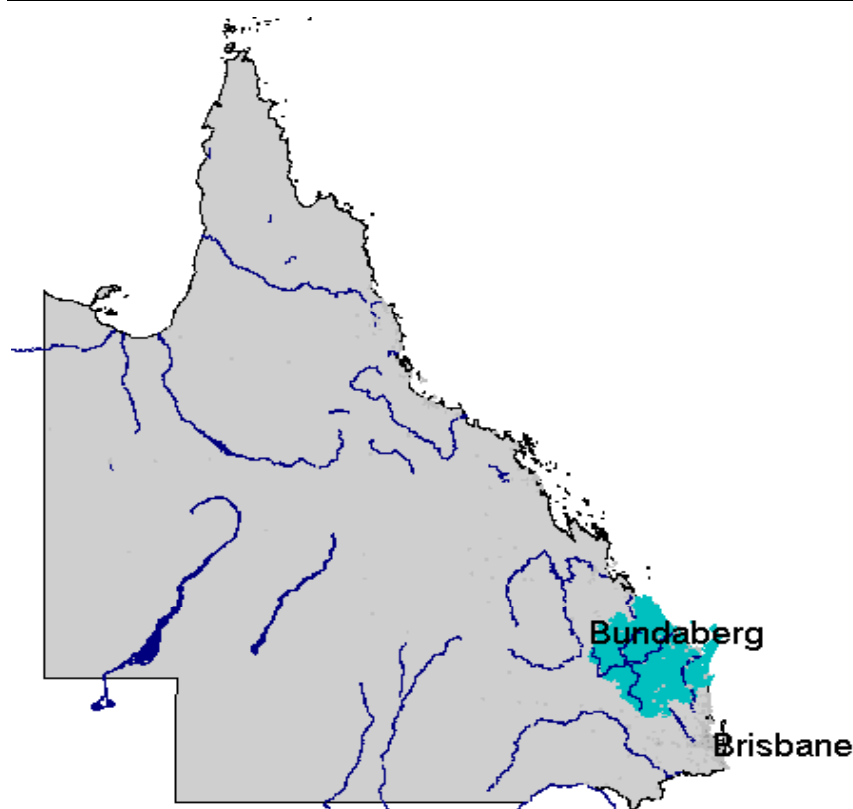
## QLD Wide Bay-Burnett

Wide Bay-Burnett comprises several sub-regions.

- The retirement and resort developments around Hervey Bay are the northerly outposts of a settlement type familiar on the NSW coast. The old industrial town of Maryborough provides a commercial centre.
- Around and behind Bundaberg is a region of intensive agriculture, growing mainly sugar cane. Bundaberg has developed as a regional centre and has manufacturing industries based on agricultural processing.
- The rural hinterland, beyond reach of the sea breeze, has missed out on retirement migration. Round Kingaroy and in several other places intensive agriculture is practised.

### Major centres:

Bundaberg, Maryborough, Gympie



### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	229,769		236,492		255,439		1.9
No. households	90,969		95,378		106,931		2.9
Workforce	108,488	47.0	104,777	44.3	113,167	44.3	1.9
Employment	88,720	–	82,977	–	93,772	–	3.1
Unemployment	19,768	18.2	21,800	20.8	19,395	17.1	-2.9
DEET U/E	14,974	12.8	11,674	10.6	10,596	10.1	-2.4
Structural U/E, % population <sup>1</sup>	22,491	17.1	26,109	19.2	25,791	16.9	-0.3

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,956	8,454	2,223	9,401	3,010	11,784	5.7
Taxes paid	467	2,018	494	2,089	709	2,774	5.4
GST paid	206	889	264	1,116	421	1,647	–
Benefits	768	3,321	861	3,640	1,162	4,549	5.4
Business income	371	1,604	375	1,584	531	2,080	4.4
Interest/dividends	71	309	84	356	104	407	4.7
Interest paid	179	773	247	1,045	368	1,440	10.9
Net property income	32	140	14	58	31	121	-\$19
Net flow of funds	2,348	10,147	2,551	10,788	3,341	13,080	4.3
Rank		61		61		58	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	70.6	60
Population growth rate, 55+	0.4	46
% Years growing since 1995	93	9
Fertility, babies % pop, 2004	1.12	58
Fertility bounce, 1996-2004	-0.26	61
Family / Youth migration	-0.4	50
Aged migration	7.0	4
Working elderly	20.3	57
Demographic stress	6	42
Dominant locations	59	52
<b>Sustainability score</b>	<b>56</b>	<b>43</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Burnett	69.2	114
Least sustainable LGA – Monto	19.7	627

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	6.96	13	6,404
New medium density and alterations	1.36	29	1,251

	2001	2004	Difference
Household size	2.57	2.53	-0.04
Household size rank	58	57	29

	New pop.	Existing pop.	Pop. conversion
Dwelling use	4,747	1,658	74.1

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	18.8	29.2	61
Computer use (%)	34.2	43.8	59
Ratio	55.0	66.5	62
Rank diff, net / computer	-2	0	42
Estimated internet use (%)	18.2	29.2	60
Take-up surplus / shortfall	0.6	0	19
Av. household income, 2001	35,703	49,086	64

## ADSL COVERAGE

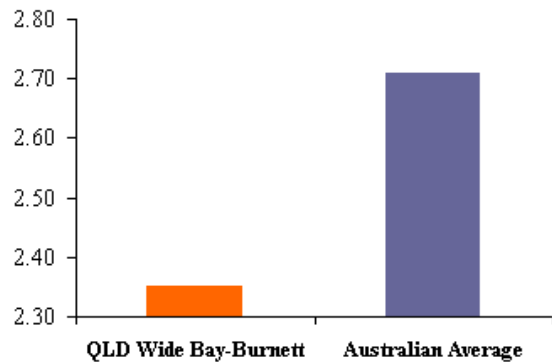
	Rate	Aust. Average	Rank
Coverage, % pop	67.3	90.4	56
Number of exchanges	115		
Number exchanges enabled	26		
% of exchanges enabled	22.6	34.3	48
Number HIBIS exchanges	4		
Exchanges per 10,000 pop.	4.9	2.7	24
Lowest (%)	0.0	Kilkivan	
Highest (%)	98.7	Bundaberg	
% children	66.1	89.6	57
% of area covered	3.9	1.2	38

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.351	62	
Staging leaders (%)	3.444	57	422
Expected broadband (%)	31.8	60	3,886
Export elasticity (%)	5.11	15	625
Export x coverage (%)	1.67	10	204
Leaders lost (%)	1.12	15	138

### Expected E-staging Level

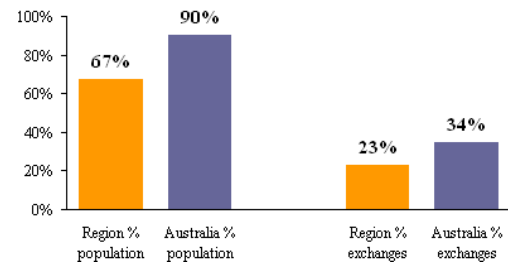


## BABY BOUNCE

	Per cent	Rank
1996	1.40	34
2001	1.22	49
2002	1.15	53
2003	1.07	59
2004	1.12	59
Bounce 2003-04	0.05	12
Actual change 2003-04 (number)	175	16

### QLD Wide Bay-Burnett

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.34	0.91
Long term Newstart	2.09	1.38
Total Newstart	3.44	2.29
Mature Age Allowance	0.27	0.11
Disability Support (DSP)	6.16	3.42
DSP, aged under 25	0.38	0.22
Youth unemployment	0.70	0.47
Parenting Payment Single (PPS)	3.03	2.25
PPS, aged under 25	0.43	0.29

	Social Security % NFOF	Rank
1999	32.72	62
2001	33.74	61
2003	32.64	61
2004	36.58	62
2005	34.78	61

# Adelaide Central



The founding fathers of Adelaide picked a site where the Adelaide plain began to slope upwards towards Mt Lofty, though still well short of the main escarpment. This choice resulted in the City having essentially industrial suburbs to the immediate west, while leafy garden suburbs developed to the east and south, between the City and the escarpment. The Adelaide Central region groups the City with these garden suburbs. The economic base of the region lies in its City; the rest of the region consists of suburbs into which a few city centre functions are slowly infusing, plus the gracious resorts of the Holdfast Bay coastline.

## Major centres:

Adelaide, Glenelg

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	370,144		374,504		378,844		0.3
No. households	153,804		160,668		169,495		1.3
Workforce	186,855	50.7	189,653	50.6	201,733	53.2	1.6
Employment	168,964	–	172,830	–	188,190	–	2.2
Unemployment	17,891	9.6	16,822	8.9	13,543	6.7	-5.3
DEET U/E	13,963	7.6	11,455	6.2	9,176	4.7	-5.4
Structural U/E, % population <sup>1</sup>	21,636	9.5	21,764	9.4	20,615	8.5	-1.3

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	5,466	14,735	6,573	17,550	7,740	20,432	5.6
Taxes paid	1,588	4,280	1,917	5,120	2,474	6,530	7.3
GST paid	374	1,008	544	1,454	732	1,933	–
Benefits	896	2,415	956	2,554	1,139	3,007	3.7
Business income	750	2,022	803	2,143	1,093	2,884	6.1
Interest/dividends	446	1,201	594	1,586	612	1,615	5.1
Interest paid	283	763	386	1,030	592	1,563	12.7
Net property income	157	423	128	341	130	342	-\$81
Net flow of funds	5,470	14,746	6,206	16,571	6,916	18,255	3.6
Rank		12		9		10	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	71.4	59
Population growth rate, 55+	0.8	43
% Years growing since 1995	80	40
Fertility, babies % pop, 2004	0.98	63
Fertility bounce, 1996-2004	-0.03	13
Family / Youth migration	4.3	8
Aged migration	5.4	13
Working elderly	22.3	49
Demographic stress	5	46
Dominant locations	100	1
<b>Sustainability score</b>	<b>58</b>	<b>40</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Holdfast Bay	69.6	108
Least sustainable LGA – Unley	51.6	329

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.32	54	3,551
New medium density and alterations	2.36	16	3,612

	2001	2004	Difference
Household size	2.45	2.42	-0.03
Household size rank	61	61	17

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,705	1,846	48.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	33.7	29.2	11
Computer use (%)	48.1	43.8	10
Ratio	69.9	66.5	11
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	32.1	29.2	11
Take-up surplus / shortfall	1.5	0	11
Áv. household income, 2001	48,519	49,086	23

## ADSL COVERAGE

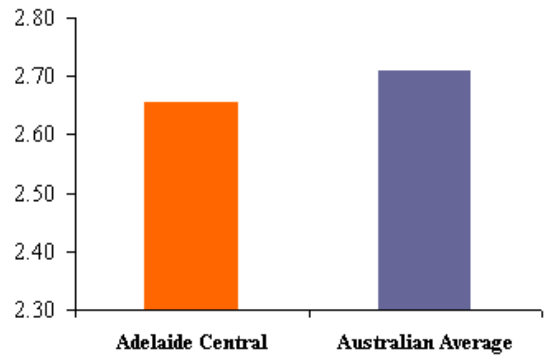
	Rate	Aust. Average	Rank
Coverage, % pop	99.9	90.4	Eq 1
Number of exchanges	15		
Number exchanges enabled	15		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.4	2.7	59
Lowest (%)	99.1		
Highest (%)	100.0		
% children	99.9	89.6	Eq 1
% of area covered	98.5	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.654	6	
Staging leaders (%)	7.893	4	1,857
Expected broadband (%)	45.4	8	10,676
Export elasticity (%)	4.02	61	947
Export x coverage (%)	0.00	57	1
Leaders lost (%)	0.01	57	2

### Expected E-staging Level

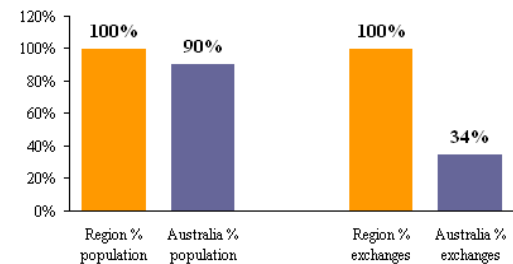


## BABY BOUNCE

	Per cent	Rank
1996	1.01	63
2001	0.98	64
2002	0.97	64
2003	0.95	64
2004	0.98	63
Bounce 2003-04	0.04	20
Actual change 2003-04 (number)	150	20

### Adelaide Central

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.77	0.91
Long term Newstart	1.14	1.38
Total Newstart	1.92	2.29
Mature Age Allowance	0.09	0.11
Disability Support (DSP)	3.39	3.42
DSP, aged under 25	0.20	0.22
Youth unemployment	0.37	0.47
Parenting Payment Single (PPS)	1.40	2.25
PPS, aged under 25	0.14	0.29

	Social Security % NFOF	Rank
1999	16.38	17
2001	15.41	12
2003	16.23	12
2004	16.71	12
2005	16.47	12

## Adelaide Outer



The Outer Adelaide region comprises the Mt Lofty Ranges and the Fleurieu Peninsula. It is separated from Central Adelaide and the Adelaide Plains by a scarp which angles across from behind Gawler to the sea at Marino. To the east the rainfall drops off and the Mallee begins. The region includes a number of national parks and conservation areas, but there are also extensive post-1960s suburbs. Beyond these suburbs, to the south and north, are the established wine areas (the Barossa Valley and Southern Vales), and beyond again to the south are the resorts and retirement areas of Encounter Bay. The wine industry combines agriculture, manufacturing and tourism but the region is mainly a commuter zone.

### Major centres:

Angaston, Mt Barker, Noarlunga Centre

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	352,106		365,920		377,662		0.8
No. households	132,305		139,181		155,067		2.7
Workforce	179,268	50.7	186,982	51.1	202,368	53.6	2.0
Employment	161,465	–	167,687	–	185,716	–	2.6
Unemployment	17,803	9.9	19,295	10.3	16,652	8.2	-3.6
DEET U/E	14,327	8.1	11,445	6.3	9,747	5.0	-3.9
Structural U/E, % population <sup>1</sup>	20,739	9.5	23,642	10.6	23,128	9.6	-0.5

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	4,573	12,746	5,299	14,480	6,337	16,780	4.7
Taxes paid	1,180	3,289	1,277	3,491	1,668	4,415	5.0
GST paid	310	864	443	1,210	623	1,649	–
Benefits	852	2,376	944	2,579	1,231	3,258	5.4
Business income	588	1,639	616	1,683	850	2,249	5.4
Interest/dividends	153	426	196	536	216	572	5.0
Interest paid	395	1,100	520	1,420	716	1,896	9.5
Net property income	68	190	43	119	56	148	-\$42
Net flow of funds	4,350	12,125	4,858	13,276	5,683	15,049	3.7
Rank		31		24		27	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	77.2	26
Population growth rate, 55+	1.5	40
% Years growing since 1995	86	21
Fertility, babies % pop, 2004	1.12	58
Fertility bounce, 1996-2004	-0.19	40
Family / Youth migration	0.6	41
Aged migration	4.3	29
Working elderly	27.0	35
Demographic stress	12	35
Dominant locations	86	26
<b>Sustainability score</b>	<b>58</b>	<b>39</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Mount Barker	71.3	89
Least sustainable LGA – Tea Tree Gully	54.9	295

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.84	19	7,739
New medium density and alterations	0.78	38	1,037

	2001	2004	Difference
Household size	2.76	2.68	-0.08
Household size rank	29	30	56

	New pop.	Existing pop.	Pop. conversion
Dwelling use	3,486	4,253	45.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	29.9	29.2	14
Computer use (%)	47.3	43.8	12
Ratio	63.1	66.5	28
Rank diff, net / computer	-2	0	42
Estimated internet use (%)	31.1	29.2	15
Take-up surplus / shortfall	-1.3	0	53
Áv. household income, 2001	46,910	49,086	28

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	90.3	90.4	26
Number of exchanges	72		
Number exchanges enabled	36		
% of exchanges enabled	50.0	34.3	26
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	2.1	2.7	38
Lowest (%)	40.0	Yankalilla	
Highest (%)	100.0	Tea Tree Gully	
% children	90.4	89.6	26
% of area covered	19.9	1.2	26

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.476	25	
Staging leaders (%)	5.958	24	796
Expected broadband (%)	38.3	24	5,112
Export elasticity (%)	4.54	33	607
Export x coverage (%)	0.44	38	59
Leaders lost (%)	0.58	36	77

### Expected E-staging Level

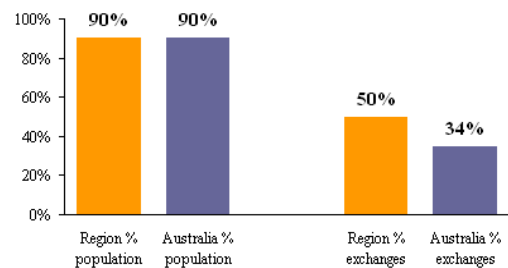


## BABY BOUNCE

	Per cent	Rank
1996	1.32	49
2001	1.21	50
2002	1.16	51
2003	1.14	52
2004	1.12	56
Bounce 2003-04	-0.02	56
Actual change 2003-04 (number)	-26	58

### Adelaide Outer

#### ADSL Coverage



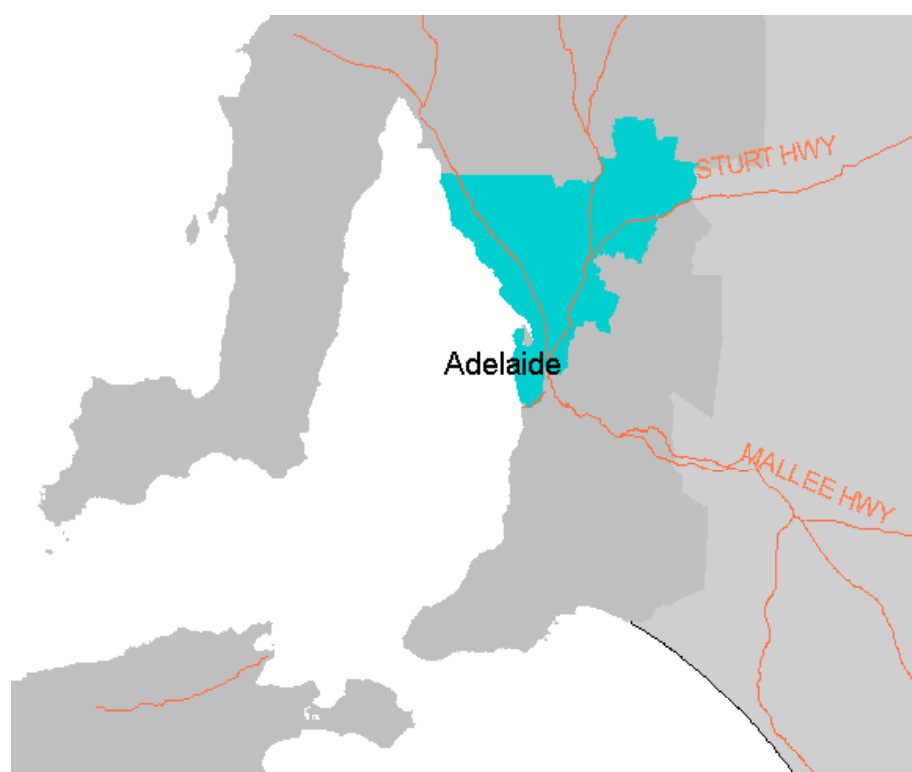
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.80	0.91
Long term Newstart	1.17	1.38
Total Newstart	1.97	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	3.59	3.42
DSP, aged under 25	0.24	0.22
Youth unemployment	0.48	0.47
Parenting Payment Single (PPS)	2.38	2.25
PPS, aged under 25	0.26	0.29

	Social Security % NFOF	Rank
1999	19.59	27
2001	19.43	25
2003	19.99	27
2004	21.79	25
2005	21.65	27

## Adelaide Plains



The Adelaide Plains region includes the southern or urbanised part of the plain which begins with Adelaide airport and extends north. The region includes old-established inner suburbs, old-established towns now incorporated into the metropolitan area (particularly Port Adelaide and Gawler), and an extensive area of post-war planned development in which public housing was provided to accommodate workers in new manufacturing industries. The region has suffered severely from employment reductions in automotive manufacturing over the past several decades, and the rate of generation of office jobs in Central Adelaide has not been sufficient to provide opportunities for commuting. The region now pins its hopes on port-related developments and on high technology investments, particularly at Mawson Lakes.

### Major centres:

Port Adelaide, Salisbury, Elizabeth

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	468,524		477,297		492,181		0.8
No. households	187,627		194,615		208,661		1.8
Workforce	222,546	47.4	232,029	48.6	239,323	48.6	0.8
Employment	187,332	–	195,270	–	209,317	–	1.8
Unemployment	35,214	15.8	36,760	15.8	30,006	12.5	-4.9
DEET U/E	27,314	12.8	23,580	10.6	19,721	8.6	-4.4
Structural U/E, % population <sup>1</sup>	46,147	16.0	49,721	17.1	46,690	15.0	-1.6

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	5,142	10,874	5,813	12,178	7,007	14,236	4.6
Taxes paid	1,295	2,738	1,349	2,826	1,810	3,677	5.0
GST paid	391	827	558	1,169	753	1,529	–
Benefits	1,519	3,212	1,655	3,468	2,031	4,127	4.3
Business income	622	1,316	649	1,360	897	1,824	5.6
Interest/dividends	156	330	177	371	183	372	2.0
Interest paid	405	857	534	1,118	756	1,537	10.2
Net property income	61	129	38	80	44	90	-\$39
Net flow of funds	5,409	11,439	5,891	12,343	6,845	13,907	3.3
Rank		47		46		46	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.4	40
Population growth rate, 55+	1.6	39
% Years growing since 1995	84	28
Fertility, babies % pop, 2004	1.22	33
Fertility bounce, 1996-2004	-0.14	24
Family / Youth migration	2.1	26
Aged migration	3.8	46
Working elderly	18.1	62
Demographic stress	12	38
Dominant locations	99	21
<b>Sustainability score</b>	<b>58</b>	<b>37</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Light	76.1	44
Least sustainable LGA – Charles Sturt	52.3	325

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.92	31	9,119
New medium density and alterations	0.98	36	1,812

	2001	2004	Difference
Household size	2.58	2.52	-0.06
Household size rank	57	58	44

	New pop.	Existing pop.	Pop. conversion
Dwelling use	4,536	4,583	49.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.8	29.2	41
Computer use (%)	36.7	43.8	49
Ratio	62.1	66.5	35
Rank diff, net / computer	8	0	5
Estimated internet use (%)	21.2	29.2	51
Take-up surplus / shortfall	1.6	0	10
Av. household income, 2001	40,180	49,086	53

## ADSL COVERAGE

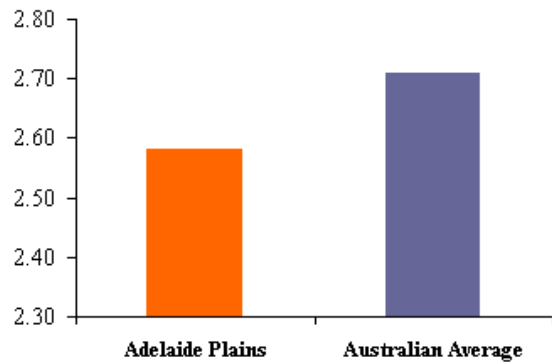
	Rate	Aust. Average	Rank
Coverage, % pop	97.0	90.4	17
Number of exchanges	29		
Number exchanges enabled	18		
% of exchanges enabled	62.1	34.3	24
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.6	2.7	50
Lowest (%)	0.0		
Highest (%)	100.0		
% children	96.1	89.6	18
% of area covered	21.1	1.2	24

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.582	16	
Staging leaders (%)	7.120	13	1,238
Expected broadband (%)	41.3	19	7,172
Export elasticity (%)	4.75	24	826
Export x coverage (%)	0.14	47	25
Leaders lost (%)	0.21	46	37

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.35	44
2001	1.21	51
2002	1.24	30
2003	1.22	28
2004	1.22	33
Bounce 2003-04	0.00	48
Actual change 2003-04 (number)	28	43

### Adelaide Plains

#### ADSL Coverage



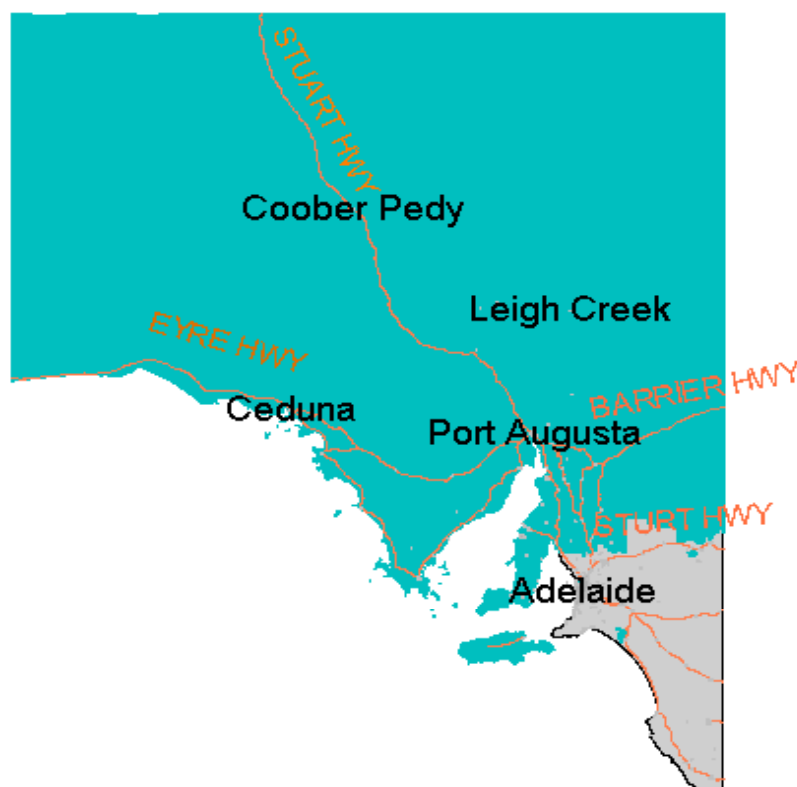
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.13	0.91
Long term Newstart	1.98	1.38
Total Newstart	3.11	2.29
Mature Age Allowance	0.13	0.11
Disability Support (DSP)	5.54	3.42
DSP, aged under 25	0.34	0.22
Youth unemployment	0.69	0.47
Parenting Payment Single (PPS)	3.05	2.25
PPS, aged under 25	0.45	0.29

	Social Security % NFOF	Rank
1999	28.08	61
2001	28.10	59
2003	28.79	56
2004	29.93	59
2005	29.68	59

# SA Eyre and Yorke



Eyre and Yorke comprise five distinct sub-regions.

- Kangaroo Island – an agricultural shire increasingly involved in tourism.
- Eyre Peninsula and the SA West Coast is wheat/sheep country. Port Lincoln is the major centre, known for its fishing and grain export port.
- The Upper Spencer Gulf comprises the three industrial cities of Whyalla, Port Augusta and Port Pirie. All are involved in the processing of minerals railed from the interior, with steel production at Whyalla, base metals smelting at Port Pirie, and electric power at Port Augusta.
- The SA Outback comprises the northern two-thirds of the state. It has scattered pastoral stations, mines, Aboriginal communities and tourist attractions including the Flinders Ranges.
- The Mid and Upper North is again wheat/sheep country. The Clare Valley is slightly higher than the rest and is wet enough to support viticulture.

## Major centres:

Port Pirie, Port Augusta, Whyalla, Port Lincoln

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	164,463		163,007		161,311		-0.3
No. households	64,294		66,485		79,580		4.6
Workforce	76,636	46.6	73,544	45.1	81,518	50.5	2.6
Employment	66,057	–	61,297	–	70,432	–	3.5
Unemployment	10,577	13.8	12,248	16.7	11,087	13.6	-2.5
DEET U/E	7,268	9.6	6,323	9.0	5,378	6.9	-4.0
Structural U/E, % population <sup>1</sup>	14,229	15.6	15,948	17.6	14,879	15.3	-1.7

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,562	10,045	1,753	10,754	2,410	14,942	6.8
Taxes paid	419	2,693	441	2,702	565	3,501	4.5
GST paid	147	945	187	1,148	268	1,660	–
Benefits	463	2,975	508	3,113	626	3,881	4.5
Business income	262	1,685	274	1,680	226	1,403	-3.0
Interest/dividends	60	389	76	469	133	824	13.3
Interest paid	119	768	148	905	243	1,507	11.9
Net property income	26	170	44	270	30	184	\$14
Net flow of funds	1,689	10,858	1,880	11,531	2,349	14,564	5.0
Rank		57		59		33	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	74.0	50
Population growth rate, 55+	-3.9	62
% Years growing since 1995	38	63
Fertility, babies % pop, 2004	1.20	41
Fertility bounce, 1996-2004	-0.22	47
Family / Youth migration	-2.3	61
Aged migration	4.4	24
Working elderly	24.3	45
Demographic stress	-13	60
Dominant locations	61	50
<b>Sustainability score</b>	<b>39</b>	<b>63</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Roxby Downs	86.4	3
Least sustainable LGA – Peterborough	22.5	622

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.80	56	1,141
New medium density and alterations	0.39	53	249

	2001	2004	Difference
Household size	2.58	2.50	-0.07
Household size rank	56	59	51

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-712	1,853	-62.4

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	19.3	29.2	58
Computer use (%)	34.9	43.8	56
Ratio	55.3	66.5	60
Rank diff, net / computer	-2	0	42
Estimated internet use (%)	19.2	29.2	58
Take-up surplus / shortfall	0.1	0	27
Av. household income, 2001	37,923	49,086	60

## ADSL COVERAGE

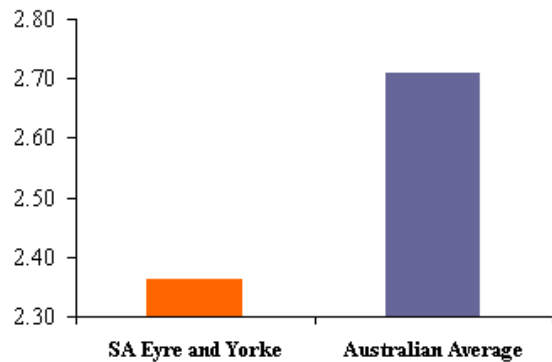
	Rate	Aust. Average	Rank
Coverage, % pop	57.8	90.4	60
Number of exchanges	230		
Number exchanges enabled	23		
% of exchanges enabled	10.0	34.3	61
Number HIBIS exchanges	4		
Exchanges per 10,000 pop.	14.3	2.7	3
Lowest (%)	0.0	Many LGAs	
Highest (%)	98.8	Whyalla	
% children	59.0	89.6	60
% of area covered	0.1	1.2	62

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.362	59	
Staging leaders (%)	3.318	62	338
Expected broadband (%)	31.8	59	3,239
Export elasticity (%)	5.22	12	532
Export x coverage (%)	2.20	3	225
Leaders lost (%)	1.40	5	143

### Expected E-staging Level

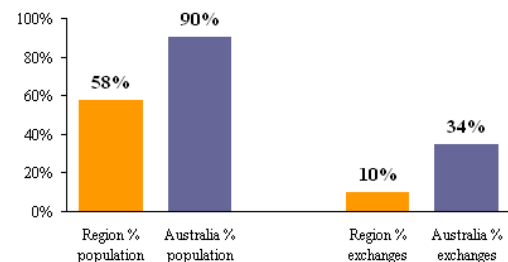


## BABY BOUNCE

	Per cent	Rank
1996	1.44	26
2001	1.28	37
2002	1.22	38
2003	1.20	36
2004	1.20	39
Bounce 2003-04	0.00	45
Actual change 2003-04 (number)	1	52

### SA Eyre and Yorke

#### ADSL Coverage



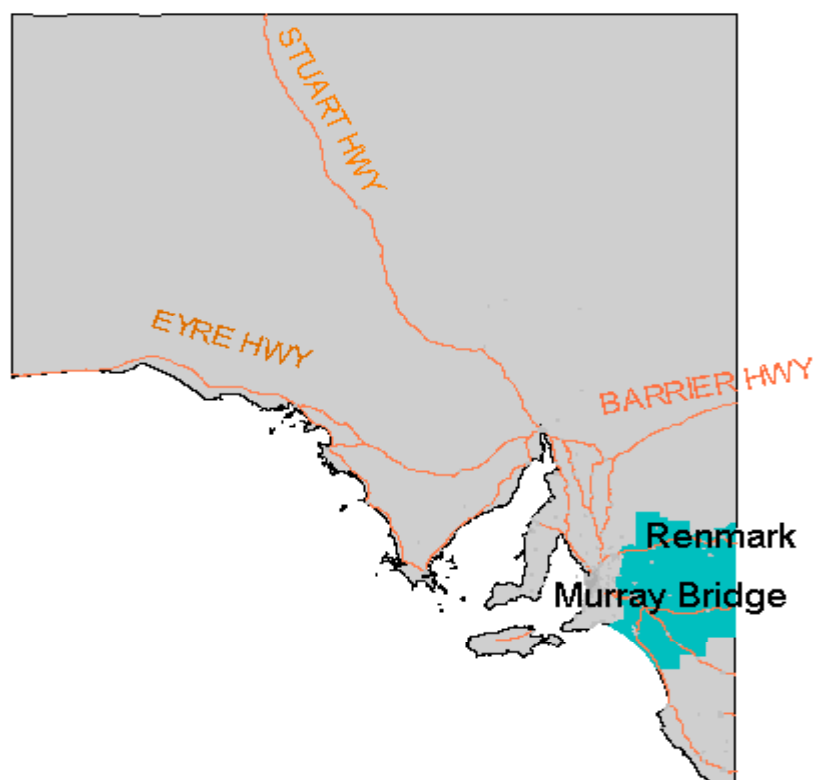
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.07	0.91
Long term Newstart	2.53	1.38
Total Newstart	3.60	2.29
Mature Age Allowance	0.15	0.11
Disability Support (DSP)	5.20	3.42
DSP, aged under 25	0.36	0.22
Youth unemployment	0.71	0.47
Parenting Payment Single (PPS)	2.62	2.25
PPS, aged under 25	0.41	0.29

	Social Security % NFOF	Rank
1999	27.40	58
2001	27.00	57
2003	23.26	43
2004	28.72	55
2005	26.64	51

## SA Murraylands



The Murray Mallee of SA adjoins the Mallee of Victoria, and has a similar pattern of development: intensive irrigated agriculture along the river, and extensive wheat/sheep farming away from it. The Riverland has a number of industries processing farm products.

### Major centres:

Renmark, Murray Bridge

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	68,164		68,412		68,476		0.0
No. households	26,825		27,750		31,831		3.5
Workforce	33,059	48.4	37,790	55.2	35,560	51.9	-1.5
Employment	29,301	–	33,744	–	31,766	–	-1.5
Unemployment	3,759	11.4	4,046	10.7	3,793	10.7	-1.6
DEET U/E	3,733	11.5	2,859	7.7	1,866	5.4	-10.1
Structural U/E, % population <sup>1</sup>	5,119	12.7	5,660	14.0	5,613	13.5	-0.2

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	695	10,175	778	11,369	944	13,783	5.2
Taxes paid	166	2,434	176	2,575	247	3,611	6.8
GST paid	49	712	75	1,104	113	1,647	–
Benefits	197	2,879	212	3,095	267	3,899	5.2
Business income	116	1,693	120	1,752	243	3,554	13.2
Interest/dividends	25	362	35	514	44	637	9.9
Interest paid	53	779	80	1,165	119	1,743	14.4
Net property income	19	272	9	131	12	180	-\$92
Net flow of funds	782	11,456	822	12,017	1,031	15,053	4.7
Rank		46		53		26	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	74.3	47
Population growth rate, 55+	-2.0	57
% Years growing since 1995	51	59
Fertility, babies % pop, 2004	1.19	42
Fertility bounce, 1996-2004	-0.20	46
Family / Youth migration	-0.9	52
Aged migration	4.2	30
Working elderly	28.3	28
Demographic stress	-3	56
Dominant locations	45	60
<b>Sustainability score</b>	<b>45</b>	<b>59</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Mid Murray	57.9	260
Least sustainable LGA – The Coorong	28.2	581

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.71	59	452
New medium density and alterations	0.20	63	54

	2001	2004	Difference
Household size	2.59	2.55	-0.05
Household size rank	54	54	33

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-32	484	-7.1

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	19.0	29.2	59
Computer use (%)	34.8	43.8	57
Ratio	54.7	66.5	63
Rank diff, net / computer	-2	0	42
Estimated internet use (%)	19.2	29.2	57
Take-up surplus / shortfall	-0.2	0	36
Av. household income, 2001	38,237	49,086	59

## ADSL COVERAGE

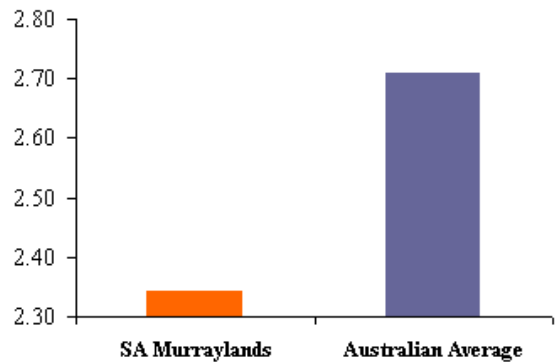
	Rate	Aust. Average	Rank
Coverage, % pop	44.6	90.4	63
Number of exchanges	94		
Number exchanges enabled	6		
% of exchanges enabled	6.4	34.3	63
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	14.1	2.7	4
Lowest (%)	0.0	Karoonda E. Murray	
Highest (%)	78.8	Murray Bridge	
% children	44.5	89.6	63
% of area covered	0.2	1.2	58

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.344	64	
Staging leaders (%)	3.355	60	165
Expected broadband (%)	31.5	63	1,551
Export elasticity (%)	5.87	1	289
Export x coverage (%)	3.25	1	160
Leaders lost (%)	1.86	2	92

### Expected E-staging Level

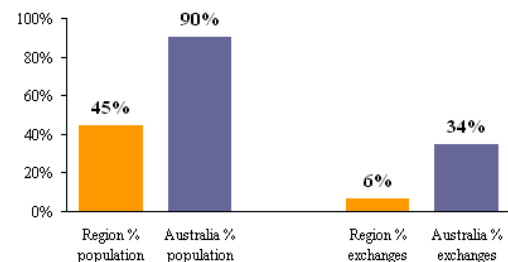


## BABY BOUNCE

	Per cent	Rank
1996	1.41	32
2001	1.24	46
2002	1.28	24
2003	1.14	53
2004	1.19	41
Bounce 2003-04	0.06	8
Actual change 2003-04 (number)	40	40

### SA Murraylands

#### ADSL Coverage



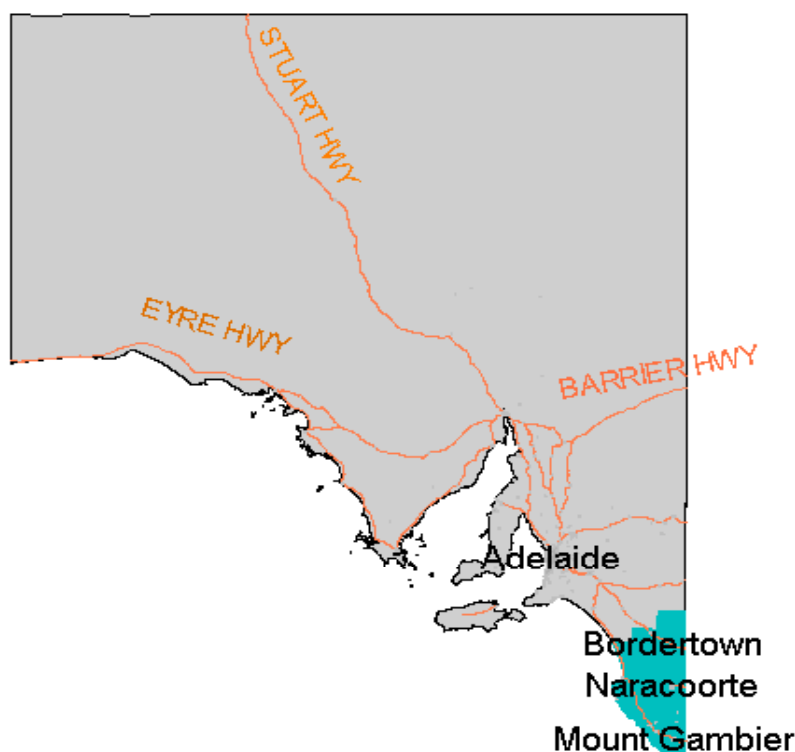
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.11	0.91
Long term Newstart	1.82	1.38
Total Newstart	2.93	2.29
Mature Age Allowance	0.13	0.11
Disability Support (DSP)	4.95	3.42
DSP, aged under 25	0.29	0.22
Youth unemployment	0.61	0.47
Parenting Payment Single (PPS)	2.46	2.25
PPS, aged under 25	0.32	0.29

	Social Security % NFOF	Rank
1999	25.13	52
2001	25.75	54
2003	27.34	57
2004	26.51	48
2005	25.90	48

## SA South East



Though quite flat, the South East of South Australia is limestone country with the remnants of recent volcanic activity round Mt Gambier. It has been a grazing rather than a grain-growing area, but lately has developed viticulture round Penola and a plantation-based timber products industry centred on Mt Gambier.

### Major centres:

Mt Gambier

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	62,819		62,588		63,320		0.3
No. households	23,753		24,600		28,558		3.8
Workforce	32,531	51.8	35,329	56.4	34,715	54.8	-0.4
Employment	29,334	–	32,526	–	32,071	–	-0.4
Unemployment	3,196	9.8	2,804	7.9	2,644	7.6	-1.5
DEET U/E	2,656	8.5	1,907	5.5	1,282	3.8	-9.4
Structural U/E, % population <sup>1</sup>	3,143	8.3	3,660	9.7	3,753	9.6	0.6

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	768	12,235	907	14,495	1,135	17,926	6.6
Taxes paid	191	3,048	217	3,463	286	4,514	6.8
GST paid	49	777	74	1,180	103	1,631	–
Benefits	148	2,357	165	2,637	204	3,218	5.3
Business income	108	1,721	113	1,801	167	2,640	7.4
Interest/dividends	32	512	42	667	50	790	7.5
Interest paid	55	873	79	1,257	109	1,718	11.9
Net property income	16	249	9	152	11	172	-\$77
Net flow of funds	777	12,376	867	13,851	1,069	16,881	5.3
Rank		27		17		14	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	77.8	22
Population growth rate, 55+	-2.1	58
% Years growing since 1995	59	55
Fertility, babies % pop, 2004	1.27	26
Fertility bounce, 1996-2004	-0.17	36
Family / Youth migration	-1.4	56
Aged migration	3.3	58
Working elderly	31.1	11
Demographic stress	-3	54
Dominant locations	62	49
<b>Sustainability score</b>	<b>47</b>	<b>56</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Mount Gambier	54.6	298
Least sustainable LGA – Wattle Range	33.7	516

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	3.97	41	930
New medium density and alterations	0.39	54	91

	2001	2004	Difference
Household size	2.67	2.60	-0.08
Household size rank	42	46	53

	New pop.	Existing pop.	Pop. conversion
Dwelling use	206	724	22.1

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	21.0	29.2	53
Computer use (%)	38.1	43.8	45
Ratio	55.1	66.5	61
Rank diff, net / computer	-8	0	58
Estimated internet use (%)	23.0	29.2	45
Take-up surplus / shortfall	-2.0	0	61
Av. household income, 2001	43,522	49,086	40

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	67.9	90.4	54
Number of exchanges	75		
Number exchanges enabled	12		
% of exchanges enabled	16.0	34.3	57
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	12.5	2.7	7
Lowest (%)	8.5	Grant	
Highest (%)	100.0	Mount Gambier	
% children	67.2	89.6	55
% of area covered	1.3	1.2	51

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.367	52	
Staging leaders (%)	3.537	54	166
Expected broadband (%)	32.0	54	1,505
Export elasticity (%)	5.54	5	260
Export x coverage (%)	1.78	7	84
Leaders lost (%)	1.14	14	53

### Expected E-staging Level

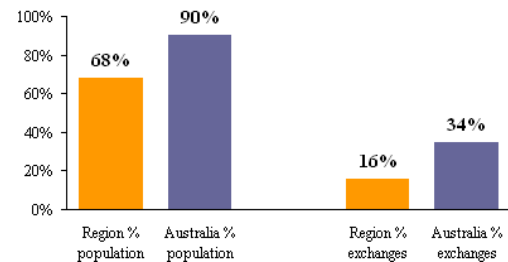


## BABY BOUNCE

	Per cent	Rank
1996	1.51	18
2001	1.34	24
2002	1.34	18
2003	1.32	18
2004	1.27	26
Bounce 2003-04	-0.05	62
Actual change 2003-04 (number)	-37	60

### SA South East

#### ADSL Coverage



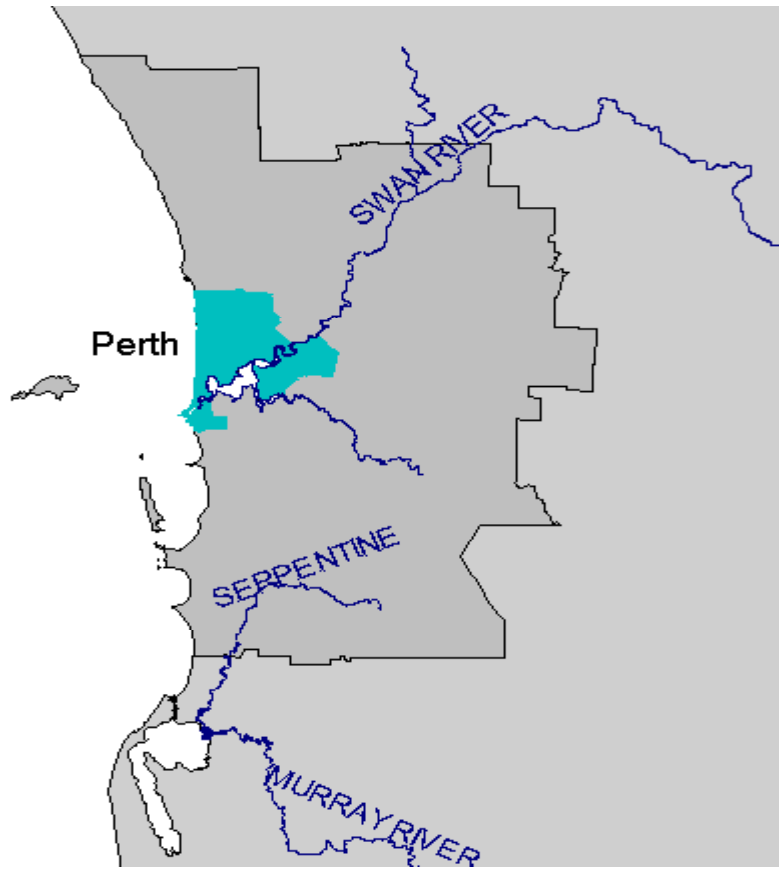
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.79	0.91
Long term Newstart	1.41	1.38
Total Newstart	2.20	2.29
Mature Age Allowance	0.07	0.11
Disability Support (DSP)	3.29	3.42
DSP, aged under 25	0.23	0.22
Youth unemployment	0.44	0.47
Parenting Payment Single (PPS)	2.29	2.25
PPS, aged under 25	0.34	0.29

	Social Security % NFOF	Rank
1999	19.05	25
2001	19.04	22
2003	19.66	24
2004	19.06	15
2005	19.06	16

# Perth Central



For its first century, what is now metropolitan Perth included several distinct population centres – Fremantle, Perth and others up-river to Guildford. All this was filled in after the second world war, and our region of Central Perth includes all the old centres and all that is between. It thus includes the container port, the established eastern and inner southern suburbs, and long-established manufacturing in Bayswater. Though the region is diverse, the city centre dominates its economic base. The city centre shares educational, cultural and tourism functions with Fremantle.

## Major centres:

Perth, Fremantle

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	418,744		426,199		442,463		0.9
No. households	175,613		188,153		205,100		2.2
Workforce	233,072	55.5	244,128	57.3	241,628	54.6	-0.3
Employment	212,193	–	223,009	–	227,565	–	0.5
Unemployment	20,878	9.0	21,121	8.7	14,063	5.8	-9.7
DEET U/E	18,740	8.1	17,593	7.2	14,312	6.0	-5.0
Structural U/E, % population <sup>1</sup>	26,536	9.9	27,538	10.1	25,482	8.6	-1.9

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	6,395	15,226	7,713	18,096	9,817	22,187	6.5
Taxes paid	1,952	4,649	2,333	5,473	3,478	7,860	9.1
GST paid	376	896	589	1,382	821	1,855	–
Benefits	954	2,272	991	2,326	1,220	2,757	3.3
Business income	1,620	3,858	1,440	3,379	1,905	4,305	1.8
Interest/dividends	458	1,092	639	1,499	653	1,477	5.2
Interest paid	425	1,011	537	1,260	885	2,000	12.0
Net property income	225	536	204	479	172	389	-\$147
Net flow of funds	6,899	16,428	7,529	17,665	8,584	19,400	2.8
Rank		5		6		6	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.0	44
Population growth rate, 55+	3.1	31
% Years growing since 1995	87	18
Fertility, babies % pop, 2004	1.15	54
Fertility bounce, 1996-2004	0.05	8
Family / Youth migration	6.7	4
Aged migration	5.3	14
Working elderly	25.2	42
Demographic stress	15	32
Dominant locations	100	1
<b>Sustainability score</b>	<b>64</b>	<b>20</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Perth	83.3	9
Least sustainable LGA – Peppermint Grv	42.2	419

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.13	39	7,315
New medium density and alterations	3.11	12	5,511
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.41	2.39	-0.02
Household size rank	63	62	9

	New pop.	Existing pop.	Pop. conversion
Dwelling use	5,639	1,676	77.1

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	34.6	29.2	9
Computer use (%)	47.9	43.8	11
Ratio	72.2	66.5	7
Rank diff, net / computer	2	0	18
Estimated internet use (%)	32.0	29.2	12
Take-up surplus / shortfall	2.6	0	1
Áv. household income, 2001	48,781	49,086	20

## ADSL COVERAGE

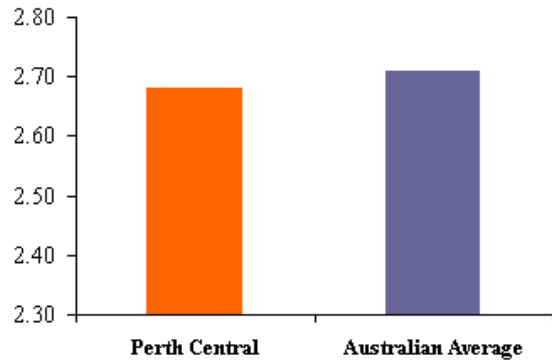
	Rate	Aust. Average	Rank
Coverage, % pop	100.0	90.4	Eq 1
Number of exchanges	18		
Number exchanges enabled	18		
% of exchanges enabled	100.0	34.3	Eq 1
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.4	2.7	57
Lowest (%)	100.0	Belmont	
Highest (%)	100.0		
% children	100.0	89.6	Eq 1
% of area covered	100.0	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.680	3	
Staging leaders (%)	8.380	3	2,810
Expected broadband (%)	46.9	3	15,709
Export elasticity (%)	4.29	42	1,455
Export x coverage (%)	0.00	59	0
Leaders lost (%)	0.00	59	0

### Expected E-staging Level

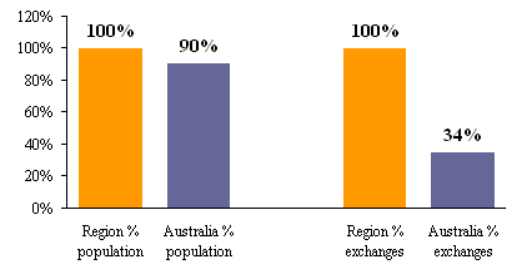


## BABY BOUNCE

	Per cent	Rank
1996	1.10	60
2001	1.11	62
2002	1.09	60
2003	1.08	58
2004	1.15	54
Bounce 2003-04	0.07	4
Actual change 2003-04 (number)	351	8

### Perth Central

#### ADSL Coverage



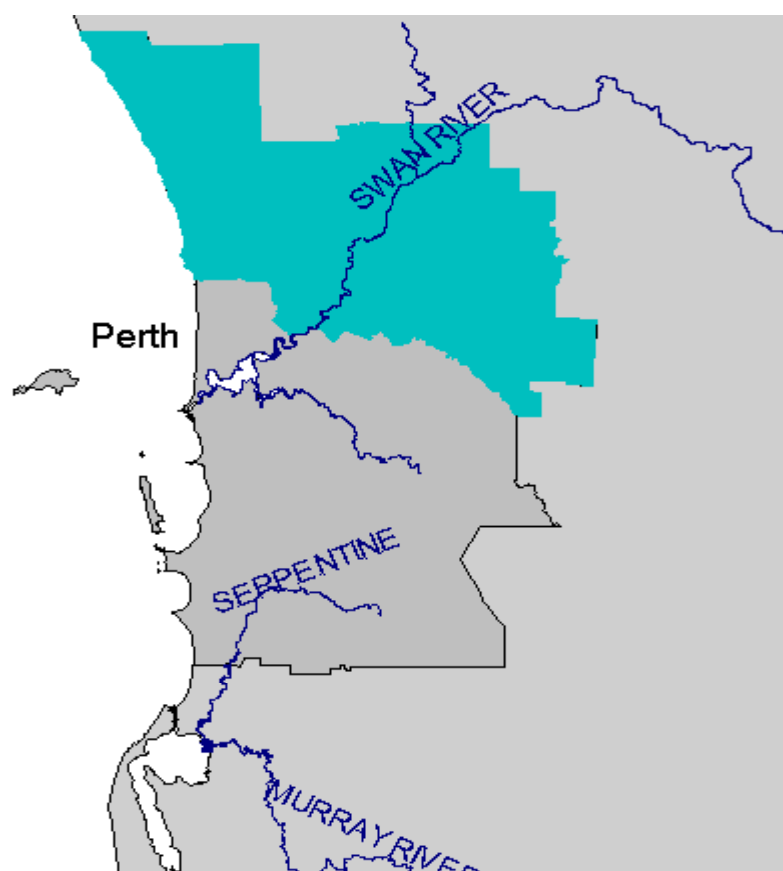
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.92	0.91
Long term Newstart	1.36	1.38
Total Newstart	2.28	2.29
Mature Age Allowance	0.10	0.11
Disability Support (DSP)	3.14	3.42
DSP, aged under 25	0.18	0.22
Youth unemployment	0.39	0.47
Parenting Payment Single (PPS)	1.75	2.25
PPS, aged under 25	0.22	0.29

	Social Security % NFOF	Rank
1999	13.83	10
2001	13.17	9
2003	15.16	10
2004	14.75	10
2005	14.21	9

## Perth Outer North



The Outer North of Perth comprises a coastal strip of commuter suburbs developed over the last few decades, plus, inland, the older-established Shires of Swan and Mundaring. The area is largely a commuter zone, but its older parts have manufacturing industries and high-intensity rural production. Above the scarp of the Darling Ranges is an important water catchment. There are grave concerns that this catchment is drying out as a result of climate change.

### Major centres:

Joondalup, Midland

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	406,586		431,463		466,995		2.0
No. households	143,936		154,915		173,270		2.8
Workforce	205,204	50.3	213,364	49.5	243,539	52.2	3.4
Employment	188,023	–	196,934	–	230,374	–	4.0
Unemployment	12,588	6.1	16,430	7.7	13,165	5.4	-5.4
DEET U/E	13,426	6.6	12,524	5.9	11,435	4.8	-2.2
Structural U/E, % population <sup>1</sup>	19,273	7.6	23,828	8.8	23,036	7.6	-0.8

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	5,635	13,561	6,527	15,126	8,059	17,258	4.1
Taxes paid	1,526	3,672	1,605	3,721	2,227	4,768	4.4
GST paid	350	843	519	1,202	727	1,558	–
Benefits	840	2,021	946	2,193	1,275	2,730	5.1
Business income	1,119	2,692	966	2,239	1,252	2,680	-0.1
Interest/dividends	149	358	195	453	236	505	5.9
Interest paid	553	1,331	744	1,725	1,084	2,322	9.7
Net property income	79	191	37	87	3	6	-\$185
Net flow of funds	5,392	12,977	5,803	13,450	6,786	14,532	1.9
Rank		18		23		34	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	80.8	12
Population growth rate, 55+	9.6	7
% Years growing since 1995	88	15
Fertility, babies % pop, 2004	1.30	21
Fertility bounce, 1996-2004	-0.11	21
Family / Youth migration	3.2	17
Aged migration	4.4	27
Working elderly	29.3	21
Demographic stress	50	4
Dominant locations	100	1
<b>Sustainability score</b>	<b>71</b>	<b>5</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Wanneroo	85.6	4
Least sustainable LGA – Bayswater	55.6	285

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	9.06	7	13,328
New medium density and alterations	1.17	31	1,724

	2001	2004	Difference
Household size	2.93	2.85	-0.08
Household size rank	6	9	57

	New pop.	Existing pop.	Pop. conversion
Dwelling use	8,735	4,593	65.5

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	32.7	29.2	12
Computer use (%)	48.6	43.8	9
Ratio	67.2	66.5	13
Rank diff, net / computer	-3	0	49
Estimated internet use (%)	33.0	29.2	10
Take-up surplus / shortfall	-0.3	0	37
Áv. household income, 2001	50,863	49,086	17

## ADSL COVERAGE

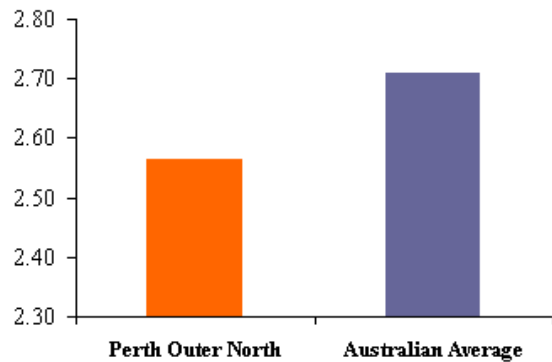
	Rate	Aust. Average	Rank
Coverage, % pop	97.5	90.4	16
Number of exchanges	35		
Number exchanges enabled	29		
% of exchanges enabled	82.9	34.3	16
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.9	2.7	48
Lowest (%)	88.5	Mundaring	
Highest (%)	100.0	Bassendean	
% children	97.4	89.6	16
% of area covered	66.8	1.2	13

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.563	18
Staging leaders (%)	7.043	15
Expected broadband (%)	42.4	17
Export elasticity (%)	4.39	38
Export x coverage (%)	0.11	48
Leaders lost (%)	0.18	48

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.40	35
2001	1.33	27
2002	1.30	23
2003	1.28	21
2004	1.30	20
Bounce 2003-04	0.02	35
Actual change 2003-04 (number)	215	12

### Perth Outer North

#### ADSL Coverage



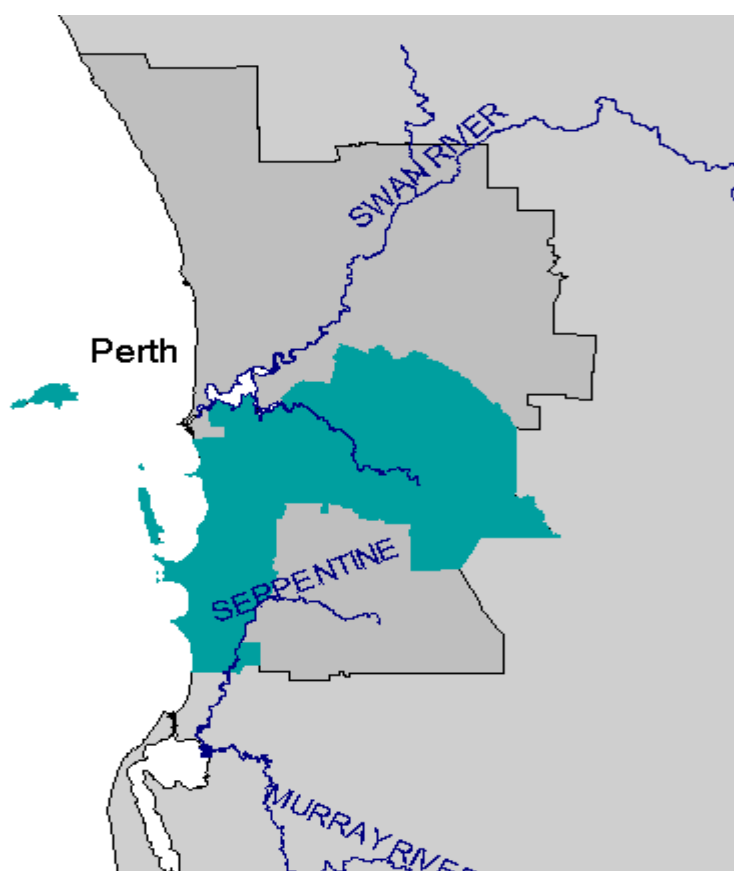
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.71	0.91
Long term Newstart	0.92	1.38
Total Newstart	1.64	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	2.57	3.42
DSP, aged under 25	0.17	0.22
Youth unemployment	0.35	0.47
Parenting Payment Single (PPS)	2.33	2.25
PPS, aged under 25	0.29	0.29

	Social Security % NFOF	Rank
1999	15.57	16
2001	16.30	14
2003	17.19	14
2004	18.96	14
2005	18.79	15

## Perth Outer South



Though Rockingham, at the far end of the Outer South of Perth, is a seaside suburb which bears comparison with the Outer North, the waterfront along Cockburn Sound is industrial, with bulk port facilities. There are also industrial and transport-oriented areas in the inland part of the region, as well as extensive commuter residential areas and several higher educational facilities. In overall socio-economic status, the region is probably lower than the other two Perth regions, and it is less dependent on central city commuting for its economic base, though this may change after completion of the fast rail connection now under construction.

### Major centres:

Armadale, Rockingham

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	502,751		523,636		559,029		1.6
No. households	179,778		194,588		212,308		2.2
Workforce	253,466	50.4	272,630	52.1	287,299	51.4	1.3
Employment	235,218	–	248,982	–	271,576	–	2.2
Unemployment	18,249	7.2	23,649	8.7	15,723	5.5	-9.7
DEET U/E	16,402	6.5	17,379	6.4	14,333	5.1	-4.7
Structural U/E, % population <sup>1</sup>	25,604	8.3	30,887	9.5	29,467	8.2	-1.2

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	6,832	13,427	7,794	14,885	9,500	16,995	4.0
Taxes paid	1,883	3,701	1,967	3,756	2,713	4,854	4.6
GST paid	408	803	624	1,192	824	1,475	–
Benefits	1,134	2,230	1,273	2,431	1,629	2,914	4.6
Business income	1,455	2,859	1,261	2,407	1,625	2,906	0.3
Interest/dividends	225	442	283	540	310	554	3.9
Interest paid	613	1,205	836	1,597	1,206	2,157	10.2
Net property income	131	258	75	144	40	71	-\$187
Net flow of funds	6,872	13,506	7,258	13,861	8,359	14,953	1.7
Rank		17		16		29	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	78.6	20
Population growth rate, 55+	5.7	18
% Years growing since 1995	92	12
Fertility, babies % pop, 2004	1.26	26
Fertility bounce, 1996-2004	-0.11	18
Family / Youth migration	3.6	14
Aged migration	4.0	36
Working elderly	26.8	37
Demographic stress	28	12
Dominant locations	100	1
<b>Sustainability score</b>	<b>67</b>	<b>12</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Rockingham	79.9	18
Least sustainable LGA – Armadale	49.0	353

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	7.47	10	13,699
New medium density and alterations	1.11	32	2,026

	2001	2004	Difference
Household size	2.86	2.79	-0.07
Household size rank	14	16	47

	New pop.	Existing pop.	Pop. conversion
Dwelling use	9,012	4,687	65.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	31.3	29.2	13
Computer use (%)	47.1	43.8	13
Ratio	66.4	66.5	17
Rank diff, net / computer	0	0	27
Estimated internet use (%)	31.3	29.2	14
Take-up surplus / shortfall	0.0	0	32
Av. household income, 2001	48,689	49,086	21

## ADSL COVERAGE

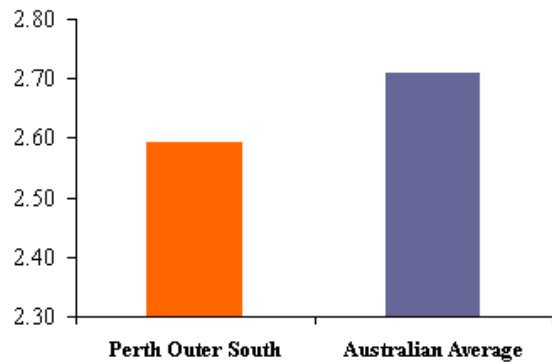
	Rate	Aust. Average	Rank
Coverage, % pop	99.1	90.4	Eq 1
Number of exchanges	34		
Number exchanges enabled	29		
% of exchanges enabled	85.3	34.3	13
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.7	2.7	49
Lowest (%)	95.2	Kwinana	
Highest (%)	100.0	Canning	
% children	99.1	89.6	Eq 1
% of area covered	81.9	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.594	15	
Staging leaders (%)	7.416	9	1,560
Expected broadband (%)	43.2	12	9,093
Export elasticity (%)	4.52	35	957
Export x coverage (%)	0.04	52	8
Leaders lost (%)	0.07	52	14

### Expected E-staging Level

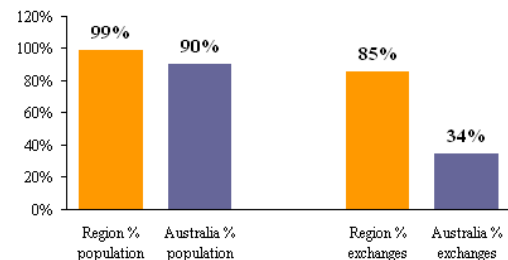


## BABY BOUNCE

	Per cent	Rank
1996	1.36	41
2001	1.27	39
2002	1.20	40
2003	1.20	35
2004	1.26	27
Bounce 2003-04	0.06	7
Actual change 2003-04 (number)	453	5

### Perth Outer South

#### ADSL Coverage



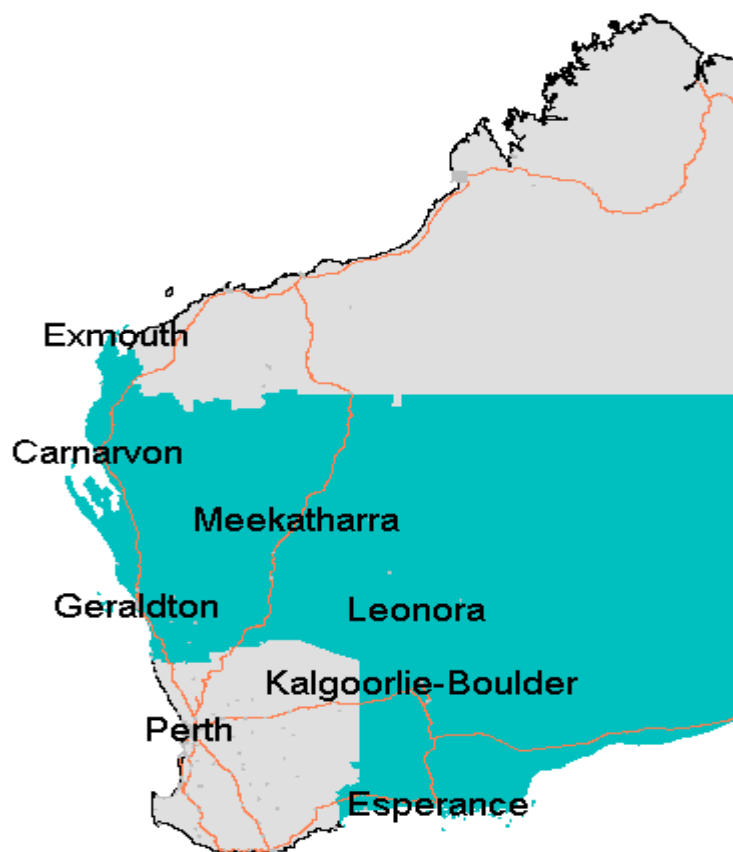
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.71	0.91
Long term Newstart	0.94	1.38
Total Newstart	1.65	2.29
Mature Age Allowance	0.09	0.11
Disability Support (DSP)	2.85	3.42
DSP, aged under 25	0.19	0.22
Youth unemployment	0.41	0.47
Parenting Payment Single (PPS)	2.48	2.25
PPS, aged under 25	0.35	0.29

	Social Security % NFOF	Rank
1999	16.51	18
2001	17.54	16
2003	18.36	18
2004	19.68	18
2005	19.48	19

## WA Gascoyne-Goldfields



The Gascoyne/Goldfields region comprises the three low-population WA planning regions centred on Carnarvon, Geraldton and Kalgoorlie. With the exception of the wheat country back of Geraldton and in the immediate vicinity of Esperance, rural production is confined to extensive pastoralism, which peters out inland. The region includes the major mineral province centred on Kalgoorlie, and the lesser but still significant mineral output of the Murchison region. Though Kalgoorlie is a major supply and mineral processing centre, many of the mines are worked by fly-in fly-out workforces based in Perth.

### Major centres:

Carnarvon, Geraldton, Kalgoorlie

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	117,610		115,880		114,315		-0.3
No. households	43,334		45,611		46,507		0.5
Workforce	70,232	59.2	65,097	56.2	67,545	59.1	0.9
Employment	64,827	–	59,058	–	62,375	–	1.4
Unemployment	5,405	7.7	6,039	9.3	5,169	7.7	-3.8
DEET U/E	5,185	7.5	3,882	6.0	3,234	4.9	-4.5
Structural U/E, % population <sup>1</sup>	6,246	8.5	7,665	10.2	7,278	9.9	-1.3

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,547	13,408	1,657	14,401	1,919	16,785	3.8
Taxes paid	433	3,755	416	3,613	533	4,659	3.7
GST paid	112	975	150	1,307	211	1,849	–
Benefits	243	2,103	295	2,561	358	3,129	6.8
Business income	449	3,887	392	3,409	548	4,791	3.5
Interest/dividends	51	443	53	461	60	526	2.9
Interest paid	141	1,225	203	1,766	275	2,405	11.9
Net property income	19	168	7	57	3	26	-\$143
Net flow of funds	1,622	14,056	1,634	14,202	1,868	16,343	2.5
Rank		16		15		18	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	83.4	6
Population growth rate, 55+	0.6	45
% Years growing since 1995	63	53
Fertility, babies % pop, 2004	1.48	7
Fertility bounce, 1996-2004	-0.24	56
Family / Youth migration	-0.3	48
Aged migration	4.2	33
Working elderly	33.4	6
Demographic stress	-19	62
Dominant locations	75	34
<b>Sustainability score</b>	<b>54</b>	<b>47</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Greenough	78.7	24
Least sustainable LGA – Perenjori	24.1	612

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.46	60	631
New medium density and alterations	0.73	40	314

	2001	2004	Difference
Household size	2.69	2.63	-0.06
Household size rank	38	41	42

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-324	956	-51.4

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.2	29.2	46
Computer use (%)	36.0	43.8	51
Ratio	61.7	66.5	36
Rank diff, net / computer	5	0	9
Estimated internet use (%)	22.2	29.2	48
Take-up surplus / shortfall	0.0	0	29
Av. household income, 2001	48,016	49,086	24

## ADSL COVERAGE

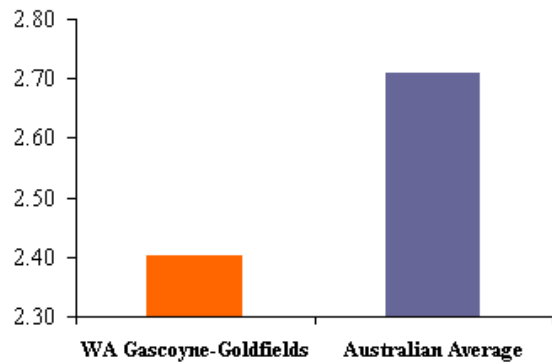
	Rate	Aust. Average	Rank
Coverage, % pop	69.2	90.4	51
Number of exchanges	124		
Number exchanges enabled	14		
% of exchanges enabled	11.3	34.3	59
Number HIBIS exchanges	1		
Exchanges per 10,000 pop.	10.1	2.7	12
Lowest (%)	0.0	Many LGAs	
Highest (%)	100.0	Geraldton	
% children	72.7	89.6	42
% of area covered	0.1	1.2	61

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.403	36
Staging leaders (%)	3.934	36
Expected broadband (%)	32.9	40
Export elasticity (%)	5.11	14
Export x coverage (%)	1.57	13
Leaders lost (%)	1.21	8
		95

### Expected E-staging Level

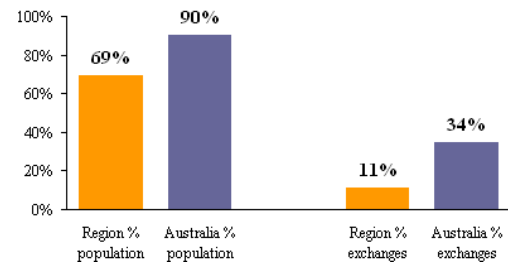


## BABY BOUNCE

	Per cent	Rank
1996	1.79	5
2001	1.61	6
2002	1.55	5
2003	1.47	8
2004	1.48	7
Bounce 2003-04	0.01	41
Actual change 2003-04 (number)	7	49

### WA Gascoyne-Goldfields

#### ADSL Coverage



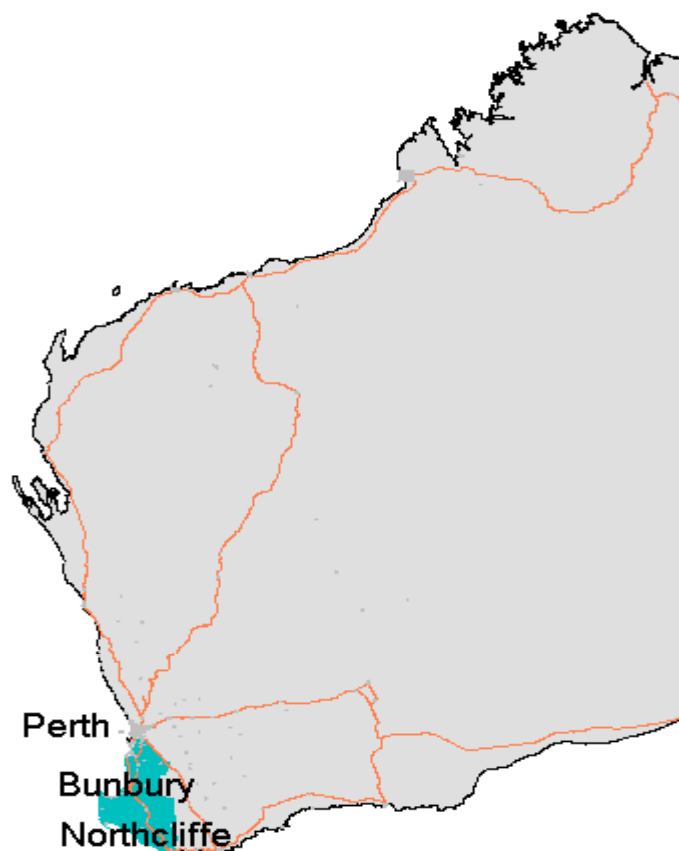
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.12	0.91
Long term Newstart	1.73	1.38
Total Newstart	2.85	2.29
Mature Age Allowance	0.11	0.11
Disability Support (DSP)	3.06	3.42
DSP, aged under 25	0.19	0.22
Youth unemployment	0.62	0.47
Parenting Payment Single (PPS)	2.85	2.25
PPS, aged under 25	0.44	0.29

	Social Security % NFOF	Rank
1999	14.96	15
2001	18.03	19
2003	16.84	13
2004	20.90	21
2005	19.14	17

## WA Peel-South West



The Peel/South West region comprises the two WA planning regions on the coast south of Perth, the first centred on the resort town of Mandurah and the second on Bunbury, with its bulk freight port. The region is noted for its resource-based industries: bauxite and alumina, coal and power, and forestry and timber products. The coastal strip is intensively farmed, by WA standards, and Margaret River is known for its viticulture. In addition, much of the coastline, especially Mandurah and Busselton, is a resort and retirement area which bears comparison with the NSW coast. In the timber country there is conflict between the timber industry and conservation with its allies in tourism.

### Major centres:

Mandurah, Bunbury

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	187,992		205,833		231,157		2.9
No. households	69,012		78,001		98,355		6.0
Workforce	90,174	47.8	100,171	48.7	105,452	45.6	1.3
Employment	83,202	–	89,744	–	98,308	–	2.3
Unemployment	6,974	7.7	10,427	10.4	7,144	6.8	-9.0
DEET U/E	5,798	6.5	6,699	6.8	6,315	6.1	-1.5
Structural U/E, % population <sup>1</sup>	10,444	9.4	13,782	11.4	13,413	9.5	-0.7

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,342	12,063	2,674	12,991	3,284	14,207	2.8
Taxes paid	634	3,268	659	3,204	928	4,013	3.5
GST paid	148	763	230	1,116	326	1,412	–
Benefits	484	2,495	556	2,700	765	3,308	4.8
Business income	490	2,522	422	2,051	596	2,580	0.4
Interest/dividends	84	435	107	519	129	560	4.3
Interest paid	191	982	259	1,257	389	1,681	9.4
Net property income	59	304	45	218	34	146	-\$158
Net flow of funds	2,486	12,804	2,656	12,905	3,166	13,694	1.1
Rank		20		33		48	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	72.7	55
Population growth rate, 55+	13.8	4
% Years growing since 1995	86	22
Fertility, babies % pop, 2004	1.18	47
Fertility bounce, 1996-2004	-0.14	25
Family / Youth migration	2.5	22
Aged migration	6.6	6
Working elderly	25.0	44
Demographic stress	60	2
Dominant locations	81	29
<b>Sustainability score</b>	<b>71</b>	<b>3</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Dardanup	83.1	10
Least sustainable LGA – Boyup Brook	25.7	603

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	12.85	1	9,429
New medium density and alterations	2.68	14	1,969

	2001	2004	Difference
Household size	2.81	2.70	-0.11
Household size rank	17	27	62

	New pop.	Existing pop.	Pop. conversion
Dwelling use	6,197	3,232	65.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	23.7	29.2	38
Computer use (%)	40.6	43.8	32
Ratio	58.5	66.5	45
Rank diff, net / computer	-6	0	55
Estimated internet use (%)	25.0	29.2	33
Take-up surplus / shortfall	-1.3	0	52
Av. household income, 2001	43,591	49,086	39

## ADSL COVERAGE

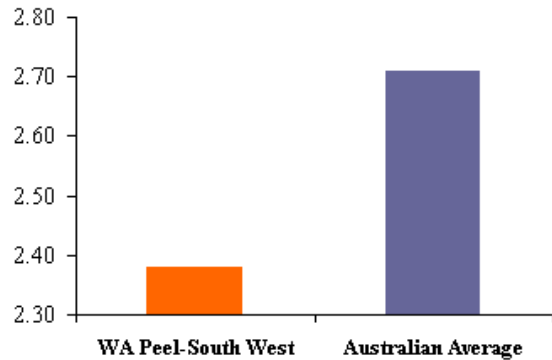
	Rate	Aust. Average	Rank
Coverage, % pop	76.5	90.4	37
Number of exchanges	87		
Number exchanges enabled	32		
% of exchanges enabled	36.8	34.3	38
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	4.5	2.7	28
Lowest (%)	0.0	Boddington	
Highest (%)	100.0	Bunbury	
% children	75.4	89.6	37
% of area covered	4.7	1.2	34

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.378	48	
Staging leaders (%)	3.868	38	388
Expected broadband (%)	32.6	45	3,269
Export elasticity (%)	4.80	22	481
Export x coverage (%)	1.13	26	113
Leaders lost (%)	0.91	28	91

### Expected E-staging Level

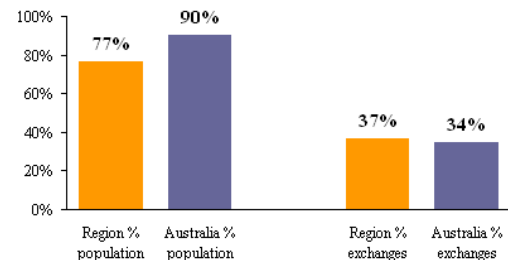


## BABY BOUNCE

	Per cent	Rank
1996	1.35	43
2001	1.26	44
2002	1.20	41
2003	1.10	57
2004	1.18	46
Bounce 2003-04	0.08	2
Actual change 2003-04 (number)	265	11

### WA Peel-South West

#### ADSL Coverage



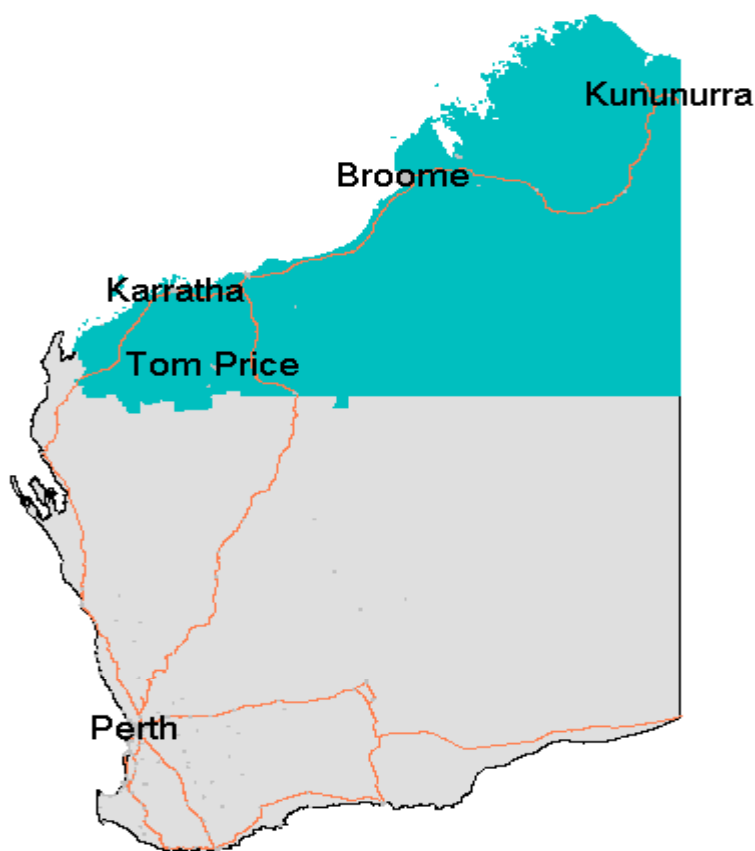
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.75	0.91
Long term Newstart	1.05	1.38
Total Newstart	1.80	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	3.29	3.42
DSP, aged under 25	0.19	0.22
Youth unemployment	0.42	0.47
Parenting Payment Single (PPS)	2.63	2.25
PPS, aged under 25	0.31	0.29

	Social Security % NFOF	Rank
1999	19.48	26
2001	20.93	29
2003	20.88	32
2004	23.28	30
2005	24.15	39

## WA Pilbara-Kimberly



The Pilbara and Kimberley are two WA planning regions, here brought together. Their output is dominated by minerals: offshore oil and gas, and onshore iron ore. The extensive pastoral stations first settled in the nineteenth century are still there, and so is a significant Aboriginal population. The region has a dry-season tourist trade. Towns in the Pilbara accommodate workers in the mining and petroleum industries, while those in the Kimberley include the old polyglot pearling port of Broome and the newer town of Kununurra, which was founded as an urban centre for the Ord River intensive agricultural area. However, an increasing proportion of the workforce flies in and out from Perth.

N.B Unemployment figures in remote regions can display excess variation.

### Major centres:

Karratha, Port Hedland, Broome

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	68,979		72,086		75,346		1.1
No. households	26,281		27,384		26,028		-1.3
Workforce	42,438	61.1	39,655	55.0	42,052	55.8	1.5
Employment	39,607	–	35,573	–	37,067	–	1.0
Unemployment	2,832	6.7	4,082	10.3	4,986	11.9	5.1
DEET U/E	2,829	6.7	2,782	7.1	1,836	4.5	-9.9
Structural U/E, % population <sup>1</sup>	3,743	8.3	4,943	10.5	5,761	11.5	3.9

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,054	14,940	1,176	16,314	1,526	20,258	5.2
Taxes paid	308	4,361	312	4,329	459	6,087	5.7
GST paid	72	1,022	100	1,388	137	1,817	–
Benefits	141	2,005	204	2,824	267	3,540	9.9
Business income	320	4,532	287	3,982	390	5,181	2.3
Interest/dividends	17	238	19	269	22	286	3.1
Interest paid	83	1,170	117	1,624	215	2,847	16.0
Net property income	-2	-33	-10	-144	-11	-150	-\$117
Net flow of funds	1,067	15,129	1,146	15,904	1,384	18,364	3.3
Rank		8		11		9	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	90.3	2
Population growth rate, 55+	15.0	2
% Years growing since 1995	81	37
Fertility, babies % pop, 2004	1.73	2
Fertility bounce, 1996-2004	-0.16	30
Family / Youth migration	0.9	36
Aged migration	3.4	56
Working elderly	32.2	9
Demographic stress	58	3
Dominant locations	67	43
<b>Sustainability score</b>	<b>70</b>	<b>7</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Broome	82.9	11
Least sustainable LGA – Ashburton	29.5	566

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	3.87	42	1,005
New medium density and alterations	0.66	43	172

	2001	2004	Difference
Household size	2.77	2.78	0.00
Household size rank	24	19	1

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,019	-14	101.4

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	21.1	29.2	52
Computer use (%)	32.4	43.8	61
Ratio	65.2	66.5	21
Rank diff, net / computer	9	0	4
Estimated internet use (%)	22.2	29.2	49
Take-up surplus / shortfall	-1.1	0	51
Av. household income, 2001	62,072	49,086	4

## ADSL COVERAGE

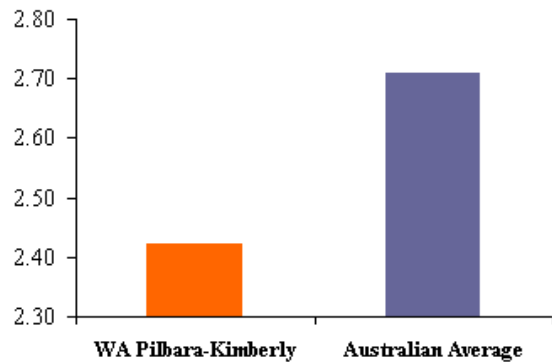
	Rate	Aust. Average	Rank
Coverage, % pop	74.9	90.4	40
Number of exchanges	35		
Number exchanges enabled	14		
% of exchanges enabled	40.0	34.3	33
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	4.2	2.7	29
Lowest (%)	0.0	Halls Creek	
Highest (%)	97.8	Port Hedland	
% children	75.2	89.6	38
% of area covered	0.2	1.2	60

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.422	32	
Staging leaders (%)	4.057	34	133
Expected broadband (%)	33.7	33	1,102
Export elasticity (%)	4.15	52	136
Export x coverage (%)	1.04	29	34
Leaders lost (%)	1.02	22	33

### Expected E-staging Level

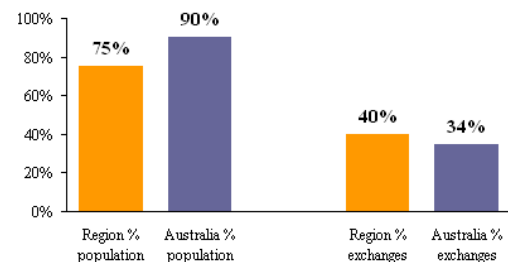


## BABY BOUNCE

	Per cent	Rank
1996	1.91	3
2001	2.05	3
2002	1.65	3
2003	1.58	4
2004	1.73	2
Bounce 2003-04	0.16	1
Actual change 2003-04 (number)	133	22

### WA Pilbara-Kimberly

#### ADSL Coverage



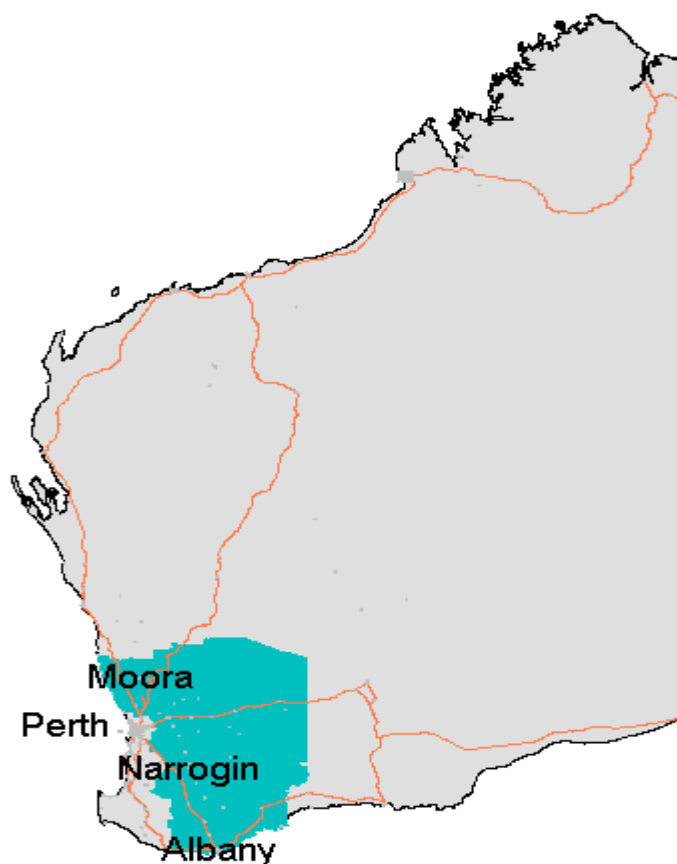
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.62	0.91
Long term Newstart	2.69	1.38
Total Newstart	4.32	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	3.24	3.42
DSP, aged under 25	0.25	0.22
Youth unemployment	0.80	0.47
Parenting Payment Single (PPS)	3.12	2.25
PPS, aged under 25	0.69	0.29

	Social Security % NFOF	Rank
1999	13.25	8
2001	17.76	17
2003	20.36	28
2004	23.36	31
2005	19.28	18

## WA Wheatbelt-Great Southern



The WA planning authorities distinguish the Wheat Belt and the Great Southern, but they are here brought together. Relative to the Eastern States, towns in the WA wheat belt are few and small; the largest are Northam and Narrogin. Much of the area depends directly on Perth for higher-order retail and administrative functions. By contrast, the Great Southern comprises the hinterland of Albany, a town of some size and long history. The region as a whole is classic wheat/sheep country, much of it now troubled by dry-land salination. The strip close to Albany is better watered, with some plantation forestry.

### Major centres:

Albany, Northam

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	123,115		126,062		125,163		-0.2
No. households	45,297		48,477		58,764		4.9
Workforce	70,218	56.9	67,826	53.8	69,614	55.6	0.7
Employment	60,511	–	61,504	–	64,403	–	1.2
Unemployment	9,707	13.8	6,323	9.3	5,211	7.5	-4.7
DEET U/E	3,224	5.1	3,284	4.9	3,284	4.9	0.0
Structural U/E, % population <sup>1</sup>	6,211	8.5	8,503	11.4	8,007	10.4	-1.5

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,251	10,043	1,428	11,326	1,765	14,101	5.8
Taxes paid	309	2,477	344	2,726	491	3,926	8.0
GST paid	97	780	136	1,080	215	1,717	–
Benefits	291	2,333	341	2,704	419	3,345	6.2
Business income	448	3,593	382	3,029	708	5,660	7.9
Interest/dividends	77	615	110	876	130	1,035	9.1
Interest paid	129	1,032	191	1,516	277	2,214	13.6
Net property income	42	333	28	223	23	188	-\$146
Net flow of funds	1,573	12,629	1,618	12,836	2,062	16,471	4.5
Rank		21		35		16	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	75.5	37
Population growth rate, 55+	2.2	37
% Years growing since 1995	61	54
Fertility, babies % pop, 2004	1.27	25
Fertility bounce, 1996-2004	-0.17	35
Family / Youth migration	-2.0	59
Aged migration	5.2	15
Working elderly	34.4	5
Demographic stress	10	39
Dominant locations	56	55
<b>Sustainability score</b>	<b>55</b>	<b>45</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Chittering	78.7	23
Least sustainable LGA – Kent	21.6	625

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	3.61	44	1,647
New medium density and alterations	0.45	50	206

	2001	2004	Difference
Household size	2.76	2.66	-0.10
Household size rank	28	35	59

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-33	1,680	-2.0

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.6	29.2	44
Computer use (%)	39.4	43.8	38
Ratio	57.5	66.5	53
Rank diff, net / computer	-6	0	55
Estimated internet use (%)	23.1	29.2	44
Take-up surplus / shortfall	-0.5	0	38
Av. household income, 2001	39,172	49,086	58

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	50.9	90.4	61
Number of exchanges	314		
Number exchanges enabled	26		
% of exchanges enabled	8.3	34.3	62
Number HIBIS exchanges	3		
Exchanges per 10,000 pop.	26.5	2.7	1
Lowest (%)	0.0	Many LGAs	
Highest (%)	100.0	Narrogin	
% children	52.5	89.6	61
% of area covered	0.4	1.2	57

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.361	60	
Staging leaders (%)	3.349	61	369
Expected broadband (%)	31.5	61	3,478
Export elasticity (%)	5.51	6	608
Export x coverage (%)	2.71	2	299
Leaders lost (%)	1.65	3	181

### Expected E-staging Level

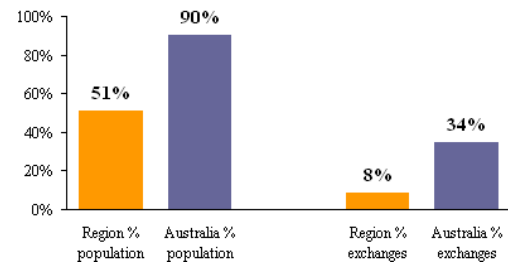


## BABY BOUNCE

	Per cent	Rank
1996	1.51	17
2001	1.39	20
2002	1.26	26
2003	1.26	24
2004	1.27	25
Bounce 2003-04	0.02	38
Actual change 2003-04 (number)	23	44

### WA Wheatbelt-Great Southern

#### ADSL Coverage



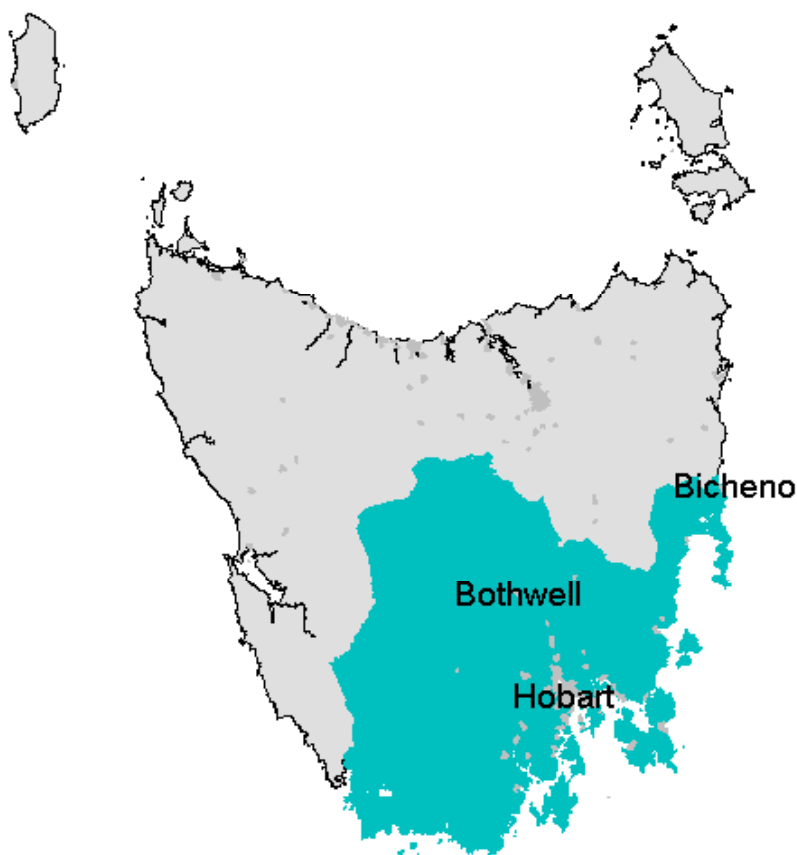
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.82	0.91
Long term Newstart	1.30	1.38
Total Newstart	2.12	2.29
Mature Age Allowance	0.08	0.11
Disability Support (DSP)	3.78	3.42
DSP, aged under 25	0.28	0.22
Youth unemployment	0.43	0.47
Parenting Payment Single (PPS)	2.44	2.25
PPS, aged under 25	0.26	0.29

	Social Security % NFOF	Rank
1999	18.47	22
2001	21.06	31
2003	17.90	17
2004	21.06	22
2005	20.31	22

## TAS Hobart-South



Southern Tasmania includes all of Hobart, plus its commuter zone, purely rural areas and forests. It accordingly has a greater mix of economic base than the capital city regions of the mainland states. The regional economic base includes city centre functions, manufacturing (much of which is resource-related), agriculture, fishing, forestry and tourism, the latter based on both natural attractions and the region's urban heritage. The region extends into high country exploited for hydro-electricity.

### Major centres:

Hobart

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	229,471		231,854		239,988		0.9
No. households	91,561		93,874		105,521		3.0
Workforce	115,429	50.3	111,862	48.2	118,699	49.5	1.5
Employment	92,134	–	93,300	–	102,960	–	2.5
Unemployment	23,294	20.2	18,560	16.6	15,739	13.3	-4.0
DEET U/E	9,252	8.5	9,956	9.3	7,056	6.3	-8.2
Structural U/E, % population <sup>1</sup>	25,006	17.9	22,372	16.1	21,004	14.0	-1.6

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	2,675	11,602	3,053	13,167	3,888	16,199	5.7
Taxes paid	709	3,075	773	3,335	1,113	4,639	7.1
GST paid	215	933	284	1,225	391	1,630	–
Benefits	689	2,988	700	3,018	893	3,723	3.7
Business income	401	1,739	371	1,598	518	2,160	3.7
Interest/dividends	119	517	143	615	149	620	3.1
Interest paid	198	861	237	1,020	359	1,495	9.6
Net property income	46	199	55	239	34	143	-\$56
Net flow of funds	2,807	12,176	3027	13,057	3,619	15,081	3.6
Rank		29		26		25	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	76.4	28
Population growth rate, 55+	-2.1	59
% Years growing since 1995	65	51
Fertility, babies % pop, 2004	1.21	39
Fertility bounce, 1996-2004	-0.15	27
Family / Youth migration	0.8	39
Aged migration	4.2	31
Working elderly	22.1	52
Demographic stress	-3	55
Dominant locations	80	30
<b>Sustainability score</b>	<b>50</b>	<b>53</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Kingborough	61.8	209
Least sustainable LGA – Central Highlands	23.8	614

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	3.53	45	3,150
New medium density and alterations	0.44	51	389
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.60	2.57	-0.02
Household size rank	51	51	12
	<b>New pop.</b>	<b>Existing pop.</b>	<b>Pop. conversion</b>
Dwelling use	2,277	873	72.3

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	25.1	29.2	30
Computer use (%)	40.4	43.8	34
Ratio	62.1	66.5	34
Rank diff, net / computer	4	0	11
Estimated internet use (%)	24.6	29.2	36
Take-up surplus / shortfall	0.5	0	20
Av. household income, 2001	42,177	49,086	47

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	84.0	90.4	29
Number of exchanges	76		
Number exchanges enabled	32		
% of exchanges enabled	42.1	34.3	32
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	3.4	2.7	32
Lowest (%)	0.0	Central Highlands	
Highest (%)	100.0	Glenorchy	
% children	83.0	89.6	29
% of area covered	4.5	1.2	36

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.519	23
Staging leaders (%)	6.408	22
Expected broadband (%)	39.3	23
Export elasticity (%)	4.25	45
Export x coverage (%)	0.68	35
Leaders lost (%)	1.03	21

### Expected E-staging Level

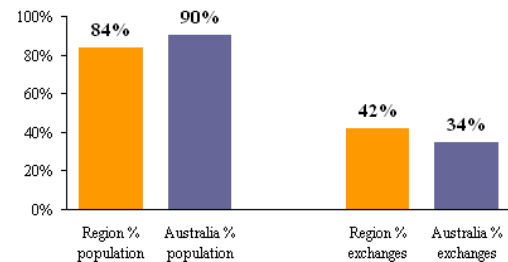


## BABY BOUNCE

	Per cent	Rank
1996	1.36	40
2001	1.31	30
2002	1.23	34
2003	1.25	26
2004	1.21	38
Bounce 2003-04	-0.04	60
Actual change 2003-04 (number)	-59	63

### TAS Hobart-South

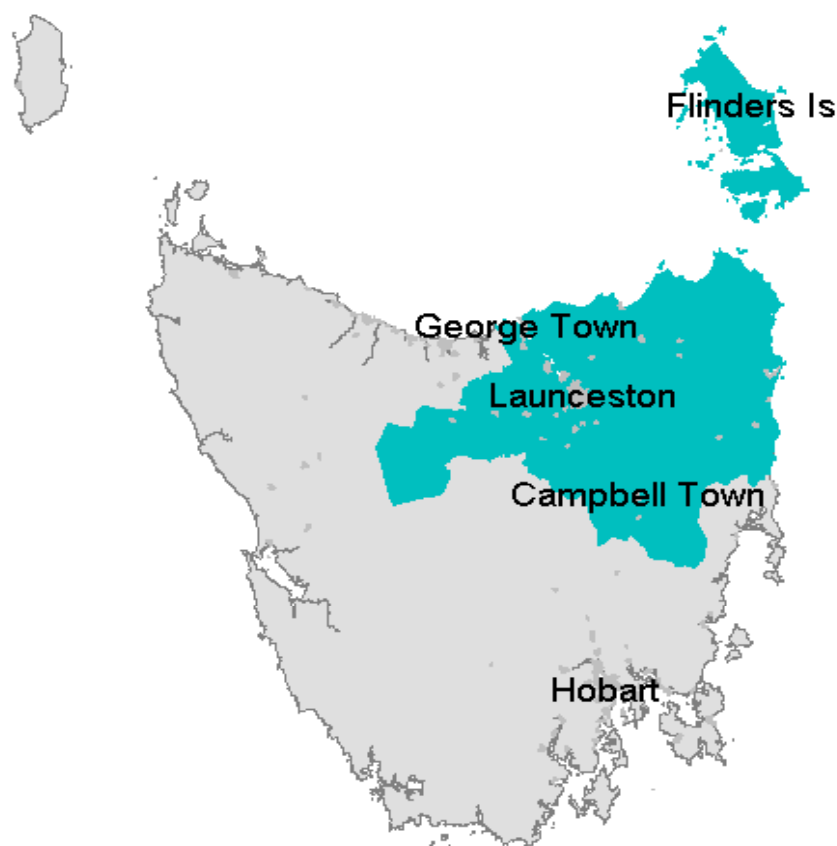
#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.91	0.91
Long term Newstart	2.18	1.38
Total Newstart	3.08	2.29
Mature Age Allowance	0.17	0.11
Disability Support (DSP)	5.01	3.42
DSP, aged under 25	0.30	0.22
Youth unemployment	0.68	0.47
Parenting Payment Single (PPS)	2.68	2.25
PPS, aged under 25	0.43	0.29
	<b>Social Security % NFOF</b>	<b>Rank</b>
1999	24.54	49
2001	23.11	43
2003	25.50	51
2004	24.66	38
2005	24.69	42

# TAS North



Northern Tasmania comprises the north east part of the island. Its chief city is Launceston. The region includes areas of intensive farming with associated agricultural processing. The northern midlands and east coast are relatively dry, and are devoted to livestock rather than crop production. It has some manufacturing, with a nucleus of heavy industry at the port of Bell Bay, and also a coal mine.

## Major centres:

Launceston

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	133,459		133,115		137,511		0.8
No. households	52,674		53,970		60,445		2.9
Workforce	66,741	50.1	68,679	51.6	69,063	50.2	0.1
Employment	56,753	–	58,304	–	60,264	–	0.8
Unemployment	9,988	15.0	10,375	15.1	8,799	12.7	-4.0
DEET U/E	7,269	11.2	4,987	7.5	4,529	6.9	-2.4
Structural U/E, % population <sup>1</sup>	11,244	14.0	12,356	15.4	11,682	13.7	-1.4

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,418	10,653	1,613	12,114	2,005	14,582	5.4
Taxes paid	359	2,699	383	2,880	535	3,891	6.3
GST paid	117	877	156	1,176	212	1,539	–
Benefits	387	2,907	423	3,181	533	3,877	4.9
Business income	214	1,607	196	1,474	273	1,987	3.6
Interest/dividends	59	444	70	523	82	594	5.0
Interest paid	108	812	139	1,048	190	1,382	9.3
Net property income	25	188	16	124	16	115	-\$73
Net flow of funds	1,519	11,412	1,639	12,313	1,972	14,344	3.9
Rank		48		48		38	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	76.0	32
Population growth rate, 55+	-3.4	61
% Years growing since 1995	58	56
Fertility, babies % pop, 2004	1.21	35
Fertility bounce, 1996-2004	-0.27	62
Family / Youth migration	0.1	44
Aged migration	4.3	28
Working elderly	21.9	53
Demographic stress	-11	59
Dominant locations	91	22
<b>Sustainability score</b>	<b>46</b>	<b>58</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Meander Valley	62.0	205
Least sustainable LGA – Flinders	29.5	565

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	2.64	51	1,354
New medium density and alterations	0.61	46	313

	2001	2004	Difference
Household size	2.60	2.60	0.00
Household size rank	52	47	4

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,309	45	96.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	22.5	29.2	45
Computer use (%)	38.4	43.8	44
Ratio	58.6	66.5	44
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	22.3	29.2	47
Take-up surplus / shortfall	0.2	0	25
Av. household income, 2001	39,218	49,086	57

## ADSL COVERAGE

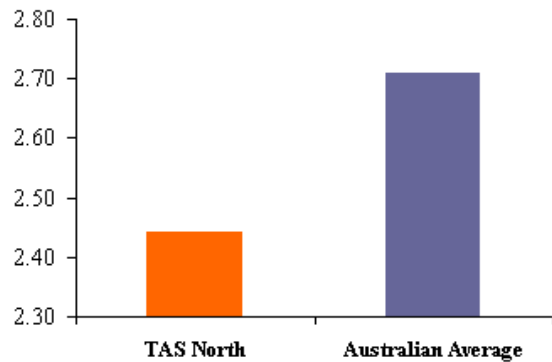
	Rate	Aust. Average	Rank
Coverage, % pop	72.7	90.4	42
Number of exchanges	71		
Number exchanges enabled	19		
% of exchanges enabled	26.8	34.3	45
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	5.6	2.7	20
Lowest (%)	0.0	Flinders	
Highest (%)	93.3	Launceston	
% children	72.4	89.6	44
% of area covered	3.1	1.2	41

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.442	28	
Staging leaders (%)	5.215	28	368
Expected broadband (%)	35.6	28	2,508
Export elasticity (%)	4.65	29	328
Export x coverage (%)	1.27	24	90
Leaders lost (%)	1.42	4	100

### Expected E-staging Level

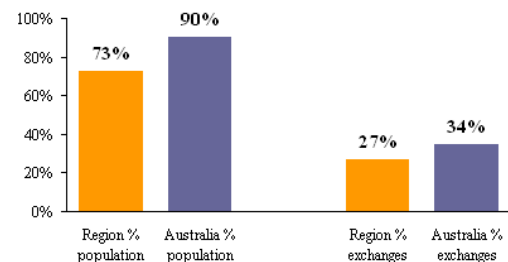


## BABY BOUNCE

	Per cent	Rank
1996	1.49	19
2001	1.31	32
2002	1.24	28
2003	1.19	39
2004	1.21	34
Bounce 2003-04	0.03	27
Actual change 2003-04 (number)	55	38

### TAS North

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.02	0.91
Long term Newstart	2.24	1.38
Total Newstart	3.26	2.29
Mature Age Allowance	0.16	0.11
Disability Support (DSP)	4.77	3.42
DSP, aged under 25	0.27	0.22
Youth unemployment	0.64	0.47
Parenting Payment Single (PPS)	2.56	2.25
PPS, aged under 25	0.36	0.29

	Social Security % NFOF	Rank
1999	25.47	54
2001	25.83	55
2003	27.00	55
2004	26.96	51
2005	27.03	53

# TAS North West



North West Tasmania comprises the urban strip along the Cradle Coast (Devonport to Ulverstone, Burnie and Wynyard, with Stanley and Smithton beyond) plus the hinterland of this strip including the West Coast. The coastal North West is dairy farming country, while further inland plantation forestry is in conflict with the conservation of native forest and so with the tourist industry. The West Coast has a history of more than a century of mining, but tourism now overshadows mining as its economic base. Extensive tree plantations were originally started to support a paper industry, but the two industries have become disconnected and much of the product of the plantations is exported as woodchips.

## Major centres:

Burnie, Devonport

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	109,068		106,826		108,434		0.4
No. households	42,164		42,950		46,907		2.2
Workforce	51,639	47.3	51,213	47.9	52,304	48.2	0.5
Employment	43,035	–	41,371	–	44,252	–	1.7
Unemployment	8,606	16.7	9,843	19.2	8,052	15.4	-4.9
DEET U/E	5,351	10.8	5,172	10.7	3,464	7.1	-9.5
Structural U/E, % population <sup>1</sup>	9,693	9.1	11,518	11.0	10,547	16.0	-2.2

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,143	10,602	1,248	11,685	1,540	14,199	5.0
Taxes paid	293	2,716	293	2,745	385	3,550	4.6
GST paid	99	914	123	1,152	166	1,532	–
Benefits	319	2,958	358	3,352	450	4,147	5.8
Business income	173	1,606	159	1,491	225	2,074	4.3
Interest/dividends	33	304	41	386	41	380	3.8
Interest paid	84	778	110	1,027	147	1,359	9.7
Net property income	17	154	10	97	9	79	-\$75
Net flow of funds	1,209	11,216	1,291	12,087	1,566	14,438	4.3
Rank		54		51		36	





# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	76.2	31
Population growth rate, 55+	-6.7	63
% Years growing since 1995	39	61
Fertility, babies % pop, 2004	1.19	45
Fertility bounce, 1996-2004	-0.24	54
Family / Youth migration	-2.6	63
Aged migration	4.0	38
Working elderly	21.3	55
Demographic stress	-29	63
Dominant locations	72	37
<b>Sustainability score</b>	<b>35</b>	<b>64</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Latrobe	58.7	249
Least sustainable LGA – West Coast	19.0	628

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	1.79	57	731
New medium density and alterations	0.34	60	138

	2001	2004	Difference
Household size	2.62	2.59	-0.03
Household size rank	48	48	15

	New pop.	Existing pop.	Pop. conversion
Dwelling use	291	441	39.7

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	20.2	29.2	55
Computer use (%)	35.4	43.8	54
Ratio	57.1	66.5	54
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	19.6	29.2	56
Take-up surplus / shortfall	0.6	0	18
Av. household income, 2001	37,673	49,086	61

## ADSL COVERAGE

	Rate	Aust. Average	Rank
Coverage, % pop	70.8	90.4	46
Number of exchanges	56		
Number exchanges enabled	15		
% of exchanges enabled	26.8	34.3	44
Number HIBIS exchanges	2		
Exchanges per 10,000 pop.	5.5	2.7	21
Lowest (%)	0.0	King Island	
Highest (%)	98.7	Devonport	
% children	70.3	89.6	49
% of area covered	1.3	1.2	50

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.390	41	
Staging leaders (%)	4.377	29	245
Expected broadband (%)	33.2	36	1,858
Export elasticity (%)	4.81	21	269
Export x coverage (%)	1.41	18	79
Leaders lost (%)	1.28	7	72

### Expected E-staging Level

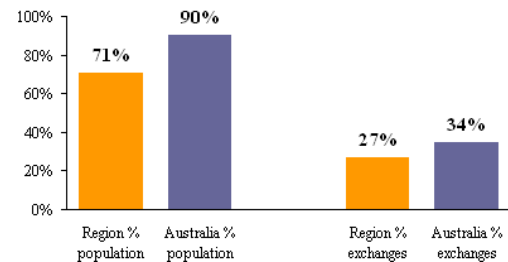


## BABY BOUNCE

	Per cent	Rank
1996	1.45	22
2001	1.31	29
2002	1.24	29
2003	1.15	44
2004	1.19	44
Bounce 2003-04	0.03	24
Actual change 2003-04 (number)	40	40

### TAS North West

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.01	0.91
Long term Newstart	2.33	1.38
Total Newstart	3.33	2.29
Mature Age Allowance	0.21	0.11
Disability Support (DSP)	5.72	3.42
DSP, aged under 25	0.39	0.22
Youth unemployment	0.69	0.47
Parenting Payment Single (PPS)	2.86	2.25
PPS, aged under 25	0.41	0.29

	Social Security % NFOF	Rank
1999	26.37	56
2001	27.73	58
2003	26.82	54
2004	29.43	57
2005	28.72	57

# Darwin

As the smallest of the capitals (though growing faster than the rest), Darwin comprises a single region which includes the CBD, all the suburbs and virtually all of the commuter and hobby farm belt. Darwin's economic base includes the provision of urban functions for the Top End and government functions for the whole of the NT. Tourism is important, and defence very important. Darwin is also the service port for offshore oil and gas fields, and expects to gain gas-processing industries. It is yet to be seen whether the rail connection from the south will increase activity in the port.

## Major centres:

Darwin



## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	101,699		107,477		110,334		0.7
No. households	37,863		41,322		42,320		0.6
Workforce	53,142	51.8	56,467	52.5	61,343	55.6	2.1
Employment	46,996	–	49,706	–	55,785	–	2.9
Unemployment	6,146	11.6	6,761	12.0	5,558	9.1	-4.8
DEET U/E	2,388	4.5	2,042	3.7	2,216	3.7	2.1
Structural U/E, % population <sup>1</sup>	6,744	10.0	7,844	11.0	7,700	10.2	-0.5

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	1,579	16,592	1,680	15,628	2,402	21,771	4.6
Taxes paid	423	4,445	392	3,645	751	6,808	7.4
GST paid	101	1,061	153	1,424	210	1,907	–
Benefits	201	2,112	222	2,068	273	2,477	2.7
Business income	195	2,045	189	1,760	205	1,859	-1.6
Interest/dividends	41	426	32	298	42	379	-1.9
Interest paid	84	878	117	1,092	166	1,507	9.4
Net property income	2	16	-14	-133	-13	-115	-\$131
Net flow of funds	1,409	14,806	1,447	13,459	1,782	16,147	1.5
Rank		9		22		19	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	87.5	4
Population growth rate, 55+	13.8	5
% Years growing since 1995	80	39
Fertility, babies % pop, 2004	1.66	4
Fertility bounce, 1996-2004	-0.19	42
Family / Youth migration	5.6	5
Aged migration	3.1	60
Working elderly	35.8	3
Demographic stress	27	14
Dominant locations	89	23
<b>Sustainability score</b>	<b>63</b>	<b>24</b>

Local government level	Score	Rank, of 632
Most sustainable LGA – Palmerston	89.0	2
Least sustainable LGA – Coomalie	37.8	465

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.71	20	2,209
New medium density and alterations	3.70	10	1,434

	2001	2004	Difference
Household size	2.78	2.67	-0.10
Household size rank	22	31	61

	New pop.	Existing pop.	Pop. conversion
Dwelling use	676	1,533	30.6

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	28.2	29.2	19
Computer use (%)	42.1	43.8	25
Ratio	67.0	66.5	15
Rank diff, net / computer	6	0	8
Estimated internet use (%)	29.0	29.2	17
Take-up surplus / shortfall	-0.8	0	46
Av. household income, 2001	56,877	49,086	9

## ADSL COVERAGE

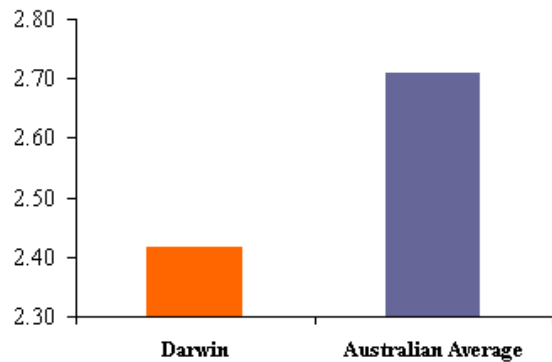
	Rate	Aust. Average	Rank
Coverage, % pop	66.8	90.4	57
Number of exchanges	15		
Number exchanges enabled	6		
% of exchanges enabled	40.0	34.3	33
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	1.4	2.7	42
Lowest (%)	0.0	Coomalie (CGC)	
Highest (%)	95.6	Darwin	
% children	62.1	89.6	59
% of area covered	4.3	1.2	37

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

		Rank	No. firms
Average journey stage	2.418	33	
Staging leaders (%)	4.107	32	218
Expected broadband (%)	33.9	32	1,796
Export elasticity (%)	4.19	49	222
Export x coverage (%)	1.39	19	74
Leaders lost (%)	1.36	6	72

### Expected E-staging Level

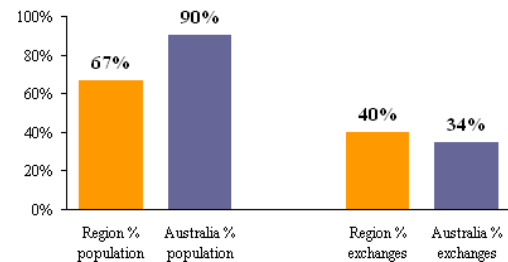


## BABY BOUNCE

	Per cent	Rank
1996	1.86	4
2001	1.69	5
2002	1.58	4
2003	1.69	2
2004	1.66	4
Bounce 2003-04	-0.03	59
Actual change 2003-04 (number)	-22	57

### Darwin

#### ADSL Coverage



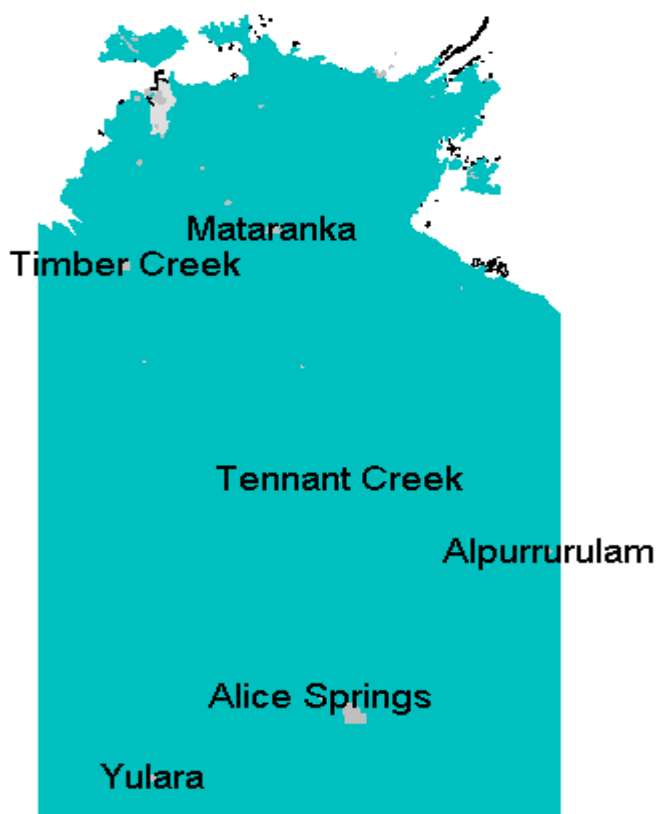
## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	1.19	0.91
Long term Newstart	2.43	1.38
Total Newstart	3.62	2.29
Mature Age Allowance	0.09	0.11
Disability Support (DSP)	2.89	3.42
DSP, aged under 25	0.22	0.22
Youth unemployment	0.63	0.47
Parenting Payment Single (PPS)	2.77	2.25
PPS, aged under 25	0.48	0.29

	Social Security % NFOF	Rank
1999	14.26	11
2001	15.36	11
2003	16.12	11
2004	15.38	11
2005	15.34	11

# NT Lingiari



Outside Darwin, the Northern Territory comprises conservation reserves and low-productivity pastoral country, with only small areas incorporated under fully-fledged local governments. Production statistics are dominated by offshore oil and gas and onshore minerals, but these do not yield much in employment or local income. In the two main towns, Katherine and Alice Springs, defence and tourism are important parts of the economic base. Outside the towns and mining settlements, the people are predominantly Aboriginal, and mostly live in communities which, due to lack of economic base, are heavily dependent on social security in its Community Development Employment Project form.

N.B Unemployment figures in remote regions can display excess variation.

## Major centres:

Alice Springs, Katherine

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	87,077		90,291		91,498		0.3
No. households	26,719		28,016		27,864		-0.1
Workforce	38,977	44.6	41,258	45.7	41,422	45.3	0.1
Employment	31,738	–	30,708	–	28,928	–	-1.5
Unemployment	7,238	18.6	10,549	25.6	12,494	30.2	4.3
DEET U/E	1,777	4.6	2,798	6.8	3,664	9.1	7.0
Structural U/E, % population <sup>1</sup>	8,259	15.4	10,627	19.4	11,840	20.3	2.7

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	905	8,756	719	7,961	915	10,001	2.2
Taxes paid	237	2,296	165	1,832	312	3,405	6.8
GST paid	62	600	86	956	127	1,383	–
Benefits	272	2,634	443	4,903	546	5,970	14.6
Business income	120	1,164	117	1,295	184	2,010	9.5
Interest/dividends	15	145	13	146	24	266	10.7
Interest paid	36	353	63	699	78	847	15.7
Net property income	7	68	-6	-69	-5	-50	-\$118
Net flow of funds	984	9,518	970	10,748	1,149	12,561	4.7
Rank		64		62		61	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	90.9	1
Population growth rate, 55+	2.4	36
% Years growing since 1995	80	38
Fertility, babies % pop, 2004	2.11	1
Fertility bounce, 1996-2004	0.12	2
Family / Youth migration	1.7	30
Aged migration	2.6	64
Working elderly	32.1	10
Demographic stress	7	41
Dominant locations	37	63
<b>Sustainability score</b>	<b>64</b>	<b>18</b>

Local government level	Score	Rank, of 632
Most sustainable LGA –	–	–
Least sustainable LGA –	–	–

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	4.17	38	1,103
New medium density and alterations	0.65	44	171

	2001	2004	Difference
Household size	3.41	3.26	-0.15
Household size rank	1	1	64

	New pop.	Existing pop.	Pop. conversion
Dwelling use	-109	1,212	-9.8

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	15.7	29.2	64
Computer use (%)	24.4	43.8	64
Ratio	64.6	66.5	24
Rank diff, net / computer	0	0	27
Estimated internet use (%)	14.0	29.2	64
Take-up surplus / shortfall	1.7	0	9
Áv. household income, 2001	53,873	49,086	14

## ADSL COVERAGE

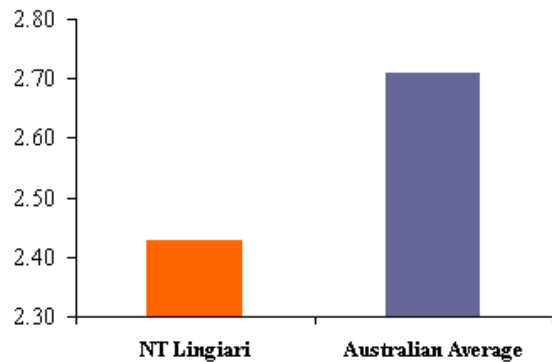
	Rate	Aust. Average	Rank
Coverage, % pop	46.6	90.4	62
Number of exchanges	32		
Number exchanges enabled	7		
% of exchanges enabled	21.9	34.3	51
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	3.4	2.7	33
Lowest (%)	11.7	Unincorporated NT	
Highest (%)	100.0	Alice Springs	
% children	49.4	89.6	62
% of area covered	0.0	1.2	63

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms
Average journey stage	2.429	29
Staging leaders (%)	3.906	37
Expected broadband (%)	33.7	34
Export elasticity (%)	3.82	63
Export x coverage (%)	2.04	4
Leaders lost (%)	2.09	1
		59

### Expected E-staging Level



## BABY BOUNCE

	Per cent	Rank
1996	1.99	2
2001	2.06	2
2002	2.14	1
2003	2.09	1
2004	2.09	1
Bounce 2003-04	-0.01	51
Actual change 2003-04 (number)	-6	53

### NT Lingiari

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	2.23	0.91
Long term Newstart	8.27	1.38
Total Newstart	10.50	2.29
Mature Age Allowance	0.12	0.11
Disability Support (DSP)	2.92	3.42
DSP, aged under 25	0.20	0.22
Youth unemployment	1.72	0.47
Parenting Payment Single (PPS)	3.15	2.25
PPS, aged under 25	0.80	0.29

	Social Security % NFOF	Rank
1999	27.67	59
2001	45.61	64
2003	40.95	64
2004	55.77	64
2005	47.53	64

# ACT



The boundaries of the ACT have been static since the delineation of the national capital territory early last century. The Canberra urban area extends beyond these limits, and its hobby farm and commuter zone extends even further out to include a significant part of SE NSW; however because of its late foundation, political separateness and situation in an area of relatively low population density Canberra has not become a regional capital. Its original *raison d'être*, government administration, remains fundamental to its economic base. Virtually all the former farmland in the ACT is now urbanised, but the territory still includes significant forested water reserves.

## Major centres:

Canberra

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2005 level	2005 percentage	% p.a. growth 2001-2005
Population	308,947		319,317		325,234		0.5
No. households	116,413		122,366		130,194		1.6
Workforce	171,586	55.6	178,298	55.8	185,172	56.9	1.0
Employment	157,447	–	168,561	–	176,877	–	1.2
Unemployment	14,138	8.2	9,737	5.5	8,294	4.5	-3.9
DEET U/E	10,742	6.3	8,501	4.8	6,949	3.8	-4.9
Structural U/E, % population <sup>1</sup>	15,287	7.6	13,114	6.4	12,784	5.8	-0.6

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2005 level (\$m)	2005 per capita (\$)	% p.a. growth 1999-2005
Wages/salaries	5,701	18,102	6,721	21,049	8,424	25,900	6.2
Taxes paid	1,658	5,266	1,855	5,810	2,405	7,393	5.8
GST paid	324	1,027	503	1,574	690	2,121	–
Benefits	489	1,554	486	1,521	646	1,985	4.2
Business income	496	1,575	598	1,873	771	2,371	7.1
Interest/dividends	197	625	284	889	303	931	6.9
Interest paid	349	1,108	449	1,407	613	1,886	9.3
Net property income	49	157	31	96	38	117	-\$41
Net flow of funds	4,602	14,611	5313	16,638	6,473	19,903	5.3
Rank		13		8		4	



# YourPlace

The place to go for the performance of Australia's local economies

## POPULATION SUSTAINABILITY

Sustainability measures	Per cent	Rank
Share of population under 55	82.3	8
Population growth rate, 55+	-	49
% Years growing since 1995	89	14
Fertility, babies % pop, 2004	1.30	23
Fertility bounce, 1996-2004	-0.13	23
Family / Youth migration	3.6	13
Aged migration	5.6	10
Working elderly	32.5	8
Demographic stress	4	47
Dominant locations	99	20
<b>Sustainability score</b>	<b>63</b>	<b>23</b>

Local government level	Score	Rank, of 632
Most sustainable LGA -	-	-
Least sustainable LGA -	-	-

## BUILDING AND CONSTRUCTION

	% of 2001 HH	Rank	Number
Net new dwellings	5.26	27	6,040
New medium density and alterations	3.56	11	4,093
	<b>2001</b>	<b>2004</b>	<b>Difference</b>
Household size	2.78	2.68	-0.10
Household size rank	21	29	60

	New pop.	Existing pop.	Pop. conversion
Dwelling use	1,765	4,274	29.2

## INTERNET AND COMPUTERS (CENSUS 2001)

	Per cent	Australia, per cent	Rank
Internet (%)	41.4	29.2	2
Computer use (%)	58.6	43.8	1
Ratio	70.7	66.5	10
Rank diff, net / computer	-1	0	34
Estimated internet use (%)	43.5	29.2	2
Take-up surplus / shortfall	-2.1	0	63
Av. household income, 2001	62,523	49,086	3

## ADSL COVERAGE

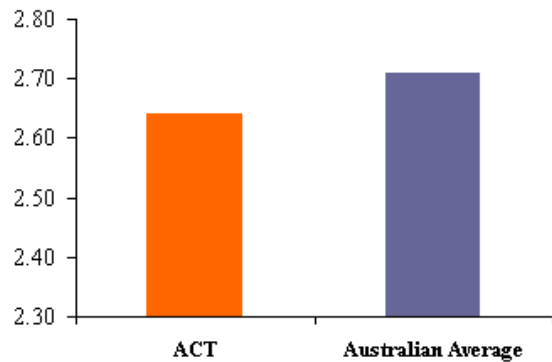
	Rate	Aust. Average	Rank
Coverage, % pop	99.9	90.4	Eq 1
Number of exchanges	21		
Number exchanges enabled	17		
% of exchanges enabled	81.0	34.3	18
Number HIBIS exchanges	0		
Exchanges per 10,000 pop.	0.7	2.7	50
Lowest (%)	99.9		
Highest (%)	99.9		
% children	99.9	89.6	Eq 1
% of area covered	99.9	1.2	Eq 1

Note: For local government area specific information call Peter Hylands, National Economics, (03) 9488 8444.

## BUSINESS USE OF ICT

	Rank	No. firms	
Average journey stage	2.641	8	
Staging leaders (%)	7.400	10	923
Expected broadband (%)	46.0	4	5,744
Export elasticity (%)	3.58	64	447
Export x coverage (%)	0.00	58	0
Leaders lost (%)	0.01	58	1

### Expected E-staging Level

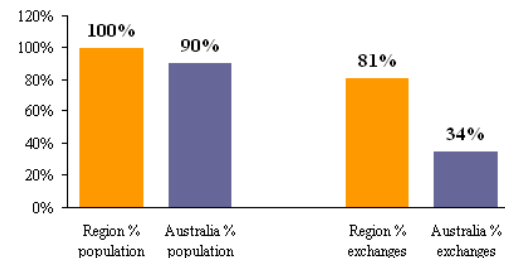


## BABY BOUNCE

	Per cent	Rank
1996	1.43	28
2001	1.27	42
2002	1.24	31
2003	1.24	27
2004	1.30	22
Bounce 2003-04	0.05	10
Actual change 2003-04 (number)	192	14

### ACT

#### ADSL Coverage



## SOCIAL SECURITY

	% Pop.	Aust. average
Short term Newstart	0.56	0.91
Long term Newstart	0.79	1.38
Total Newstart	1.35	2.29
Mature Age Allowance	0.05	0.11
Disability Support (DSP)	2.15	3.42
DSP, aged under 25	0.17	0.22
Youth unemployment	0.33	0.47
Parenting Payment Single (PPS)	1.60	2.25
PPS, aged under 25	0.21	0.29

	Social Security % NFOF	Rank
1999	10.64	3
2001	9.14	4
2003	8.98	4
2004	10.32	4
2005	9.98	4





## **APPENDIX 2**

# **INDEX OF LOCALITIES AND REGION MEMBERSHIP**

## A2.1 Index of localities

Local Government Area	Region
Adelaide (C)	Adelaide Central
Adelaide Hills (DC)	Adelaide Outer
Albany (C)	WA Wheatbelt-Great Southern
Albury (C)	NSW Murray
Alexandrina (DC)	Adelaide Outer
Alice Springs (T)	NT Lingiari
Alpine (S)	VIC Ovens-Hume
Alpurrurulam (CGC)	NT Lingiari
Angurugu (CGC)	NT Lingiari
Anmatjere (CGC)	NT Lingiari
Aramac (S)	QLD Pastoral
Ararat (RC)	VIC Central Highlands
Arltarpilta (CGC)	NT Lingiari
Armada (C)	Perth Outer South
Armidale Dumaresq (A)	NSW North
Ashburton (S)	WA Pilbara-Kimberly
Ashfield (A)	Sydney Inner West
Atherton (S)	QLD Far North
Auburn (A)	Sydney Mid West
Augusta-Margaret River (S)	WA Peel-South West
Aurukun (S)	QLD Far North
Badu (IC)	QLD Far North
Ballarat (C)	VIC Central Highlands
Ballina (A)	NSW Richmond-Tweed
Balonne (S)	QLD Pastoral
Balranald (A)	NSW Murray
Bamaga (IC)	QLD Far North
Banana (S)	QLD Fitzroy
Bankstown (C)	Sydney Mid West
Banyule (C)	Melbourne North
Barcaldine (S)	QLD Pastoral
Barcoo (S)	QLD Pastoral
Barossa (DC)	Adelaide Outer
Barraba (A)	NSW North
Barunga West (DC)	SA Eyre and Yorke
Bass Coast (S)	VIC Gippsland
Bassendean (T)	Perth Outer North
Bathurst (C)	NSW Central West
Bauhinia (S)	QLD Fitzroy
Baulkham Hills (A)	Sydney Outer North
Baw Baw (S)	VIC Gippsland
Bayside (C)	Melbourne South
Bayswater (C)	Perth Outer North
Beaudesert (S)	QLD Gold Coast
Bega Valley (A)	NSW South-East
Bellingen (A)	NSW Mid North Coast

Local Government Area	Region
Belmont (C)	Perth Central
Belyando (S)	QLD Mackay
Belyuen (CGC)	NT Lingiari
Benalla (RC)	VIC Goulburn
Bendemere (S)	QLD Pastoral
Berri and Barmera (DC)	SA Murraylands
Berrigan (A)	NSW Murray
Beverley (S)	WA Wheatbelt-Great Southern
Biggenden (S)	QLD Wide Bay-Burnett
Bingara (A)	NSW North
Binjari (CGC)	NT Lingiari
Blackall (S)	QLD Pastoral
Blacktown (C)	Sydney Mid West
Bland (A)	NSW Central West
Blayney (A)	NSW Central West
Blue Mountains (C)	Sydney Outer West
Boddington (S)	WA Peel-South West
Bogan (A)	NSW Far and North West
Boigu (IC)	QLD Far North
Bombala (A)	NSW South-East
Boonah (S)	QLD West Moreton
Booringa (S)	QLD Pastoral
Boorowa (A)	NSW South-East
Boroondara (C)	Melbourne East
Borrooloola (CGC)	NT Lingiari
Botany Bay (C)	Global Sydney
Boulia (S)	QLD Pastoral
Bourke (A)	NSW Far and North West
Bowen (S)	QLD North
Boyup Brook (S)	WA Peel-South West
Break O'Day (M)	TAS North
Brewarrina (A)	NSW Far and North West
Bridgetown-Greenbushes (S)	WA Peel-South West
Brighton (M)	TAS Hobart-South
Brimbank (C)	Melbourne West
Brisbane (C)	Brisbane City
Broadsound (S)	QLD Mackay
Broken Hill (C)	NSW Far and North West
Brookton (S)	WA Wheatbelt-Great Southern
Broome (S)	WA Pilbara-Kimberly
Broomehill (S)	WA Wheatbelt-Great Southern
Bruce Rock (S)	WA Wheatbelt-Great Southern
Bulloo (S)	QLD Pastoral
Buloke (S)	VIC Mallee-Wimmera
Bunbury (C)	WA Peel-South West
Bundaberg (C)	QLD Wide Bay-Burnett

Local Government Area	Region
Bungil (S)	QLD Pastoral
Burdekin (S)	QLD North
Burke (S)	QLD North West
Burnett (S)	QLD Wide Bay-Burnett
Burnie (C)	TAS North West
Burnside (C)	Adelaide Central
Burwood (A)	Sydney Inner West
Busselton (S)	WA Peel-South West
Byron (A)	NSW Richmond-Tweed
Cabonne (A)	NSW Central West
Caboolture (S)	Brisbane North
Cairns (C)	QLD Far North
Calliope (S)	QLD Fitzroy
Caloundra (C)	QLD Sunshine Coast
Cambooya (S)	QLD Agricultural SW
Cambridge (T)	Perth Central
Camden (A)	Sydney Outer South West
Campaspe (S)	VIC Goulburn
Campbelltown (C) (NSW)	Sydney Outer South West
Campbelltown (C) (SA)	Adelaide Central
Canada Bay (A)	Sydney Inner West
Canning (C)	Perth Outer South
Canterbury (C)	Sydney Mid West
Capel (S)	WA Peel-South West
Cardinia (S)	Melbourne Westport
Cardwell (S)	QLD Far North
Carnamah (S)	WA Gascoyne-Goldfields
Carnarvon (S)	WA Gascoyne-Goldfields
Carpentaria (S)	QLD North West
Carrathool (A)	NSW Murrumbidgee
Casey (C)	Melbourne Westport
Ceduna (DC)	SA Eyre and Yorke
Central Coast (M)	TAS North West
Central Darling (A)	NSW Far and North West
Central Goldfields (S)	VIC Loddon
Central Highlands (M)	TAS Hobart-South
Cessnock (C)	NSW Hunter
Chapman Valley (S)	WA Gascoyne-Goldfields
Charles Sturt (C)	Adelaide Plains
Charters Towers (C)	QLD North
Cherbourg (AC)	QLD Wide Bay-Burnett
Chinchilla (S)	QLD Agricultural SW
Chittering (S)	WA Wheatbelt-Great Southern
Circular Head (M)	TAS North West
Clare and Gilbert Valleys (DC)	SA Eyre and Yorke
Claremont (T)	Perth Central
Clarence (C)	TAS Hobart-South
Clarence Valley (A)	NSW Mid North Coast
Cleve (DC)	SA Eyre and Yorke

Local Government Area	Region
Clifton (S)	QLD Agricultural SW
Cloncurry (S)	QLD North West
Cobar (A)	NSW Far and North West
Cockburn (C)	Perth Outer South
Coffs Harbour (C)	NSW Mid North Coast
Colac-Otway (S)	VIC Barwon
Collie (S)	WA Peel-South West
Conargo (A)	NSW Murray
Cooper Pedy (DC)	SA Eyre and Yorke
Cook (S)	QLD Far North
Coolah (A)	NSW Far and North West
Coolamon (A)	NSW Murrumbidgee
Coolgardie (S)	WA Gascoyne-Goldfields
Cooloolo (S)	QLD Wide Bay-Burnett
Coomalie (CGC)	Darwin
Cooma-Monaro (A)	NSW South-East
Coonabarabran (A)	NSW Far and North West
Coonamble (A)	NSW Far and North West
Coorow (S)	WA Gascoyne-Goldfields
Cootamundra (A)	NSW Murrumbidgee
Copper Coast (DC)	SA Eyre and Yorke
Corangamite (S)	VIC West
Corowa (A)	NSW Murray
Corrigin (S)	WA Wheatbelt-Great Southern
Cottesloe (T)	Perth Central
Cowra (A)	NSW Central West
Cox Peninsula (CGC)	NT Lingiari
Cranbrook (S)	WA Wheatbelt-Great Southern
Crow's Nest (S)	QLD Agricultural SW
Croydon (S)	QLD Far North
Cuballing (S)	WA Wheatbelt-Great Southern
Cue (S)	WA Gascoyne-Goldfields
Culcairn (A)	NSW Murray
Cunderdin (S)	WA Wheatbelt-Great Southern
Daguragu (CGC)	NT Lingiari
Dalby (T)	QLD Agricultural SW
Dalrymple (S)	QLD North
Dalwallinu (S)	WA Wheatbelt-Great Southern
Dandaragan (S)	WA Wheatbelt-Great Southern
Dardanup (S)	WA Peel-South West
Darebin (C)	Melbourne North
Darwin (C)	Darwin
Dauan (IC)	QLD Far North
Deniliquin (A)	NSW Murray
Denmark (S)	WA Wheatbelt-Great Southern
Derby-West Kimberley (S)	WA Pilbara-Kimberly
Derwent Valley (M)	TAS Hobart-South
Devonport (C)	TAS North West
Diamantina (S)	QLD Pastoral

Local Government Area	Region
Donnybrook-Balingup (S)	WA Peel-South West
Doomadgee (AC)	QLD North West
Dorset (M)	TAS North
Douglas (S)	QLD Far North
Dowerin (S)	WA Wheatbelt-Great Southern
Duaringa (S)	QLD Fitzroy
Dubbo (C)	NSW Far and North West
Dumbleyung (S)	WA Wheatbelt-Great Southern
Dundas (S)	WA Gascoyne-Goldfields
Dungog (A)	NSW Hunter
Eacham (S)	QLD Far North
East Fremantle (T)	Perth Central
East Gippsland (S)	VIC Gippsland
East Pilbara (S)	WA Pilbara-Kimberly
Eastern Capital City Regional (A)	NSW South-East
Eidsvold (S)	QLD Wide Bay-Burnett
Elliott District (CGC)	NT Lingiari
Elliston (DC)	SA Eyre and Yorke
Emerald (S)	QLD Fitzroy
Erub (IC)	QLD Far North
Esk (S)	QLD West Moreton
Esperance (S)	WA Gascoyne-Goldfields
Etheridge (S)	QLD Far North
Eurobodalla (A)	NSW South-East
Evans (A)	NSW Central West
Exmouth (S)	WA Gascoyne-Goldfields
Fairfield (C)	Sydney Mid West
Fitzroy (S)	QLD Fitzroy
Flinders (M)	TAS North
Flinders (S)	QLD North West
Flinders Ranges (DC)	SA Eyre and Yorke
Forbes (A)	NSW Central West
Franklin Harbor (DC)	SA Eyre and Yorke
Frankston (C)	Melbourne Westport
Fremantle (C)	Perth Central
Gannawarra (S)	VIC Mallee-Wimmera
Gatton (S)	QLD West Moreton
Gawler (T)	Adelaide Plains
Gayndah (S)	QLD Wide Bay-Burnett
George Town (M)	TAS North
Geraldton (C)	WA Gascoyne-Goldfields
Gilgandra (A)	NSW Far and North West
Gingin (S)	WA Wheatbelt-Great Southern
Gladstone (C)	QLD Fitzroy
Glamorgan/Spring Bay (M)	TAS Hobart-South
Glen Eira (C)	Melbourne South
Glen Innes (A)	NSW North
Glenelg (S)	VIC West

Local Government Area	Region
Glenorchy (C)	TAS Hobart-South
Gloucester (A)	NSW Hunter
Gnowangerup (S)	WA Wheatbelt-Great Southern
Gold Coast (C)	QLD Gold Coast
Golden Plains (S)	VIC Barwon
Goomalling (S)	WA Wheatbelt-Great Southern
Goondiwindi (T)	QLD Agricultural SW
Gosford (C)	NSW Central Coast
Gosnells (C)	Perth Outer South
Goyder (DC)	SA Eyre and Yorke
Grant (DC)	SA South East
Great Lakes (A)	NSW Hunter
Greater Argyle (A)	NSW South-East
Greater Bendigo (C)	VIC Loddon
Greater Dandenong (C)	Melbourne Westport
Greater Geelong (C)	VIC Barwon
Greater Queanbeyan (C)	NSW South-East
Greater Shepparton (C)	VIC Goulburn
Greater Taree (C)	NSW Mid North Coast
Greenough (S)	WA Gascoyne-Goldfields
Griffith (C)	NSW Murrumbidgee
Gundagai (A)	NSW Murrumbidgee
Gunnedah (A)	NSW North
Guyra (A)	NSW North
Halls Creek (S)	WA Pilbara-Kimberly
Hammond (IC)	QLD Far North
Harden (A)	NSW South-East
Harvey (S)	WA Peel-South West
Hastings (A)	NSW Mid North Coast
Hawkesbury (C)	Sydney Outer West
Hay (A)	NSW Murrumbidgee
Hepburn (S)	VIC Central Highlands
Herberton (S)	QLD Far North
Hervey Bay (C)	QLD Wide Bay-Burnett
Hinchinbrook (S)	QLD North
Hindmarsh (S)	VIC Mallee-Wimmera
Hobart (C)	TAS Hobart-South
Hobsons Bay (C)	Melbourne West
Holbrook (A)	NSW Murray
Holdfast Bay (C)	Adelaide Central
Holroyd (C)	Sydney Mid West
Hope Vale (AC)	QLD Far North
Hornsby (A)	Sydney Outer North
Horsham (RC)	VIC Mallee-Wimmera
Hume (A)	NSW Murray
Hume (C)	Melbourne North
Hunter's Hill (A)	Global Sydney
Huon Valley (M)	TAS Hobart-South
Hurstville (C)	Sydney South
Iama (IC)	QLD Far North

Local Government Area	Region
Ilfracombe (S)	QLD Pastoral
Indigo (S)	VIC Ovens-Hume
Inglewood (S)	QLD Agricultural SW
Injinoo (AC)	QLD Far North
Inverell (A)	NSW North
Ipswich (C)	QLD West Moreton
Irwin (S)	WA Gascoyne-Goldfields
Isis (S)	QLD Wide Bay-Burnett
Isisford (S)	QLD Pastoral
Jabiru (T)	NT Lingiari
Jericho (S)	QLD Fitzroy
Jerilderie (A)	NSW Murray
Jerramungup (S)	WA Wheatbelt-Great Southern
Jilkminggan (CGC)	NT Lingiari
Johnstone (S)	QLD Far North
Jondaryan (S)	QLD Agricultural SW
Joondalup (C)	Perth Outer North
Junea (A)	NSW Murrumbidgee
Kalamunda (S)	Perth Outer South
Kalgoorlie/Boulder (C)	WA Gascoyne-Goldfields
Kangaroo Island (DC)	SA Eyre and Yorke
Karoonda East Murray (DC)	SA Murraylands
Katanning (S)	WA Wheatbelt-Great Southern
Katherine (T)	NT Lingiari
Kellerberrin (S)	WA Wheatbelt-Great Southern
Kempsey (A)	NSW Mid North Coast
Kent (S)	WA Wheatbelt-Great Southern
Kentish (M)	TAS North West
Kiama (A)	NSW Illawarra
Kilcoy (S)	Brisbane North
Kilkivan (S)	QLD Wide Bay-Burnett
Kimba (DC)	SA Eyre and Yorke
King Island (M)	TAS North West
Kingaroy (S)	QLD Wide Bay-Burnett
Kingborough (M)	TAS Hobart-South
Kingston (C)	Melbourne South
Kingston (DC)	SA South East
Knox (C)	Melbourne East
Kogarah (A)	Sydney South
Kojonup (S)	WA Wheatbelt-Great Southern
Kolan (S)	QLD Wide Bay-Burnett
Kondinin (S)	WA Wheatbelt-Great Southern
Koorda (S)	WA Wheatbelt-Great Southern
Kowanyama (AC)	QLD Far North
Kubin (IC)	QLD Far North
Kulin (S)	WA Wheatbelt-Great Southern
Kunbarllanjnja (CGC)	NT Lingiari
Ku-ring-gai (A)	Sydney Outer North
Kwinana (T)	Perth Outer South

Local Government Area	Region
Kyogle (A)	NSW Richmond-Tweed
Lachlan (A)	NSW Central West
Laidley (S)	QLD West Moreton
Lajamanu (CGC)	NT Lingiari
Lake Grace (S)	WA Wheatbelt-Great Southern
Lake Macquarie (C)	NSW Hunter
Lane Cove (A)	Global Sydney
Latrobe (C)	VIC Gippsland
Latrobe (M)	TAS North West
Launceston (C)	TAS North
Laverton (S)	WA Gascoyne-Goldfields
Le Hunte (DC)	SA Eyre and Yorke
Leeton (A)	NSW Murrumbidgee
Leichhardt (A)	Sydney Inner West
Leonora (S)	WA Gascoyne-Goldfields
Light (RegC)	Adelaide Plains
Lismore (C)	NSW Richmond-Tweed
Litchfield (S)	Darwin
Lithgow (C)	NSW Central West
Liverpool (C)	Sydney Mid West
Livingstone (S)	QLD Fitzroy
Lockhart (A)	NSW Murrumbidgee
Lockhart River (AC)	QLD Far North
Loddon (S)	VIC Loddon
Logan (C)	QLD Gold Coast
Longreach (S)	QLD Pastoral
Lower Eyre Peninsula (DC)	SA Eyre and Yorke
Loxton Waikerie (DC)	SA Murraylands
Ltyentye Purte (CGC)	NT Lingiari
Mabuiag (IC)	QLD Far North
Macedon Ranges (S)	VIC Loddon
Mackay (C)	QLD Mackay
Maitland (C)	NSW Hunter
Mallala (DC)	Adelaide Plains
Mandurah (C)	WA Peel-South West
Manilla (A)	NSW North
Manjimup (S)	WA Peel-South West
Manly (A)	Sydney Outer North
Manningham (C)	Melbourne East
Mansfield (S)	VIC Goulburn
Mapoon (AC)	QLD Far North
Mareeba (S)	QLD Far North
Maribyrnong (C)	Melbourne West
Marion (C)	Adelaide Central
Marngarr (CGC)	NT Lingiari
Maroochy (S)	QLD Sunshine Coast
Maroondah (C)	Melbourne East
Marrickville (A)	Sydney Mid West
Maryborough (C)	QLD Wide Bay-Burnett

Local Government Area	Region
Mataranka (CGC)	NT Lingiari
McKinlay (S)	QLD North West
Meander Valley (M)	TAS North
Meekatharra (S)	WA Gascoyne-Goldfields
Melbourne (C)	Melbourne Inner
Melton (S)	Melbourne West
Melville (C)	Perth Outer South
Menzies (S)	WA Gascoyne-Goldfields
Mer (IC)	QLD Far North
Merredin (S)	WA Wheatbelt-Great Southern
Merriwa (A)	NSW Hunter
Mid Murray (DC)	SA Murraylands
Mildura (RC)	VIC Mallee-Wimmera
Millmerran (S)	QLD Agricultural SW
Mingenew (S)	WA Gascoyne-Goldfields
Mirani (S)	QLD Mackay
Miriam Vale (S)	QLD Wide Bay-Burnett
Mitcham (C)	Adelaide Central
Mitchell (S)	VIC Goulburn
Moira (S)	VIC Goulburn
Monash (C)	Melbourne East
Monto (S)	QLD Wide Bay-Burnett
Moonee Valley (C)	Melbourne West
Moora (S)	WA Wheatbelt-Great Southern
Moorabool (S)	VIC Central Highlands
Morawa (S)	WA Gascoyne-Goldfields
Moree Plains (A)	NSW North
Moreland (C)	Melbourne North
Mornington (S)	QLD North West
Mornington Peninsula (S)	Melbourne Westport
Mosman (A)	Global Sydney
Mosman Park (T)	Perth Central
Mount Alexander (S)	VIC Loddon
Mount Barker (DC)	Adelaide Outer
Mount Gambier (C)	SA South East
Mount Isa (C)	QLD North West
Mount Magnet (S)	WA Gascoyne-Goldfields
Mount Marshall (S)	WA Wheatbelt-Great Southern
Mount Morgan (S)	QLD Fitzroy
Mount Remarkable (DC)	SA Eyre and Yorke
Moyne (S)	VIC West
Mudgee (A)	NSW Far and North West
Mukinbudin (S)	WA Wheatbelt-Great Southern
Mullewa (S)	WA Gascoyne-Goldfields
Mundaring (S)	Perth Outer North
Mundubbera (S)	QLD Wide Bay-Burnett
Murchison (S)	WA Gascoyne-Goldfields
Murgon (S)	QLD Wide Bay-Burnett
Murilla (S)	QLD Agricultural SW

Local Government Area	Region
Murray (A)	NSW Murray
Murray (S)	WA Peel-South West
Murray Bridge (RC)	SA Murraylands
Murrindindi (S)	VIC Goulburn
Murrumbidgee (A)	NSW Murrumbidgee
Murrurundi (A)	NSW Hunter
Murweh (S)	QLD Pastoral
Muswellbrook (A)	NSW Hunter
Nambucca (A)	NSW Mid North Coast
Nanango (S)	QLD Wide Bay-Burnett
Nannup (S)	WA Peel-South West
Napranum (AC)	QLD Far North
Naracoorte and Lucindale (DC)	SA South East
Narembeen (S)	WA Wheatbelt-Great Southern
Narrabri (A)	NSW North
Narrandera (A)	NSW Murrumbidgee
Narrogin (S)	WA Wheatbelt-Great Southern
Narrogin (T)	WA Wheatbelt-Great Southern
Narromine (A)	NSW Far and North West
Naiyu Nambiyu (CGC)	NT Lingiari
Nebo (S)	QLD Mackay
Nedlands (C)	Perth Central
New Mapoon (AC)	QLD Far North
Newcastle (C)	NSW Hunter
Ngaanyatjarraku (S)	WA Gascoyne-Goldfields
Nillumbik (S)	Melbourne North
Noosa (S)	QLD Sunshine Coast
North Sydney (A)	Global Sydney
Northam (S)	WA Wheatbelt-Great Southern
Northam (T)	WA Wheatbelt-Great Southern
Northampton (S)	WA Gascoyne-Goldfields
Northern Areas (DC)	SA Eyre and Yorke
Northern Grampians (S)	VIC Mallee-Wimmera
Northern Midlands (M)	TAS North
Norwood Payneham St Peters (C)	Adelaide Central
Numbulwar Numburindi (CGC)	NT Lingiari
Nundle (A)	NSW North
Nungarin (S)	WA Wheatbelt-Great Southern
Nyirranggulung Mardruk Ngadberre (CGC)	NT Lingiari
Oberon (A)	NSW Central West
Onkaparinga (C)	Adelaide Outer
Orange (C)	NSW Central West
Orroroo/Carrieton (DC)	SA Eyre and Yorke
Palm Island (AC)	QLD North
Palmerston (C)	Darwin
Parkes (A)	NSW Central West
Paroo (S)	QLD Pastoral

Local Government Area	Region
Parramatta (C)	Sydney Mid West
Parry (A)	NSW North
Peak Downs (S)	QLD Fitzroy
Penrith (C)	Sydney Outer West
Peppermint Grove (S)	Perth Central
Perenjori (S)	WA Gascoyne-Goldfields
Perry (S)	QLD Wide Bay-Burnett
Perth (C)	Perth Central
Peterborough (DC)	SA Eyre and Yorke
Pine Creek (CGC)	NT Lingiari
Pine Rivers (S)	Brisbane North
Pingelly (S)	WA Wheatbelt-Great Southern
Pittsworth (S)	QLD Agricultural SW
Pittwater (A)	Sydney Outer North
Plantagenet (S)	WA Wheatbelt-Great Southern
Playford (C)	Adelaide Plains
Pormpuraaw (AC)	QLD North West
Port Adelaide Enfield (C)	Adelaide Plains
Port Augusta (C)	SA Eyre and Yorke
Port Hedland (T)	WA Pilbara-Kimberly
Port Lincoln (C)	SA Eyre and Yorke
Port Phillip (C)	Melbourne Inner
Port Pirie City and Dists (M)	SA Eyre and Yorke
Port Stephens (A)	NSW Hunter
Poruma (IC)	QLD Far North
Prospect (C)	Adelaide Central
Pyrenees (S)	VIC Central Highlands
Quairading (S)	WA Wheatbelt-Great Southern
Queenscliffe (B)	VIC Barwon
Quilpie (S)	QLD Pastoral
Quirindi (A)	NSW North
Randwick (C)	Global Sydney
Ravensthorpe (S)	WA Gascoyne-Goldfields
Redcliffe (C)	Brisbane North
Redland (S)	QLD Gold Coast
Renmark Paringa (DC)	SA Murraylands
Richmond (S)	QLD North West
Richmond Valley (A)	NSW Mid North Coast
Robe (DC)	SA South East
Rockdale (C)	Sydney South
Rockhampton (C)	QLD Fitzroy
Rockingham (C)	Perth Outer South
Roebourne (S)	WA Pilbara-Kimberly
Roma (T)	QLD Pastoral
Rosalie (S)	QLD Agricultural SW
Roxby Downs (M)	SA Eyre and Yorke
Ryde (C)	Global Sydney
Rylstone (A)	NSW Central West
Saibai (IC)	QLD Far North

Local Government Area	Region
Salisbury (C)	Adelaide Plains
Sandstone (S)	WA Gascoyne-Goldfields
Sarina (S)	QLD Mackay
Scone (A)	NSW Hunter
Seisia (IC)	QLD Far North
Serpentine-Jarrahdale (S)	WA Peel-South West
Severn (A)	NSW North
Shark Bay (S)	WA Gascoyne-Goldfields
Shellharbour (C)	NSW Illawarra
Shoalhaven (C)	NSW Illawarra
Singleton (A)	NSW Hunter
Snowy River (A)	NSW South-East
Sorell (M)	TAS Hobart-South
South Gippsland (S)	VIC Gippsland
South Perth (C)	Perth Central
Southern Grampians (S)	VIC West
Southern Mallee (DC)	SA Murraylands
Southern Midlands (M)	TAS Hobart-South
St Pauls (IC)	QLD Far North
Stanthorpe (S)	QLD Agricultural SW
Stirling (C)	Perth Central
Stonnington (C)	Melbourne Inner
Strathbogie (S)	VIC Goulburn
Strathfield (A)	Sydney Inner West
Streaky Bay (DC)	SA Eyre and Yorke
Subiaco (C)	Perth Central
Surf Coast (S)	VIC Barwon
Sutherland Shire (A)	Sydney South
Swan (C)	Perth Outer North
Swan Hill (RC)	VIC Mallee-Wimmera
Sydney (C)	Global Sydney
Tambellup (S)	WA Wheatbelt-Great Southern
Tambo (S)	QLD Pastoral
Tammin (S)	WA Wheatbelt-Great Southern
Tamworth (C)	NSW North
Tapatjatjaka (CGC)	NT Lingiari
Tara (S)	QLD Agricultural SW
Taroom (S)	QLD Agricultural SW
Tasman (M)	TAS Hobart-South
Tatiara (DC)	SA South East
Tea Tree Gully (C)	Adelaide Outer
Temora (A)	NSW Murrumbidgee
Tennant Creek (T)	NT Lingiari
Tenterfield (A)	NSW North
Thamarrurr (CGC)	NT Lingiari
The Coorong (DC)	SA Murraylands
Three Springs (S)	WA Gascoyne-Goldfields
Thuringowa (C)	QLD North
Tiara (S)	QLD Wide Bay-Burnett

Local Government Area	Region
Timber Creek (CGC)	NT Lingiari
Tiwi Islands (CGC)	NT Lingiari
Toodyay (S)	WA Wheatbelt-Great Southern
Toowoomba (C)	QLD Agricultural SW
Torres (S)	QLD Far North
Townsville (C)	QLD North
Towong (S)	VIC Ovens-Hume
Trayning (S)	WA Wheatbelt-Great Southern
Tumbarumba (A)	NSW Murray
Tumby Bay (DC)	SA Eyre and Yorke
Tumut (A)	NSW South-East
Tweed (A)	NSW Richmond-Tweed
Ugar (IC)	QLD Far North
Umagico (AC)	QLD Far North
Unincorp. Other Territories	
Unincorporated ACT	ACT
Unincorporated NSW	NSW Far and North West
Unincorporated NT	NT Lingiari
Unincorporated Qld	
Unincorporated SA	SA Eyre and Yorke
Unincorporated Tas	
Unincorporated Vic	VIC Gippsland
Unincorporated WA	WA Pilbara-Kimberly
Unley (C)	Adelaide Central
Upper Gascoyne (S)	WA Gascoyne-Goldfields
Upper Lachlan (A)	NSW South-East
Uralla (A)	NSW North
Urana (A)	NSW Murray
Victor Harbor (C)	Adelaide Outer
Victoria Park (T)	Perth Central
Victoria Plains (S)	WA Wheatbelt-Great Southern
Vincent (T)	Perth Central
Wagga Wagga (C)	NSW Murrumbidgee
Waggamba (S)	QLD Agricultural SW
Wagin (S)	WA Wheatbelt-Great Southern
Wakefield (DC)	SA Eyre and Yorke
Wakool (A)	NSW Murray
Walangeri Ngumpinku (CGC)	NT Lingiari
Walcha (A)	NSW North
Walgett (A)	NSW Far and North West
Walkerville (M)	Adelaide Central
Wallace Rockhole (CGC)	NT Lingiari
Wambo (S)	QLD Agricultural SW
Wandering (S)	WA Wheatbelt-Great Southern
Wangaratta (RC)	VIC Ovens-Hume
Wanneroo (C)	Perth Outer North
Waratah/Wynyard (M)	TAS North West
Waroona (S)	WA Peel-South West

Local Government Area	Region
Warraber (IC)	QLD Far North
Warren (A)	NSW Far and North West
Warringah (A)	Sydney Outer North
Warrnambool (C)	VIC West
Warroo (S)	QLD Pastoral
Warwick (S)	QLD Agricultural SW
Watiyawanu (CGC)	NT Lingiari
Wattle Range (DC)	SA South East
Waverley (A)	Global Sydney
Weddin (A)	NSW Central West
Weipa (T)	QLD Far North
Wellington (A)	NSW Far and North West
Wellington (S)	VIC Gippsland
Wentworth (A)	NSW Murray
West Arthur (S)	WA Wheatbelt-Great Southern
West Coast (M)	TAS North West
West Tamar (M)	TAS North
West Torrens (C)	Adelaide Plains
West Wimmera (S)	VIC Mallee-Wimmera
Westonia (S)	WA Wheatbelt-Great Southern
Whitehorse (C)	Melbourne East
Whitsunday (S)	QLD Mackay
Whittlesea (C)	Melbourne North
Whyalla (C)	SA Eyre and Yorke
Wickepin (S)	WA Wheatbelt-Great Southern
Williams (S)	WA Wheatbelt-Great Southern
Willoughby (C)	Global Sydney
Wiluna (S)	WA Gascoyne-Goldfields
Wingecarribee (A)	NSW Illawarra
Winton (S)	QLD Pastoral
Wodonga (RC)	VIC Ovens-Hume
Wollondilly (A)	Sydney Outer South West
Wollongong (C)	NSW Illawarra
Wondai (S)	QLD Wide Bay-Burnett
Wongan-Ballidu (S)	WA Wheatbelt-Great Southern
Woocoo (S)	QLD Wide Bay-Burnett
Woodanilling (S)	WA Wheatbelt-Great Southern
Woollahra (A)	Global Sydney
Woorabinda (AC)	QLD Fitzroy
Wujal Wujal (AC)	QLD Far North
Wyalkatchem (S)	WA Wheatbelt-Great Southern
Wyndham (C)	Melbourne West
Wyndham-East Kimberley (S)	WA Pilbara-Kimberly
Wyong (A)	NSW Central Coast
Yalgoo (S)	WA Gascoyne-Goldfields
Yallaroi (A)	NSW North
Yankalilla (DC)	Adelaide Outer
Yarra (C)	Melbourne Inner
Yarra Ranges (S)	Melbourne Westport



<b>Local Government Area</b>	<b>Region</b>
Yarrabah (AC)	QLD Far North
Yarriambiack (S)	VIC Mallee-Wimmera
Yass Valley (A)	NSW South-East
Yilgarn (S)	WA Wheatbelt-Great Southern
York (S)	WA Wheatbelt-Great Southern
Yorke (IC)	QLD Far North
Yorke Peninsula (DC)	SA Eyre and Yorke
Young (A)	NSW South-East
Yuendumu (CGC)	NT Lingiari
Yugul Mangi (CGC)	NT Lingiari

## A2.2 Index of region membership

Region	Local Government Area	Region	Local Government Area		
ACT	Unincorporated ACT		Willoughby (C)		
Adelaide Central	Adelaide (C)	Melbourne East	Woollahra (A)		
	Burnside (C)		Boroondara (C)		
	Campbelltown (C) SA		Knox (C)		
	Holdfast Bay (C)		Manningham (C)		
	Marion (C)		Maroondah (C)		
	Mitcham (C)		Monash (C)		
	Norwood Payneham St Peters (C)		Whitehorse (C)		
	Prospect (C)		Melbourne Inner	Melbourne (C)	
	Unley (C)		Port Phillip (C)		
	Walkerville (M)		Stonnington (C)		
	Adelaide Outer		Adelaide Hills (DC)	Yarra (C)	
			Alexandrina (DC)	Melbourne North	Banyule (C)
			Barossa (DC)	Darebin (C)	
			Mount Barker (DC)	Hume (C)	
Onkaparinga (C)		Moreland (C)			
Tea Tree Gully (C)		Nillumbik (S)			
Victor Harbor (DC)		Whittlesea (C)			
Yankalilla (DC)		Melbourne South	Bayside (C)		
Adelaide Plains		Charles Sturt (C)	Glen Eira (C)		
		Gawler (M)	Kingston (C)		
	Light (DC)	Melbourne West	Brimbank (C)		
	Mallala (DC)	Hobsons Bay (C)			
	Playford (C)	Maribyrnong (C)			
	Port Adelaide Enfield (C)	Melton (S)			
	Salisbury (C)	Moonee Valley (C)			
	West Torrens (C)	Wyndham (C)			
	Brisbane City	Brisbane (C)	Melbourne Westernport	Cardinia (S)	
		Brisbane North	Caboolture (S)	Casey (C)	
Kilcoy (S)	Frankston (C)				
Pine Rivers (S)	Greater Dandenong (C)				
Redcliffe (C)	Mornington Peninsula (S)				
Darwin	Coomalie (CGC)		Yarra Ranges (S)		
	Darwin (C)	NSW Central Coast	Gosford (C)		
	Litchfield (S)	Wyong (A)			
	Palmerston (C)	NSW Central West	Bathurst (C)		
	Global Sydney	Botany Bay (C)	Bland (A)		
Hunter's Hill (A)		Blayney (A)			
Lane Cove (A)		Cabonne (A)			
Mosman (A)		Cowra (A)			
North Sydney (A)		Evans (A)			
Randwick (C)		Forbes (A)			
Ryde (C)		Lithgow (C)			
Sydney (C)		Lachlan (A)			
Waverley (A)		Oberon (A)			
			Orange (C)		

Region	Local Government Area
NSW Far and North West	Parkes (A)
	Rylstone (A)
	Weddin (A)
	Bogan (A)
	Bourke (A)
	Brewarrina (A)
	Broken Hill (C)
	Central Darling (A)
	Cobar (A)
	Coolah (A)
	Coonabarabran (A)
	Coonamble (A)
	Dubbo (C)
	Gilgandra (A)
	Mudgee (A)
	Narromine (A)
	Unincorporated NSW
	Walgett (A)
	Warren (A)
	Wellington (A)
NSW Hunter	Cessnock (C)
	Dungog (A)
	Gloucester (A)
	Great Lakes (A)
	Lake Macquarie (C)
	Maitland (C)
	Merriwa (A)
	Murrurundi (A)
	Muswellbrook (A)
	Newcastle (C)
	Port Stephens (A)
	Scone (A)
	Singleton (A)
	NSW Illawarra
Shellharbour (C)	
Shoalhaven (C)	
Wingecarribee (A)	
Wollongong (C)	
NSW Mid North Coast	
	Clarence Valley (A)
	Coffs Harbour (C)
	Greater Taree (C)
	Hastings (A)
	Kempsey (A)
	Nambucca (A)
	Richmond Valley (A)
	NSW Murray
Balranald (A)	

Region	Local Government Area
NSW Murrumbidgee	Berrigan (A)
	Conargo (A)
	Corowa (A)
	Culcairn (A)
	Deniliquin (A)
	Holbrook (A)
	Hume (A)
	Jerilderie (A)
	Murray (A)
	Tumbarumba (A)
	Urana (A)
	Wakool (A)
	Wentworth (A)
	Carrathool (A)
	Coolamon (A)
	Cootamundra (A)
	Griffith (C)
	Gundagai (A)
	Hay (A)
	Junee (A)
NSW North	Leeton (A)
	Lockhart (A)
	Murrumbidgee (A)
	Narrandera (A)
	Temora (A)
	Wagga Wagga (C)
	Armidale Dumaresq (A)
	Barraba (A)
	Bingara (A)
	Glen Innes (A)
Gunnedah (A)	
NSW Richmond-Tweed	Guyra (A)
	Inverell (A)
	Manilla (A)
	Moree Plains (A)
	Narrabri (A)
	Nundle (A)
	Parry (A)
	Quirindi (A)
	Severn (A)
	Tamworth (C)
Tenterfield (A)	
NSW Richmond-Tweed	Uralla (A)
	Walcha (A)
	Yallaroi (A)
	Ballina (A)
NSW Richmond-Tweed	Byron (A)
	Kyogle (A)

Region	Local Government Area	
NSW South-East	Lismore (C)	
	Tweed (A)	
	Bega Valley (A)	
	Bombala (A)	
	Boorowa (A)	
	Cooma-Monaro (A)	
	Crookwell (A)	
	Eastern Capital City Regional (A)	
	Eurobodalla (A)	
	Greater Argyle (A)	
	Greater Queanbeyan (C)	
	Harden (A)	
	Snowy River (A)	
	Tumut (A)	
	Upper Lachlan (A)	
	Yass Valley (A)	
	Young (A)	
	NT Lingjari	Alice Springs (T)
		Alpurrurulam (CGC)
Angurugu (CGC)		
Anmatjere (CGC)		
Arltarlpilta (CGC)		
Belyuen (CGC)		
Binjari (CGC)		
Borroloola (CGC)		
Cox Peninsula (CGC)		
Daguragu (CGC)		
Elliott District (CGC)		
Jabiru (T)		
Jilkminggan (CGC)		
Katherine (T)		
Kunbarllanjnja (CGC)		
Lajamanu (CGC)		
Ltyentye Purte (CGC)		
Margarr (CGC)		
Mataranka (CGC)		
Naiyu Nambiyu (CGC)		
Numbulwar Numburindi (CGC)		
Nyirrangulung Mardrulk		
Ngadberre (CGC)		
Pine Creek (CGC)		
Tapatjatjaka (CGC)		
Tennant Creek (T)		
Thamarrurr (CGC)		
Timber Creek (CGC)		
Tiwi Islands (CGC)		
Unincorporated NT		

Region	Local Government Area	
Perth Central	Walangeri Ngumpinku (CGC)	
	Wallace Rockhole (CGC)	
	Watiyawanu (CGC)	
	Yuendumu (CGC)	
	Yugul Mangi (CGC)	
	Belmont (C)	
	Cambridge (T)	
	Claremont (T)	
	Cottesloe (T)	
	East Fremantle (T)	
	Fremantle (C)	
	Mosman Park (T)	
	Nedlands (C)	
	Peppermint Grove (S)	
	Perth (C)	
	South Perth (C)	
	Stirling (C)	
	Subiaco (C)	
	Victoria Park (T)	
Perth Outer North	Vincent (T)	
	Bassendean (T)	
	Bayswater (C)	
	Joondalup (C)	
	Mundaring (S)	
	Swan (C)	
	Wanneroo (S)	
	Perth Outer South	Armadale (C)
		Canning (C)
		Cockburn (C)
Gosnells (C)		
Kalamunda (S)		
Kwinana (T)		
Melville (C)		
Rockingham (C)		
QLD Agricultural SW		Cambooya (S)
		Chinchilla (S)
	Clifton (S)	
	Crow's Nest (S)	
	Dalby (T)	
	Goondiwindi (T)	
	Inglewood (S)	
	Jondaryan (S)	
	Millmerran (S)	
	Murilla (S)	
	Pittsworth (S)	
Rosalie (S)		
Stanthorpe (S)		
Tara (S)		

Region	Local Government Area
QLD Far North	Taroom (S)
	Toowoomba (C)
	Waggamba (S)
	Wambo (S)
	Warwick (S)
	Atherton (S)
	Aurukun (S)
	Badu (IC)
	Bamaga (IC)
	Boigu (IC)
	Cairns (C)
	Cardwell (S)
	Cook (S)
	Croydon (S)
	Dauan (IC)
	Douglas (S)
	Eacham (S)
	Erub (IC)
	Etheridge (S)
	Hammond (IC)
	Herberton (S)
	Hope Vale (AC)
	Iama (IC)
	Injinoo (AC)
	Johnstone (S)
	Kowanyama (AC)
	Kubin (IC)
	Lockhart River (AC)
	Mabuiag (IC)
	Mapoon (AC)
	Mareeba (S)
	Mer (IC)
	Napranum (AC)
	New Mapoon (AC)
	Poruma (IC)
	Saibai (IC)
	Seisia (IC)
	St Pauls (IC)
	Torres (S)
	Ugar (IC)
Umagico (AC)	
Warraber (IC)	
Weipa (T)	
Wujal Wujal (AC)	
Yarrabah (AC)	
Yorke (IC)	
QLD Fitzroy	Bauhinia (S)
	Calliope (S)
	Duarina (S)

Region	Local Government Area
	Emerald (S)
	Fitzroy (S)
	Gladstone (C)
	Jericho (S)
	Livingstone (S)
	Mount Morgan (S)
	Peak Downs (S)
	Rockhampton (C)
	Woorabinda (AC)
QLD Gold Coast	Beaudesert (S)
	Gold Coast (C)
	Logan (C)
	Redland (S)
QLD Mackay	Belyando (S)
	Broadsound (S)
	Mackay (C)
	Mirani (S)
	Nebo (S)
	Sarina (S)
QLD North	Whitsunday (S)
	Bowen (S)
	Burdekin (S)
	Charters Towers (C)
	Dalrymple (S)
	Hinchinbrook (S)
	Palm Island (AC)
	Thuringowa (C)
	Townsville (C)
QLD North West	Burke (S)
	Carpentaria (S)
	Cloncurry (S)
	Doomadgee (AC)
	Flinders (S)
	McKinlay (S)
	Mornington (S)
	Mount Isa (C)
	Pormpuraaw (AC)
	Richmond (S)
	QLD Pastoral
Balonne (S)	
Barcaldine (S)	
Barcoo (S)	
Bendemere (S)	
Blackall (S)	
Booringa (S)	
Boulia (S)	
Bulloo (S)	
Bungil (S)	
Diamantina (S)	
Ilfracombe (S)	
Isisford (S)	
Longreach (S)	
Murweh (S)	
Paroo (S)	

Region	Local Government Area
	Quilpie (S)
	Roma (T)
	Tambo (S)
	Warroo (S)
	Winton (S)
QLD Sunshine Coast	Caloundra (C)
	Maroochy (S)
	Noosa (S)
QLD West Moreton	Boonah (S)
	Esk (S)
	Gatton (S)
	Ipswich (C)
	Laidley (S)
QLD Wide Bay-Burnett	Biggenden (S)
	Bundaberg (C)
	Burnett (S)
	Cherbourg (AC)
	Cooloola (S)
	Eidsvold (S)
	Gayndah (S)
	Hervey Bay (C)
	Isis (S)
	Kilkivan (S)
	Kingaroy (S)
	Kolan (S)
	Maryborough (C)
	Miriam Vale (S)
	Monto (S)
	Mundubbera (S)
	Murgon (S)
	Nanango (S)
	Perry (S)
	Tiaro (S)
	Wondai (S)
	Woocoo (S)
SA Eyre and Yorke	Barunga West (DC)
	Ceduna (DC)
	Clare and Gilbert Valleys (DC)
	Cleve (DC)
	Cooper Pedy (DC)
	Copper Coast (DC)
	Elliston (DC)
	Flinders Ranges (DC)
	Franklin Harbor (DC)
	Goyder (DC)
	Kangaroo Island (DC)
	Kimba (DC)
	Le Hunte (DC)
	Lower Eyre Peninsula (DC)
	Mount Remarkable (DC)
	Northern Areas (DC)
	Orroroo/Carrieton (DC)
	Peterborough (DC)

Region	Local Government Area	
	Port Augusta (C)	
	Port Lincoln (C)	
	Port Pirie City and Dists (M)	
	Roxby Downs (M)	
	Streaky Bay (DC)	
	Tumby Bay (DC)	
	Wakefield (DC)	
	Whyalla (C)	
	Yorke Peninsula (DC)	
	SA Murraylands	Berri and Barmera (DC)
		Karoonda East Murray (DC)
		Loxton Waikerie (DC)
		Mid Murray (DC)
	Murray Bridge (RC)	
	Renmark Paringa (DC)	
	Southern Mallee (DC)	
	The Coorong (DC)	
SA South East	Grant (DC)	
	Kingston (DC)	
	Mount Gambier (C)	
	Naracoorte and Lucindale (DC)	
	Robe (DC)	
	Tatiara (DC)	
	Wattle Range (DC)	
Sydney Inner West	Ashfield (A)	
	Burwood (A)	
	Canada Bay (A)	
	Leichhardt (A)	
	Strathfield (A)	
Sydney Mid West	Auburn (A)	
	Bankstown (C)	
	Blacktown (C)	
	Canterbury (C)	
	Fairfield (C)	
	Holroyd (C)	
	Liverpool (C)	
	Marrickville (A)	
	Parramatta (C)	
Sydney Outer North	Baulkham Hills (A)	
	Hornsby (A)	
	Ku-ring-gai (A)	
	Manly (A)	
	Pittwater (A)	
	Warringah (A)	
Sydney Outer South West	Camden (A)	
	Campbelltown (C) (NSW)	
	Wollondilly (A)	
Sydney Outer West	Blue Mountains (C)	
	Hawkesbury (C)	
	Penrith (C)	
Sydney South	Hurstville (C)	
	Kogarah (A)	
	Rockdale (C)	

Region	Local Government Area
	Sutherland Shire (A)
TAS Hobart-South	Brighton (M)
	Central Highlands (M)
	Clarence (C)
	Derwent Valley (M)
	Glamorgan/Spring Bay (M)
	Glenorchy (C)
	Hobart (C)
	Huon Valley (M)
	Kingborough (M)
	Sorell (M)
	Southern Midlands (M)
	Tasman (M)
TAS North	Break O'Day (M)
	Dorset (M)
	Flinders (M)
	George Town (M)
	Launceston (C)
	Meander Valley (M)
	Northern Midlands (M)
	West Tamar (M)
TAS North West	Burnie (C)
	Central Coast (M)
	Circular Head (M)
	Devonport (C)
	Kentish (M)
	King Island (M)
	Latrobe (M)
	Waratah/Wynyard (M)
	West Coast (M)
VIC Goulburn	Benalla (RC)
	Campaspe (S)
	Greater Shepparton (C)
	Mansfield (S)
	Mitchell (S)
	Moira (S)
	Murrindindi (S)
	Strathbogie (S)
VIC Barwon	Colac-Otway (S)
	Golden Plains (S)
	Greater Geelong (C)
	Queenscliff (B)
	Surf Coast (S)
VIC Central Highlands	Ararat (RC)
	Ballarat (C)
	Hepburn (S)
	Moorabool (S)
	Pyrenees (S)
VIC Gippsland	Bass Coast (S)
	Baw Baw (S)
	East Gippsland (S)
	Latrobe (C)
	South Gippsland (S)
	Wellington (S)

Region	Local Government Area
VIC Loddon	Central Goldfields (S)
	Greater Bendigo (C)
	Loddon (S)
	Macedon Ranges (S)
	Mount Alexander (S)
VIC Mallee-Wimmera	Buloke (S)
	Gannawarra (S)
	Hindmarsh (S)
	Horsham (RC)
	Mildura (RC)
	Northern Grampians (S)
	Swan Hill (RC)
	West Wimmera (S)
	Yarriambiack (S)
VIC Ovens-Hume	Alpine (S)
	Indigo (S)
	Towong (S)
	Wangaratta (RC)
	Wodonga (RC)
VIC West	Corangamite (S)
	Glenelg (S)
	Moyne (S)
	Southern Grampians (S)
	Warrnambool (C)
WA Gascoyne-Goldfields	Carnamah (S)
	Carnarvon (S)
	Chapman Valley (S)
	Coolgardie (S)
	Coorow (S)
	Cue (S)
	Dundas (S)
	Esperance (S)
	Exmouth (S)
	Geraldton (C)
	Greenough (S)
	Irwin (S)
	Kalgoorlie/Boulder (C)
	Laverton (S)
	Leonora (S)
	Meekatharra (S)
	Menzies (S)
	Mingenew (S)
	Morawa (S)
	Mount Magnet (S)
	Mullewa (S)
	Murchison (S)
	Ngaanyatjarraku (S)
	Northampton (S)
	Perenjori (S)
	Ravensthorpe (S)
	Sandstone (S)
	Shark Bay (S)
	Three Springs (S)
	Upper Gascoyne (S)

Region	Local Government Area
	Wiluna (S)
	Yalgoo (S)
WA Peel-South West	Augusta-Margaret River (S)
	Boddington (S)
	Boyup Brook (S)
	Bridgetown-Greenbushes (S)
	Bunbury (C)
	Busselton (S)
	Capel (S)
	Collie (S)
	Dardanup (S)
	Donnybrook-Balingup (S)
	Harvey (S)
	Mandurah (C)
	Manjimup (S)
	Murray (S)
	Nannup (S)
	Serpentine-Jarrahdale (S)
	Waroona (S)
WA Pilbara-Kimberly	Ashburton (S)
	Broome (S)
	Derby-West Kimberley (S)
	East Pilbara (S)
	Halls Creek (S)
	Port Hedland (T)
	Roebourne (S)
	Wyndham-East Kimberley (S)
WA Wheatbelt-Great Southern	Albany (C)
	Beverley (S)
	Brookton (S)
	Broomehill (S)
	Bruce Rock (S)
	Chittering (S)
	Corrigin (S)
	Cranbrook (S)
	Cuballing (S)
	Cunderdin (S)
	Dalwallinu (S)
	Dandaragan (S)
	Denmark (S)
	Dowerin (S)
	Dumbleyung (S)
	Gingin (S)
	Gnowangerup (S)
	Goomalling (S)
	Jerramungup (S)
	Katanning (S)
	Kellerberrin (S)
	Kent (S)
	Kojonup (S)
	Kondinin (S)
	Koorda (S)
	Kulin (S)

Region	Local Government Area
	Lake Grace (S)
	Merredin (S)
	Moora (S)
	Mount Marshall (S)
	Mukinbudin (S)
	Narembeen (S)
	Narrogin (S)
	Narrogin (T)
	Northam (S)
	Northam (T)
	Nungarin (S)
	Pingelly (S)
	Plantagenet (S)
	Quairading (S)
	Tambellup (S)
	Tammin (S)
	Toodyay (S)
	Trayning (S)
	Victoria Plains (S)
	Wagin (S)
	Wandering (S)
	West Arthur (S)
	Westonia (S)
	Wickepin (S)
	Williams (S)
	Wongan-Ballidu (S)
	Woodanilling (S)
	Wyalkatchem (S)
	Yilgarn (S)
	York (S)



## **A2.3 Regional classification**

The regions resulting from these boundary changes can be included within the established classification as follows.

### ***Core metropolitan regions***

Global Sydney  
Sydney Inner West  
Melbourne Inner  
Brisbane City  
Adelaide Central  
Perth Central  
TAS Hobart-South  
Darwin  
ACT

### ***Dispersed metropolitan regions***

NSW Central Coast  
Sydney Outer North  
Sydney Outer South West  
Sydney Outer West  
Sydney South  
Melbourne East  
Melbourne South  
Brisbane North  
Adelaide Outer  
Perth Outer North  
Perth Outer South

### ***Production zones***

NSW Hunter  
NSW Illawarra  
Sydney Mid West  
VIC Barwon  
Melbourne North  
Melbourne West  
Melbourne Westport  
QLD West Moreton  
Adelaide Plains

### ***Resource-based regions***

QLD Pastoral  
QLD Fitzroy  
QLD North West  
WA Pilbara-Kimberly  
WA Gascoyne-Goldfields  
WA Peel-South West  
NT Lingiari

### ***Lifestyle regions***

NSW Mid North Coast  
NSW Richmond-Tweed  
NSW South-East  
QLD Gold Coast  
QLD Sunshine Coast

### ***Rural based regions***

NSW Central West  
NSW Far and North West  
NSW Murrumbidgee  
NSW Murray  
NSW North  
VIC Gippsland  
VIC Goulburn  
VIC Loddon  
VIC Mallee-Wimmera  
VIC Ovens-Hume  
VIC West  
VIC Central Highlands  
QLD Agricultural SW  
QLD Far North  
QLD Mackay  
QLD North  
QLD Wide Bay-Burnett  
SA Eyre and Yorke  
SA Murraylands  
SA South East  
WA Wheatbelt-Great Southern  
TAS North West  
TAS North

## **APPENDIX 3**

# **INDICATOR EXPLANATIONS**

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## Appendix 3: Indicator explanations

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### A3.1 Regional indicators

This section provides an explanation and exposition of the indicators presented in the regional summaries. Each indicator is described, data sources referenced and the ideas behind each discussed. Every indicator is expressed in different units and in general is presented in a format that makes regional comparisons easy. Most measures are accompanied with a rank, which is a rank out of the 64 State of the Region regions, with 1 being the best.

#### *Population and labour force*

**Population:** Residential population by region for 1998 and 2001 are taken from the *ABS estimated resident population (ERP)* series. The 2005 population was derived from the household growth for 2004/2005 and constrained to 2005 state population growth. The 2005 household total was derived by increasing the 2004 household total by the number of dwelling approvals.

**Households:** The number of Households per region uses the *ABS Census* for 1998 and 2001. From the 2001 levels, which are known, new residential building approvals data is used to grow the stock of houses in a region. This data is provided by the ABS and reported quarterly. If however, the new building approvals data is added to the stock in 2005 an over estimation will occur, due to the demolition of old houses. Therefore, National Economics uses estimated demolition rates to ensure no double counting occurs.

**Workforce:** This is a measure of the labour force adjusted for the movement of people from the workforce to Disability Support Pensions (DSP). The labour force estimates are produced by the *Department of Employment, Education and Training (DEET)*. The information is contained in the *Small Area Labour Markets* publication that is produced quarterly. The labour force is defined as the yearly average level for 1998 and 2001 and 2005. The average DEET figure is added to the excess movement to disability support pensions. Excess movement is defined as any growth in excess of the rate of growth in the general population. It therefore assumes that there is a natural level of people (expressed as a per cent of the population) who need to access the DSP. The DSP data is ascertained from the Department of Social Security (Centrelink). The rationale for adding in people who move from unemployment benefits to disability support is to measure the real labour force. If a person is receiving unemployment benefits, they are counted as part of the labour force, however when people move from unemployment benefits to the DSP they are excluded. This impacts on the unemployment rate which is defined as the number of unemployed divided by the labour force.

**Employment:** This is a National Economics' measure of employment. It is the adjusted labour force as defined above, minus the estimated National Economics unemployment level.

**Unemployment:** This is a National Economics' measure of unemployment. It is derived using Centrelink data. It includes all people receiving Newstart allowance, Mature Age Allowance, excess growth in DSP (that is, at a level greater than population growth), youth allowance as a non-student and an estimate of students on youth allowance who are, for example, unemployed and undertaking compulsory training. This latter measure is based on demographic trends and microsimulation.

**Structural unemployment :** This is a measure of the level of long-term unemployed as a percentage of the population aged 18 to 65 years old. It includes all those classified as long-term unemployed, those receiving disability support pensions, 50 per cent of people from a non-English speaking background receiving Newstart allowance, 50 per cent of people receiving single parents benefits and all people receiving the mature age allowance. This measure excludes people on Newstart allowance

short-term and anyone receiving youth allowance. It therefore assumes that none of the youth are structurally unemployed.

**DEWRBSB unemployment:** This is the unemployment rate produced by the *Department of Employment, Education and Training* (DEET). The information is contained in the *Small Area Labour Markets* publication. It contains estimates of employment, labour force participation, unemployment and the unemployment rate by Statistical Local Areas (SLAs).

### ***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.

The flow of funds methodology has a number of important advantages in regional benchmarking. Because the net flow is the effective position of the household sector in terms of consumption, changes in any of the components will necessarily be able to be measured in terms of the total impact on the consumption position of the household sector as a whole. One of the biggest problems that actively updated benchmarks related to the household have is the change that occurs between the Census collection periods. By breaking down the components of the flows of funds into measures that can be readily updated through time enables changes to be estimated on a more regular basis. A good example of this change is the impact of the GST. In the tables presented the effects of the introduction of the GST can be seen in terms of the net position of the household sector.

Because the net flow of funds is unambiguous in its interpretations the relative ranking of a region to another has particular clarity. In the table presented for each region the rank of the region in terms of flow of funds is given for each of the years 1999, 2001 and 2005. In addition, a ranking of the growth in the net flow of funds between 2005 and 1999 is provided. All per capita amounts are derived using ABS population estimates for 1999, 2001 and National Economics provisional estimates for 2004.

As with many published data series previously supplied estimates for 2001 and 1999 have been reviewed and recast in the 2004 State of the Regions to account for the release of more accurate information, along with the following changes to methodology.

- ❑ In the past the impacts of the Family Tax Benefits have been split into the traditional “family allowance type” payments which was accounted for as Benefit income, and the tax benefit was account for in Wages and salaries income and tax paid. Over the past two years however with significant changes relating to incomes policy as it relate to family we have decide to recast benefits to include all of the family payments as benefits. This is especially important in the light of recent changes and once-off family assistance bonuses, which are literally billions of dollars.
- ❑ In the past deductible interest paid on property investment was included as a cost to the household sector in the net flow of funds. Rental incomes and the tax related “net property income” then balanced. Following the large increase in deductible interest due to the property boom and small increases in interest rates this component of region income has become very important. Due to large difference in the take-up of debt for property investment between regions, and its subsequent impact on net property rent we have isolated these effect more clearly. Interest paid to property investment has been removed from interest paid, and net property income has been recast in later years to include changes. Discussion of the region impact is provided later in this section.

- ❑ An additional source of variation between estimates presented in the State of the Regions reports relates to significant variation between reported local area employment estimates which use the Department of Employment, Education and Training (DEET) Small Area Labour Markets publication. The publication is based on the previous Census, and building consistent series across Census periods is problematic. A series has been available for the 2004 and 2005 period which cover the periods based on the 1996 Census as well as that based on the 2001 Census. However for the purposes of the report this “back-casting” (the process by which the previous estimates are revised), are far too volatile. As such NIEIR has utilised another process to build a consistent series. The result is the 2004 estimate of 1999 and 2001 wages and salaries varies from the levels previously supplied.

### ***Wages, salaries and farm income***

The calculation of the 2005 flow of funds data was restricted this year due to the inexplicably late release of the Taxation Statistics for 2002/03. As such the 2005 figures must be calculated in a similar manner to the 2003 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.

- ❑ 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.

Again this year we 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 2005.

**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 2005 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 amount 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 2003 to 2005 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 2005 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 2005 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, 2005 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,

$$\text{Net Flow} = \text{Wages} + \text{Benefits} + \text{Business Income} + \text{Interest \& Dividends} + \text{Property Income} - \text{Income Tax} - \text{Interest Paid} - \text{GST}$$

**Social benefits as a % of net flow of funds:** as described above benefits are payments by Centrelink including Community Development Employment Programs (accessed mainly by indigenous communities) and exclude payments from the Department of Veterans Affairs. These are expressed as a percent of the net flow of funds. Net flow of funds was developed elsewhere. Regions with a high score have a high dependency on social security income.

### **A3.2 Population sustainability**

A full description of the measures used in the population sustainability table is presented in Chapter 8.

### **A3.3 Building and construction**

This table is an exciting addition to the appendix in the State of the Regions 2005 report. It is based on building approvals information for the 2002, 2003 and 2004 calendar year, and National Economics estimates of demolition rates by region.

The table highlights not only the regions with the most building activity but also the effectiveness of this new activity in generating population growth. One of the most importance trends in the nation is the reduction in average household sizes. Put simply we continue to require many more houses to simply accommodate the same population year in, year out. For many regional communities unused to seeing building activity the emergence of new construction, or the increase in building approvals granted, is often mistaken for population growth and prosperity, when in reality it is often simply construction to house smaller household sizes.

To illustrate this, the table shows the number of net new dwelling in the regions (building approvals less demolitions and non-completions). The subset of this amount being medium density approvals and alterations is detailed separately for comparison.

The impact of these changes on household size is also shown and is based on the NIEIR 2005 population estimates. The rank of the household size out of all regions of Australia in 2001, 2004 and the rank of change between 2001 and 2004 is also shown.

To clarify the impact of reducing household size versus housing for new population the total net new dwelling is broken into two separate categories. One, is the number of new dwellings housing new population and the other is the new dwelling which are effectively housing the old population in more houses. This is a stylised presentation of the issue and cannot be directly seen to be a measure of the individual outcomes, but it does illustrate those regions building for population growth and those building for population maintenance only.

The conversion factor is the proportion of net new dwellings which can be referred to as building for new population.

### **A3.4 Internet and ICT**

#### ***Internet and computers***

Based on the ABS 2001 Census, the level of internet access and computer use in the region has been expressed as a percentage of the population in the region. The internet use estimates are based on those people reporting internet use at home.

The ratio of internet use to computer use is likely to tell us something about the relative internet access in the area in terms of coverage and affordability. The difference in the SOR rank between computer use and internet use highlights the impact of these access conditions.

The overall amount of internet access is known to be a function of the amount of computer use and the income of the area. As such we can estimate the amount of internet use which his expected from a region based on the reported computer use and its income profile.

The Estimated internet use is based on and the shortfall between internet connection and internet use calculated. The difference between the estimate internet use and the actual usage provides us with a shortfall. The region with higher than expected usage with have a positive score whilst one that falls short of expectations with be negative.

For clarity the average income is also reports and taken from the ABS 2001 Census.



### *ADSL coverage and business use of ICT*

A detailed explanation of both tables is available in Chapter 3 and 5 respectively.

### **A3.5 Baby bounce**

The estimates of effective fertility are calculated using the individual year estimated resident population (ERP) at the SLA level. These amounts are aggregated to the SOR region, with the effective fertility equally the share of total population represented by those aged less than one year. It is “effective” in the sense that the actual birthplace is not collected, rather the place at which the infant lives at June 30<sup>th</sup> in their first year.