State of the Regions

REPORT 2002

AUSTRALIAN LOCAL GOVERNMENT ASSOCIATION

NATIONAL ECONOMICS

Acknowledgements

Contents

Contents (continued)

Contents (continued)

Contents (continued)

Contents (continued)

Contents (continued)

Contents (continued)

List of tables

List of tables (continued)

List of tables (continued)

List of tables

List of tables (continued)

List of tables (continued)

Preface

This report is the fifth *State of the Regions* (SOR) report. The core objectives of the SOR reports are to:

(i)   present the latest statistical indicators of how Australian regions are performing;

(ii)   analyse the indicator trends in terms of growing equality and inequality between Australian regions;

(iii)   make suggestions for the policy implications of current Australian regional performance; and

(iv)   steadily expand the indicators used to measure regional performance.

In relation to objective (iv), the regional scoreboard indexes have been considerably expanded this year. Given the current topical interest in regional housing markets a new set of indicators has been added to measure regional housing market outcomes.

Indicators included in this set include those covering housing affordability and investor housing market balance.

A new indicator set covers environmental issues with a focus on rainfall and water supply issues. Again this is topical in a drought year.

Another indicator set includes measures showing the distribution of income within regions for youth (i.e. those aged 15 to 34) and older workers.

The inclusion of environmental indicators is another major advance in this year's SOR.

Perhaps the biggest indicator breakthrough in this year's SOR deals with the addition of a creativity index and its component indexes covering patent activity, advanced industry activity and the indicators covering cultural, ethnic and lifestyle diversity. There are a number of dimensions to these indexes. Firstly, based on United States and the analysis of this report they are good predictions of the ability of regions to be successful in the modern globalised economy. More importantly, they allow Australian SOR regions to be benchmarked and linked to comparable United States regions.

The immediate response by some is to say: what this SOR report is telling us is that if our region does not have ethnic and cultural diversity and no high technology industry and is 402 on the United States ranking scale, then we might as well give up. The answer to that is a clearly, DON'T.

There are few regions even in the United States that emulate the San Francisco/Silicon Valley region. But United States regions in general appear to have been reasonably successful in keeping up. In this context what is important for an Australian region that ranks lowly on the creative index is to use the information in the SOR to see how their comparable United States regions are performing. From this group select those that have been doing reasonably well socio-economically and explore what is driving this outcome. For many United States and Australian regions the pathway to convergence of living standards is not blind emulation of highly ranked creative regions, but complementation and leveraging off the opportunities created by the highly ranked regions.

In this context tourism is an important instrument for raising creativity rankings of a region. This is because tourism leads to more diverse lifestyle infrastructure compared to what otherwise would have been available. For many regions such indirect benefits from tourism are more important than the direct benefits.

Nevertheless, the requirements of the globalised economy are that all industries, whether high-tech or low-tech, must be best practice knowledge based, have a high capacity for innovation, and be highly entrepreneurial. This is raising the bar for all regions. Given the characteristics of a region, it may well prosper being ranked 402 on the United States scale. However, for it to stay at 402 and continue to prosper it may well have to evolve its socio-economic structure towards attributes important for creativity, albeit in niche areas and on a relatively small scale.

Under objective (i), the structural indicators from the 2001 SOR, namely population, employment, income, etc. are updated in this SOR. Although the latest estimates are to 2002, for many indicators the degree of "hardness" between the indicators varies. Population, employment/unemployment, etc. are up to date. Income flows data are based on the tax data and Census data. The 2002 estimates are prepared using NIEIR's microsimulation models given national and State data benchmarks.

For objective (ii), the SOR presents a new framework for clearly identifying recent trends in movements in equality and inequality between regions. This presentation is core to the SOR and is therefore selected to be the first chapter in this report.

For objective (iii), this report focuses on reform and restructure of local/regional governance in the context of improving national competitiveness. This is given context by the report outlining the intense activity that is going into local/regional governance enhancement in Western Europe and the United States.

The report is divided into five parts. Part A (Chapters 2 to 5) deals with regional inequality issues, Part B (Chapter 6) creative regions and Australia-United States benchmarking, Part C (Chapters 7 to 10) local/regional governance issues and Part D (Chapters 11, 12 and 14 to 19) an overview of recent developments of Australian regions by broad (core, production, lifestyle, rural, etc.) regional groupings. Part E (Chapter 13) advances analysis of natural resource analysis and a case illustration of using improved resource intelligence. The parts do not have to be read in order and, indeed, most of the chapters are self-contained.

The need for local/regional governance enhancement depends, in part, on whether or not regions are converging in living standards. The greater the growth of inequality between regions, the greater the need for enhanced local/regional governance. The answer to this question in this report is that Australian regions in general are continuing to diverge in terms of income and wealth. This can be seen from a summary of the conclusions for Chapter 2. If these trends continue at the current rate it will not be too long for Australian claims to be land of equality to have a hollow ring.

❑ The distribution of employment by region has shown a small improvement since 1998.

❑ Whilst overall equality of employment improved, the regions covering 20 per cent of Australia's population with the worst employment received only 11.6 per cent of new employment created since 1998.

❑ Equality of regional incomes has drastically worsened since 1998.

❑ The regions covering 20 per cent of the Australian population with the highest levels of incomes now earn 30.1 per cent of all income, and have claimed over 43 per cent of the increases since 1999. This is despite record commodity prices, which have benefited many poorer regions.

❑ Since 1998, the 20 per cent of Australia's population living in the regions with the highest average income, received 4.9 times the income growth of the 20 per cent living in the poorest regions.

❑ The "net flow of funds" which is a measure of the consumption capacity of regions has also shown a considerable deterioration in regional equality.

❑ However, the most dramatic trend in regional equality has been the change in the value of housing stock.

❑ The regions covering 20 per cent of the Australian population with the highest values of housing now own 34.8 per cent of the entire value of housing in Australia. These regions have claimed over 41 per cent of the increases since 1996.

The potential steps outlined in the report for enhancing the role of local/regional governance are:

❑ Firstly states, and then Commonwealth and states, should *commit to the promotion of sustainable regional development, in partnership with regional communities*, both rural and urban through the co-operative recognition of regions' goals for sustainable development, the promotion of internationally competitive strengths and the facilitation of balanced state and national development.

❑ Local government should be *recognised by both State and Federal Governments as a vital facilitator* of such efforts and be parties to evolving partnership agreements with them in a national effort to promote the cohesion of our economy and community.

Local governments will need to recognise that this commitment entails major efforts to build their capacity as modern facilitators of sustainable regional economic development, recognising that they need to partners with community and business interests as well as State and Federal Governments. This will include new public – private partnerships in infrastructure and community service provision and the building of learning and knowledge based communities. It requires them to move well beyond their traditional roles of physical and community infrastructure provision and finance.

❑ These approaches should include efforts to understand and support community and business efforts to improve productivity, develop active targets to promote full regional employment and export of regions' services and products, to embrace natural resource sustainability, to promote "triple bottom line" accountability and participation by firms, government agencies and civic groups, as well as councils, and counter social exclusion..

Some of this needs to be included the development of a *core of regional budgets* identified by all levels of government and co-ordinated with a vigorous set of regional indicators and economic, social and environmental ' balance sheets" and public reporting on progress. This can run along side other efforts to foster local level enterprise initiative and lend strategic support to it but needs to develop firm analysis of core regional strengths, capacities, strategies and alliances.

❑ While commonly recognised sets of regions are emerging , these trends should be greatly accelerated over a period of 5 to 10 years. Further consideration must also be given to foster cohesion of effort where economic regions *cross state borders* across the Tweed and Murray rivers, between the ACT and Southern NSW, and perhaps between Northern areas of WA and NT. (Maybe we can also apply some of the EU Interegia Program experience of fostering projects for cross border integration)

❑ There is a steady emergence of efforts to *promote regions as locations for direct investment* by domestic and foreign sources by local and regional communities, by state and some national agencies. This could be intensified if there were efforts to make clearer the geographic impacts and choices of the decision making of institutional investors and deposit taking bodies.

Efforts should be made to explore the relevance of such instruments as the *US Community Reinvestment Act*. Under this, without heavy coercion the Federal Reserve Bank examines and regularly publishes reports on the investment policies of financial institutions so that local communities can see the pattern of returns or reinvestment through those sources.

❑ Local government should seek to improve regional cooperation by promoting a review of ways it can be rewarded by the criteria used to allocate general revenue assistance grants via state Grants Commissions.

The following identifies a number of broadly sectoral initiatives worthy of consideration.

❑ The role of local government in natural resource management should be recognised and be strengthened. The use of Heritage Trust Funds should be used as a lever to achieve this objective.

❑ Links between social and community development and economic and NRM forums.

❑ Integrate the Area Consultative Committees into regional forums or development systems anchored on a firm LGA foundation.

❑ Regional socio-economic information system implementation as outlined above, can promote regional benchmarks.

❑ Examination of the enterprise zone system proposals for stressed regions.

❑ Local government be better resourced to discharge their current and future responsibilities by a formula allocation of GST revenues.

❑ Explore the European developments of regional devolution, and of linked up services provision as outlined in Chapter 8.

❑ Experiment with the levels of 'block funds' linking a range of regionally relevant State and Federal Government programs with greater levels of local discretion in application.

❑ Apply the EU experience of Structural Funds and their programs, especially in SMEs, R & D promotion and diffusion, education incentives and regional targeting, learning communities and cross border co-operation, again as explored in Chapter 8.

❑ Explore multi-region relations to national infrastructure programs.

❑ VET and university funding relations need further improvement in the shifting environment of tertiary education and research to strengthen regional alliances and protocols and their relations with compulsory and community education networks and reforms.

❑ Strengthen inter-governmental cooperation to achieve enhanced regional economic outcomes, possibly by examining the experience of the European Union's Council of Regions to elevate the participation of regional communities in national policy and to promote more vigorous sharing of regional experience and multi-region cooperation.

By 'local/regional governance enhancement', which is sometimes referred to as reform in the body of this report, is meant two things:

❑ firstly, greater responsibilities for local government as now constituted; and

❑ second, increased flexibility for allowing individual local government to form regional grouping with other local governments on an issue by issue, or policy by policy, basis.

That is, any one local government may be in a number of regional groupings depending on the requirements of the time and the efficiency of policy design and implementation.

1. Summary and overview

Along with the traditional update of the regional performance indicators, the 2002 *State of the Regions* (SOR) report focuses on governance and its linked issue of growing inequality between regions. This growing inequality is the result of the process commonly referred to as 'globalisation', but in reality represents the outcomes of the shift in economic structure towards the so-called 'knowledge based' or 'innovation' driven economy.

The issue of governance is linked to disparities between regions because the issue of governance is seen as part of the general regional development policy response. Currently in both Western Europe and the United States there is unprecedented interest in regional development policies and local/regional governance reform. Leading corporate strategists, such as Prof. Michael E. Porter, are reinforcing earlier SOR reports by stressing renewed importance of location as a focus for building internationally competitive strengths.

1.1 Regional development and governance reform in Western Europe and the United States

Chapters 8 and 9 of this study summarise developments in Western Europe and the United States with a focus on California. What is driving current development is the regional disparities in terms of socio-economic status which is beginning to emerge within nation states. This has heightened governance practitioners and policy developers' awareness of regional issues, particularly within Western Europe and America.

In part the evolution of such disparities can be attributed to the forces of globalisation and recognition that competition is not occurring between countries, rather between regions at the sub-national level. The ensuing alteration in the patterns of trade and the decay of national sovereignty as a unit of political and economic organisation connotes regions are now more suitably defined via social and economic networks, rather than traditional notions of spatially defined governance. That is, the primacy of the 'regional networks' as a unit of social and economic organisation is beginning to emerge.

Hence, when the socio-economic landscape is perceived through a regional lens this provides a greater understanding of what is occurring within the context of globalisation. This paradigm shift has introduced a new epoch in governance and policy issues, producing new challenges, which require a different mode of governance and policy solutions.

The common response to these issues from the United States and the European policy apparatus is a process of decentralisation of policy making and empowerment at the regional level. The regionalisation of governance has resulted in increased use of public and private sector partnerships at the regional level. As part of this process a great deal of policy making power has been pushed down the policy chain to regional development agencies and other quasi-governmental instrumentalities. Regional governments are assuming increased responsibility for development of employment, environmental, research and development, housing and urban regeneration and transport policy. The ultimate objective being, to null regional economic inequalities, enhancing prosperity for all.

The process is being affected through increased funding at the local level to allow development and implementation of policy founded in regional knowledge. In Europe this is occurring through the disbursement of monies via the EU Structural Funds to disadvantaged regions. The funds are then applied by regional authorities to redress regionally specific problems. In the United States policy debate and development occurs via purpose formed regional agencies, who leverage public/private sector networks and partnerships to dynamically implement policy.

1.1.1   Summary of Economic Union (EU) policy

The role model policy for regional development and local/regional governance inclusion in the process is policies and programs built around the four structural funds for EU regional development. The funds have a total of A$400 billion for the 2001-2006 period which is complemented by policies and resources of nation states and their states/provinces. The four structural funds are:

❑   European Regional Development Fund;

❑   Cohesion Fund;

❑   Financial Instruments for Fisheries Fund; and

❑   European Agricultural Guidance and Guarantee Fund.

Allocation of funds to assist disadvantaged regions:

❑   70% of the funding goes to regions whose development is lagging behind. They are home to 22% of the population of the Union (Objective 1);

❑   11.5% of the funding assists economic and social conversion in areas experiencing structural difficulties. 18% of the population of the Union lives in such areas (Objective 2); and

❑   12.3% of the funding promotes the modernisation of training systems and the creation of employment (Objective 3) outside the Objective 1 regions where such measures form part of the strategies for catching up.

There are also four community initiatives seeking common solutions to specific problems. They spend 5.35% of the funding for the Structural Funds on:

❑   cross-border, trans-national and inter-regional cooperation;

❑   sustainable development of cities and declining urban areas;

❑   rural development through local initiatives; and

❑   combating inequalities and discrimination in access to the labour market.

The Structural Funds finance multi-annual programs which constitute development strategies drawn up in a partnership associating the regions. They act on economic and social structures to:

❑   develop infrastructure, such as transport and energy;

❑   extend telecommunications services;

❑   help firms and provide training workers; and

❑   disseminate the tools and know-how of the information society.

England is developing locally elected regional assemblies to improve regional content in policy, sharing similar policy objectives to the broader EU. It has promoted new forms of 'linked up' community service systems in a more devolved system of governance.

The important point for this SOR report is that all of the above policy initiatives are to operate in the context of a new mode of regional governance. That is, policy development and implementation is to operate within the context of decentralisation, enhanced local content, increased democratic connectivity with the respective constituencies, increased coherence, accountability and effectiveness. These elements are enshrined within the concepts of 'proportionality' and 'subsidiarity'.

1.1.2   Summary of Californian governance reform

The new mode of governance being adopted in California, called 'regional stewardship', is to be enacted through a myriad of public and private sector partnerships, the formation of specific local agencies (which will be the vehicles for a variety of different policy objectives) and academic and business networks providing the mechanisms for dynamic and flexible policy response.

The key strategies for successful regional economies fall under five categories:

❑   **economic leadership:** Carry out the meaning of stature created by the Economic Strategy Panel. that is, obtain timely information on emerging issues and requirements of regional economies and the labour force to facilitate and support data driven public policy and investment decisions;

❑   **state inter-agency coordination:** Provide assistance and oversight to all state agencies to align state resources with state and regional economic strategies and to drive resources closest to the 'customers' in the regions, using and enhancing existing service delivery networks;

❑   **assist regions:** Provide data and assistance to regions to enable them to develop and implement economic strategies for industry clusters. Support partnerships between state government and regions via negotiation of regional compacts and other cooperative approaches;

❑   **special regional needs:** Establish a permanent state entity, modelled after the Appalachian Commission's to assist particular regions which are characterised by structural unemployment and under-investment to compete in the global economy; and

❑   **a sustainable economy:** Identify economic development opportunities through environmental leadership. For example, energy conservation, renewable and self-sufficiency strategies, investments in 'green' infrastructure and by promoting environmentally sustainable business practice.

These governance changes will be couched within the guiding principle of openness, regional empowerment, accountability, increased participation, flexibility and greater democratic representation at the grass roots level.

In both the EU and California the evolution of these new systems of governance represent a radical departure from traditional philosophies and institutions. By the devolution of policy making power down the political hierarchy it is hoped the disparities that presently characterise regional socio-economic landscapes can be ameliorated.

In Australia there is yet nowhere near the political pressure for regional development and local/regional governance reform. One explanation could be that income and wealth is distributed more equally across Australian regions compared to the EU/US case. Chapter 7 shows that this is not the case, in terms of the generation of gross regional product. The generation of gross regional product is more unequally spread between Australian regions compared to both the Economic Union and United States jurisdictions.

At the top end of the Australian distribution for gross regional product, the top 6% of the population live in regions which create 20% of the nation's gross product.

However, it is Chapters 2 to 5 of this SOR where the issue of equality and inequality amongst Australian regions is vigorously examined using SOR indicators for the 64 non-urban and urban regions.

1.2   Equality and inequality among Australian regions

Chapter 2 overviews regional inequality using the technique of the Lorenz curve. The Lorenz curve is a simple technique for measuring what percentage of the population by Australian regions are the winners and losers in the battle for a share of the national economic cake. Using this framework Chapter 2 makes the following conclusion for the 1998-2002 period.

> Australia has prized itself in the past as being a land of relative equality in terms of wealth and income and equality in terms of the potential to make the most of ones life. The results of this section in terms of the averages indicate that there is still some truth to this contention. What is very disturbing however is the trends at the margin, in determining which regions over the last few years have received the share of the increase in Australian jobs, income and wealth, especially wealth, as reflected in that major Australian wealth generator, housing equity.

> If these trends continue at the current rate it will not be too long for Australian claims to be land of equality to have a hollow ring.

❑   The distribution of employment by region has shown a small improvement since 1998.

❑   Whilst overall equality of employment improved, the regions covering 20 per cent of Australia's population with the worst employment received only 11.6 per cent of new employment created since 1998.

❑   Equality of regional incomes has drastically worsened since 1998.

❑   The regions covering 20 per cent of the Australian population with the highest levels of incomes now earn 30.1 per cent of all income, and have claimed over 43 per cent of the increases since 1999. This is despite record commodity prices, which have benefited many poorer regions.

❑   Since 1998, the 20 per cent of Australia's population living in the regions with the highest average income, received 4.9 times the income growth of the 20 per cent living in the poorest regions.

❑   The "net flow of funds" which is a measure of the consumption capacity of regions has also shown a considerable deterioration in regional equality.

❑   However, the most dramatic trend in regional equality has been the change in the value of housing stock.

❑   The regions covering 20 per cent of the Australian population with the highest values of housing now own 34.8 per cent of the entire value of housing in Australia. These regions have claimed over 41 per cent of the increases since 1996.

Chapter 4 examines issues of inequality among the young and the old between Australian regions. For the young the conclusion is striking. Youths aged 15 to 34 are almost three times more likely to earn more than $50,000 per year in the core metro regions as those who live in Australia's lifestyle, rural or production zone regions. The pull of youth to the core metro regions is strong, yet the growing inequality in house prices is erecting even higher fences in preventing youth from maximising their economic potential.

The chapter also offers an interesting possible insight into the movement of the older population to the lifestyle regions. The analysis indicates that the aged migration phenomenon is partly in response to low incomes and weak employment opportunities for the over 55 age group in the core metro regions. Those leaving tend to be the less well off forming low income communities in the lifestyle regions.

Lifestyle regions have to be careful not to depend too greatly on population growth to drive their regions. They should also pay attention to the age and household characteristics of the population change.

Chapter 5 examines the labour market performance outcomes for the 64 Australian regions. This chapter is a standard part of SOR reports.

The requirement for an alternative better estimate of regional employment and unemployment has been documented in previous reports. In essence the labour force area estimates produced from the official labour force survey are not appropriate for the estimates of the real level of unemployment within a region. The NIEIR unemployment rate takes as a base the number of people that the government provides Social Security to, who could reasonably be considered as unemployed.

In addition, other measures of social disadvantage such as the structural and long term unemployment rates by regions are presented. Consistent with the trend in the other parts of the report, this section highlights the need for a new model of governance that seeks to address a consistent set of economic parameters that can measure regional advantage and disadvantage and seek to redress the imbalances of the current approach.

The key conclusions are:

❑ unemployment in Australia has fallen from 10.02% in 2001 to 9.21% in 2002;

❑ the level of employment growth has been substantial, although the majority of this job creation has been part time and casual;

❑ despite this year's political controversy surrounding the Disability Support Pension (DSP) and the proposed initiatives of the Federal Government to remove the unemployed from the ranks of the DSP, the number of DSP recipients once again grew;

❑ approximately 5.4% of all people aged between 18 and 65 years now receive the DSP;

❑ higher levels of DSP and Single Parent Payments were offset by falls in the levels of long term unemployed to reduce the number of structural unemployment from 1.31 million in 2001 to 1.280 million in 2002;

❑ there continues to be large differences in the levels of growth in the DSP between regions, with the 'lifestyle' regions witnessing an 80% increase in recipients since 1991 versus the core metro region's growth of under 30%. Benefit reassignment continues to be a strong pointer to the failure of economic policy to address regional imbalances building in the economy;

❑ the lowest levels of unemployment are once again in Sydney, with four of Sydney's seven regions occupying the top four places in Australia; and

❑ conversely, although major infrastructure initiatives and a generally positive economic outlook exists for Tasmania, its three regions occupy places in the bottom six of 64.

In pursuit of the objective of developing a wide range of indicators measuring regional performance, Chapter 3 develops a number of housing market disequilibrium indicators for Australian regions.

It has been well documented that over the past five years the Australian economy has experienced a housing price boom. With approvals for new homes and flats continuing to outstrip the number of people entering the house purchase years or house forming years, it seems inevitable that a crash is just around the corner. Chapter 3 of the SOR analyses the trends in house prices and average mortgage payments over the last six years for each region to gather insight into which areas are likely to be impacted the most from the proposed price crash. Since the purchase of a home is probably the largest investment most Australians will ever make and, therefore, the greatest vehicle for their own individual wealth, movements in the housing market have important ramifications for all regions.

The intellectual advance in the Chapter 3 housing market analysis is that it uses actual mortgage payments as the indicator of affordability. The traditional measure of looking at mortgage required at current house prices and interest rates as a per cent of income is a poor measure in the era of low interest rates and high real long term debt burden because of low inflation. Yes, people starting off in their 20s may well be able to afford 35 to 40 per cent of household income on mortgage debt

servicing. But with child costs in their 30s, education costs in their 40s and retirement savings in their 50s, households can only afford a fraction of their 20s mortgage costs in latter years, especially now that seniority wage determination has ended. That is, in this context actual average mortgage payments are likely to be a better measure of affordability, a concept which is exploited in Chapter 3.

The difference between now and the 1970s and 1980s is that low inflation now prevails and the household real debt burden will stay constant, rather than decline rapidly as was the case in earlier decades. The analysis of Chapter 3, therefore, strongly suggests that households may well be locking themselves into debt burdens which are not affordable on a life-cycle basis.

The results of the analysis are:

❑   the average mortgage level payment has shown moderate growth between 1996 and 2002;

❑   house prices have grown in excess of 12% per annum in Melbourne and Sydney, although most 'regional' centres have experienced small and sometimes negative growth;

❑   low interest rates and the First Home Buyers Grant have increased affordability for many regional areas in Australia;

❑   in contrast for most major cities, particularly Sydney and Melbourne, affordability based on actual mortgages paid have been reduced significantly;

❑   the impact is a significant reduction in the number of people who can afford housing at the current price levels. This will result in decreased demand regardless of interest rate movements, that will result in significant price reductions;

❑   metropolitan evidence suggest that there has been a large increase in the number of people with mortgages, combined with a significant reduction in implied yields, points to a contraction in the investment market for housing, further reducing demand;

❑   in 2002 we have a situation where housing is less affordable but is significantly less attractive as an investment. Therefore a price correction seems imminent; and

❑   if interest rates increase there will be a further deterioration in regard to affordability.

The major insight into the housing market is that non-affordability of housing appears to have grown fastest in Australia's fringe capital city regions. It is likely that these areas will experience the greatest price correction, leading to further inequalities in the distribution of household income.

1.3   Local/regional governance reform in Australia

Chapter 7 contends that one reason for the lack of strong regional development policy in Australia and lack of interest in local/regional governance reform is due to Australia's weak system of representative democracy. The chapter also explains why empowered local/regional governance can be effective in maximising economic benefits from the knowledge/innovation economy. In essence this is because social networks involving direct contact is the building block for sustained innovation and these social networks are greatly strengthened by local/regional governance involvement with:

❑   resources;

❑   expertise;

❑   policy power, either directly or indirectly via State and Federal Government structures;

❑   coordination involvement with other local governments, institutions (universities, etc.) and other State organisations; and

❑   local area objectives and vision.

Chapter 7 also outlines initial steps that would have to be taken to reform local/regional governance in Australia to enable effective regional economic planning and mobilisation in Australia to occur and

unlock local area, as yet, unrealised innovation potential and to better sustain the management of natural resources. In essence this requires pathways to be created to enable local/regional governance involvement in a diverse range of policy issues at all stages, ranging from proposals, design, resourcing, implementation and accountability.

The potential steps outlined in the chapter for enhancing the role of local/regional governance are:

❑ Firstly states, and then Commonwealth and states, should *commit to the promotion of sustainable regional development, in partnership with regional communities*, both rural and urban through the co-operative recognition of regions' goals for sustainable development, the promotion of internationally competitive strengths and the facilitation of balanced state and national development.

❑ Local government should be *recognised by both State and Federal Governments as a vital facilitator* of such efforts and be parties to evolving partnership agreements with them in a national effort to promote the cohesion of our economy and community.

Local governments will need to recognise that this commitment entails major efforts to build their capacity as modern facilitators of sustainable regional economic development, recognising that they need to partners with community and business interests as well as State and Federal Governments. This will include new public – private partnerships in infrastructure and community service provision and the building of learning and knowledge based communities. It requires them to move well beyond their traditional roles of physical and community infrastructure provision and finance.

❑ These approaches should include efforts to understand and support community and business efforts to improve productivity, develop active targets to promote full regional employment and export of regions' services and products, to embrace natural resource sustainability, to promote "triple bottom line" accountability and participation by firms, government agencies and civic groups, as well as councils, and counter social exclusion..

Some of this needs to be included the development of a *core of regional budgets* (referred to above) identified by all levels of government and co-ordinated with a vigorous set of regional indicators and economic, social and environmental ' balance sheets" and public reporting on progress. This can run along side other efforts to foster local level enterprise initiative and lend strategic support to it but needs to develop firm analysis of core regional strengths, capacities, strategies and alliances.

❑ While commonly recognised sets of regions are emerging , these trends should be greatly accelerated over a period of 5 to 10 years. Further consideration must also be given to foster cohesion of effort where economic regions *cross state borders* across the Tweed and Murray rivers, between the ACT and Southern NSW, and perhaps between Northern areas of WA and NT. (Maybe we can also apply some of the EU Interegia Program experience of fostering projects for cross border integration)

❑ There is a steady emergence of efforts to *promote regions as locations for direct investment* by domestic and foreign sources by local and regional communities, by state and some national agencies. This could be intensified if there were efforts to make clearer the geographic impacts and choices of the decision making of institutional investors and deposit taking bodies.

Efforts should be made to explore the relevance of such instruments as the *US Community Reinvestment Act*. Under this, without heavy coercion the Federal Reserve Bank examines and regularly publishes reports on the investment policies of financial institutions so that local communities can see the pattern of returns or reinvestment through those sources.

❑ Local government should seek to improve regional cooperation by promoting a review of ways it can be rewarded by the criteria used to allocate general revenue assistance grants via state Grants Commissions

The following identifies a number of broadly sectoral initiatives worthy of consideration.

❑ The role of local government in natural resource management should be recognised and be strengthened. The use of Heritage Trust Funds should be used as a lever to achieve this objective.

❑ Links between social and community development and economic and NRM forums.

❑ Integrate the Area Consultative Committees into regional forums or development systems anchored on a firm LGA foundation.

❑ Regional socio-economic information system implementation as outlined above, can promote regional benchmarks.

❑ Examination of the enterprise zone system proposals for stressed regions.

❑ Local government be better resourced to discharge their current and future responsibilities by a formula allocation of GST revenues.

❑ Explore the European developments of regional devolution, and of linked up services provision as outlined in the Chapter 8.

❑ Experiment with the levels of 'block funds' linking a range of regionally relevant State and Federal Government programs with greater levels of local discretion in application, within the framework outlined above.

❑ Apply the EU experience of Structural Funds and their programs, especially in SMEs, R & D promotion and diffusion, education incentives and regional targeting, learning communities and cross border co-operation, again as explored in Chapter 8.

❑ Explore multi-region relations to national infrastructure programs.

❑ VET and university funding relations need further improvement in the shifting environment of tertiary education and research to strengthen regional alliances and protocols and their relations with compulsory and community education networks and reforms.

❑ Strengthen inter-governmental cooperation to achieve enhanced regional economic outcomes, possibly by examining the experience of the European Union's Council of Regions to elevate the participation of regional communities in national policy and to promote more vigorous sharing of regional experience and multi-region cooperation.

Chapter 10 profiles two case studies of enhanced regional governance in Western Australia and Queensland.

1.4   Creativity and diversity: benchmarking Australian regions to United States regions

A long term objective of SOR has been to benchmark Australian regions to United States and European regions. Part of this objective has been realised in this report.

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

Leading regions establish competitive advantage through their capabilities. They are vehicles for resource mobilisation that can almost instantaneously bring together the resources required to launch new businesses and turn innovations into successful products. For these reasons, the nexus of competitive advantage shifts to those regions that can generate, retain and attract the best talent. That is particularly so since knowledge workers are extremely mobile and the distribution of talent is highly skewed.

This sets the question, how do regions attract this type of talent to their communities? How do these talented individuals make their residential and occupational decisions? What are the distinguishing factors that set the high technology centres in multiple sectors apart from other areas?

Richard Florida and his colleagues in America theorise that a city's tolerance and acceptance of diversity – its level of tolerance for a wide range of people – is key to its success in attracting and involving talented people. diverse, inclusive communities that welcome 'unconventional' or wave making people, are ideal for nurturing the creativity and innovation that characterise the knowledge economy. More specifically, he has created the 'creative capital theory'. This theory postulates that economic growth is determined by the locational choices of the holders of creative capital. The theory identifies the type of human capital, creative people who are the key to economic growth, and secondly, it identifies the underlying factors that shape the locational decisions of these creative people.

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

This extends earlier research by the Inc. Business Journal identifying business hot spots for new or rapid growth as reflective of community support for diversity and entrepreneurial style. From past SORs there is nothing here that has not been said. Nevertheless, the work does validate past SORs and presents a quantitative framework to move forward and benchmark both within and between nations.

1.5   Creative capital and location choice

According to the results of Florida's research there is a select group of major factors pre-eminent in the locational choices of the creative class. The major factors include thick labour markets, lifestyle, social interaction, diversity, authenticity, identity and quality of place.

Firstly, given the amount of time people stay with a particular company has trended downwards, regions need to have a job market which is conducive to horizontal movement. Industry clusters are an example, where there is the creation of a labour pool for companies and a 'thick labour market' for people who need jobs.

Lifestyle options are also sited as a driving force in location choice. Given the unpredictable nature of the creative class' work schedules, they require access to entertainment and recreation on a 'just-in-time' basis. The notion that some cities are for fun and others for making money is considered insufficient. A range of 'scenes' is sited as an important factor. These scenes include music, arts, technology, nightlife and so on.

Opportunities for social interaction play an important role in location choice of the creative class. Social interaction opportunities are facilitated by having venues suitable to the formation of casual acquaintances, such as coffee shops, bookstores, cafes and restaurants.

Diversity in terms of visible ethnicity, sexual preferences, religion and so on signals to employers and people 'that a community embraces the open meritocratic values of the creative age'. The creative class desire a cosmopolitan atmosphere where there is a free exchange of different opinions, cultural, political and gastronomic options.

A location must also have authenticity. That is, a particular mix of old buildings and cultural heritage. The preferred areas have a certain feel or character which gives it a sense of authenticity.

The creative class is beginning to substitute reference points for self-identity. that is, traditionally people identified themselves with where they worked, however according to Florida, the creative class increasingly identifies with where they live.

The above creative class location characteristics are used in conjunction to arrive at the concept of 'quality of place'. Florida conceptualises this using three dimensions:

1. **what's there:** the combination of the built environment and the natural environment, a proper setting for pursuit to creative lives;

2. **who's there:** the diverse kinds of people, interacting and providing cues that anyone can plug into and make a life in that community; and

3. **what's going on:** the vibrancy of street life, café culture, arts, music and people engaging in outdoor activities – altogether a lot of active, exciting, creative endeavours.

1.6   The conclusions

❑   The widening gap between the higher skilled and the lower skilled members of the workforce is driving an important social trend world-wide. Those whose skills are in high demand know it, and they are choosing to locate in communities and cities that please them, knowing work will follow.

❑   Within this new paradigm local communities need to understand the underlying forces which are driving these decisions and how successful their regions are in harnessing these forces.

❑   This report shows that Australia is well placed in the attraction and development of high concentrations of creative forces.

❑   Combining United States research with National Economics' analysis this report shows areas of Sydney and Melbourne that would be placed within the top ten United States cities.

❑   According to the research conducted by Richard Florida the primary determinant of regional economic growth is a concentration of 'creative capital'. Creative capital is responsible for the innovation which drives high technology industries and dynamic economic outcomes. Increasingly the location of high technology firms is dictated by where there are high concentrations of creative capital. That is, firms are now following the talent as opposed to the converse. The key to identifying regions where there will be concentrations of high technology industries and dynamic growth outcomes is understanding how the creative class make their decisions on where to locate.

❑   The decision parameters used by the creative class on where to locate are based on the characteristics of an area, that is its openness with regard to acceptance of social and cultural diversity, bohemian and alternative lifestyles and multi-culturalism, in conjunction with vibrant street culture, music scene, night life and open spaces. The indexes derived to measure these parameters accurately predict regions where the proliferation of high technology industries and economic growth are, and will, occur.

❑   The areas which consistently score the highest in terms of their diversity (percentages of same sex households, foreign born and 'bohemians') and amenities are the regions that have the highest concentrations of the creative class and capital.

❑   The regions with the greatest concentrations of creative capital, Global Sydney, Sydney Outer North and Inner West, Melbourne's Inner and East, Perth Central and Brisbane City are where there is the greatest levels of high technology industries and innovation, producing superior economic outcomes.

❑ Regions' abilities to innovate are underpinned by the presence of the creative class: this is evident in the research conducted in America by Richard Florida, and confirmed to apply to Australia in this report.

1.7 Australian regions

Part D of the report summarises recent developments in Australian regions in the same format used in previous SOR reports.

2.   Regional equality and inequality in Australia

2.1   Introduction

The 2002 State of the Regions report is the fifth in the series presented annually by National Economics. Throughout the series we have identified regional outcomes across a range of key economic and social areas. In this section of this year's report we utilise results from previous years to determine how the degree of equality or inequality has changed between the mid to late 90s and now.

The distribution of a nation's resources in an equitable fashion is considered by National Economics to be a key goal of good governance. These measurements are important because outcomes of equality are, prima facie, an important indicator of the success of good governance. Alternatively marked deterioration in equality is an indicator of poor governance.

All of the indicators used in this section are presented in the regional indicator in the appendix of this report, where all sources and methods have been documented. In this section we use useful presentation devices to summarise the outcomes of winners and losers in terms of recent economic history.

2.2   Synopsis of argument

Australia has prized itself in the past on being a land of relative equality in terms of wealth and income, and equality in terms of the potential to make the most of one's life. The results of this section indicate that, in terms of averages, there is still some truth to this contention. What is very disturbing however is the trend at the margins, in determining which Australian regions over the last few years have received the major share of the job increases, and income and wealth, especially wealth as reflected in that major Australian wealth generator, housing equity.

If these trends continue at the current rate it will not be too long before Australia's claim to be land of equality has a hollow ring. The major findings of the analysis described in this report are as follows.

❑   The distribution of employment by region has shown a small improvement since 1998.

❑   Whilst overall equality of employment improved, the regions covering 20 per cent of Australia's population with the worst employment received only 11.6 per cent of new employment created since 1998.

❑   Equality of regional incomes has drastically worsened since 1998.

❑   The regions covering 20 per cent of the Australian population with the highest levels of incomes now earn 30.1 per cent of all income, and have claimed over 43 per cent of the increases since 1999. This is despite record commodity prices, which have benefited many poorer regions.

❑   Since 1998, the 20 per cent of Australia's population living in the regions with the highest average income, received 4.9 times the income growth of the 20 per cent living in the poorest regions.

❑   The "net flow of funds" which is a measure of the consumption capacity of regions has also shown a considerable deterioration in regional equality.

❑   The most dramatic trend in regional equality has been the change in the value of housing stock.

❑   The regions covering 20 per cent of the Australian population with the highest values of housing now own 34.8 per cent of the entire value of housing in Australia. These regions have claimed over 41 per cent of the increases since 1996.

❑ Weak monetary policy in the form of low interest rates has created employment for all, but only rises in income for some, and an extraordinary and unsustainable growth in house prices for a few.

These results are particularly disturbing because although the focus up to now has been the inequality of the distribution between households with consideration as to how this can possible be improved, the reality is that the path to the increase in household income and wealth is through improvements in the regional distribution of the rewards from economic advancement. Without this, significant improvement in household equality is only possible by unacceptable reduction of income through increased income and wealth taxes.

We are concentrating on recent history because it is one of the objectives of the "State of the Regions" analysis to pick up on recent trends which can then be useful for determining economic and social policy. The alternative is to wait five to seven years for these trends to be reported in Census document, at which point they are too late to influence policy in an efficient manner.

Given this objective, in no way can the figures by themselves be used to criticise current administrations as these trends have probably been occurring in the Australian economy for at least the last fifteen years. However current administrations can be severely criticised for their disinterest, not in terms of announced concern but in terms of practical policy to alleviate the problems. What other jurisdictions are doing in this regard is well documented later in this report.

Each of the issues of employment, income, and housing prices are covered in the remainder of the report.

2.3 Lorenz curves and the Gini coefficient

To measure the levels of inequality between regions we will use two tools, the Lorenz curve and the Gini coefficient. A Lorenz curve is calculated by ordering or ranking the 64 regions from highest levels of the variable in question to the lowest levels based on the 1998 levels. For example, when considering employment, the ordering will begin with the region with the highest levels of employed persons per head of population through to the lowest. In the case of employment, the lowest ranked of the 64 regions was the NSW Mid North Coast and the highest was Queensland's North West.

The Gini coefficient is derived from the Lorenz curve. The Gini coefficient is a number that lies between 0 and 1 and relates to the level of inequality across a set of populations. In this report the Gini coefficient measures the inequality between regions. If regions had equally distributed employment the level of population would always correspond to the same level of employment Australia-wide, which would correspond to a Gini coefficient of 0. In practice, the regions with the lowest ranks will tend to have a smaller share of total employment than their share of total population. The difference between the distribution of employment and the distribution of population is the basis for the Gini coefficient[1].

In Table 2.1, a fictitious set of seven regions is used to show how a Lorenz curve is constructed, and to provide context for the Gini coefficients presented.

---

[1] Technically the Gini coefficient measures the area between the Lorenz curves and the diagonal

Rank	Employed (Emp)	Population (Pop)	Emp / Pop	Cumulative, (Emp)	Cumulative, (Pop)	CDF[1] % Emp	CDF % Pop
Table 2.1	**Example of the construction of a Lorenz curve**						
1st	36	40	0.9	36	40	16.3	10.5
2nd	40	50	0.8	76	90	34.4	23.7
3rd	28	40	0.7	104	130	47.1	34.2
4th	42	70	0.6	146	200	66.1	52.6
5th	30	60	0.5	176	260	79.6	68.4
6th	36	90	0.4	212	350	95.9	92.1
7th	9	30	0.3	221	380	100.0	100.0
[1] CDF – Cumulative distribution function							

When the cumulative distribution functions (CDF) of employment and population are plotted against each other the Lorenz curve is shown. The figure below shows the Lorenz curve for the fictional example, along with a dotted line depicting what the curve would look like if employment were distributed equally amongst regions.

Example of Lorenz curve
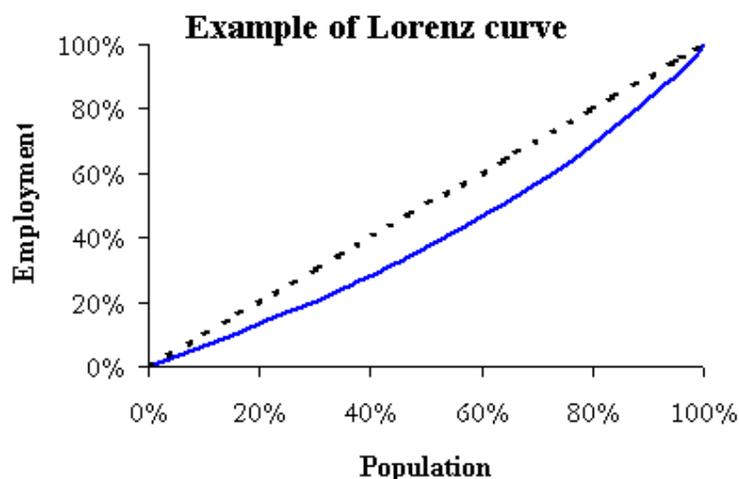
To help identify the results presented in the following section the following statements could be made from the example above;

❑ The top two regions in terms of employment, which represent 23.7 per cent of the population (regions ranked 1 and 2), have 34.4 per cent of all employment.

❑ The lowest ranked region (7th), which represents 7.9 per cent (100 – 92.1) of the population, has only 4.1 per cent of the employment (100 – 95.9).

❑ Regions with the highest levels of employment, which represent 52.6 per cent of the population, have 66.1 per cent of the employment.

❑ Calculation of the Gini coefficient for the example results in a value of 0.18

To interpret the Gini coefficient that is derived from the Lorenz curve the following table should be considered.

Gini coefficient	Description
0.00	Equality
0.15	Moderately unequal
0.30	Very unequal
0.50	Extremely unequal

The severity of a Gini coefficient of 0.5 can be seen from the example presented previously. In the example the level of employment varied from 90 per cent for the highest ranked region to 30 per cent for the lowest, however the Gini coefficient calculated from that example was only 0.18.

Gini coefficients are most often used in the analysis of the income across a population of individuals. A Gini coefficient derived from a cross-section of the population will tend to be higher than a Gini coefficient derived from a set of regions. This is because of the averaging process that is inherent in the construction of levels of regional income, employment etc. Within an individual region such as Sydney, there will be a large level of variation of incomes amongst individuals who live in that region, and its resultant Gini coefficient will be high. However, when we aggregate income to a regional level the differences or variation between regions such as the difference between Melbourne and Sydney in total will tend to be less than the differences or variation within the region, and hence produce a lower Gini coefficient.

In addition to Lorenz curves for selected years, a Lorenz curve for the change in levels of each variable is also presented. This difference curve is referred to as the "marginal" curve. The marginal Lorenz curves show the equality of the distribution of the changes. For instance, in the case of income the curve shows how equal the distribution of the total increase in Australian income between 1999 and 2002 has been. With standard Lorenz curves the differences between the share of population and the share of total income earned were identified. The marginal Lorenz curve instead can show the difference between the share of population and the share of the increase in income earned.

If Australia were moving towards a more equal regional distribution the Lorenz curve would move above the original path of the curve, and have a lower Gini coefficient than the latest value. If equality is reduced the Lorenz curve for the difference will lie below the original curve and the Gini coefficient will be greater than the previous value.

The interpretation of the Gini coefficient at the regional level is uncertain because it is rarely applied outside the context of the distribution of household incomes. In terms of household income the benchmark value of the Gini which has been associated with severe political instability and social strife is a value in the 0.3 to 0.4 range. It is contented and hopefully validated by future analysis when this coefficient is translated to a regional context a Gini coefficient of 0.2 would be the comparable figure.

2.3.1   Employment

The equality of employment distribution in Australia has improved since 1998. The continued strong growth in the Australian economy and the boom in the construction sector in particular has resulted in the Gini coefficient falling from 0.056 in 1998 to 0.051 in 2002. The majority of this improvement has occurred in the previous year.

It is worth noting that the definition of employment used in this analysis is the NIEIR estimate of employment. Employment is defined in very broad terms and hence for purposes of the analysis a part-time or casual job is treated the same as a full time job. The implication of this definition proves important when differentiating between the economy's capacity to generate equal employment opportunities versus equal income growth opportunities. The trend towards casualisation of the

workforce when applied in a non-uniform manner across regions will create different outcomes for employment equality versus incomes equality

Table 2.2	Employment			
	1998	2001	2002	Marginal, 1998 – 02
Gini coefficient	0.056	0.055	0.051	-0.002
Bottom 20 % of population	17.3	16.9	17.1	11.6
Top 20% of population	22.6	22.8	22.7	24.0
Ratio top / bottom	1.31	1.35	1.33	2.07

From the Lorenz curves for 1998 and 2002 presented in the following figure it is clear that there is a fairly constant gap between the dotted line of equality and Lorenz curves results. The constant gap throughout the middle sections of the employment distribution indicates that the majority of the differences lie in the tails of the distribution. This is verified in the Table 3.2 above which shows that whilst the Gini coefficient is low, the ratio of the level of employment in the top 20 per cent to the bottom 20 per cent of the population is 1.33. That is, these regions have 33 per cent more employment per head of population.
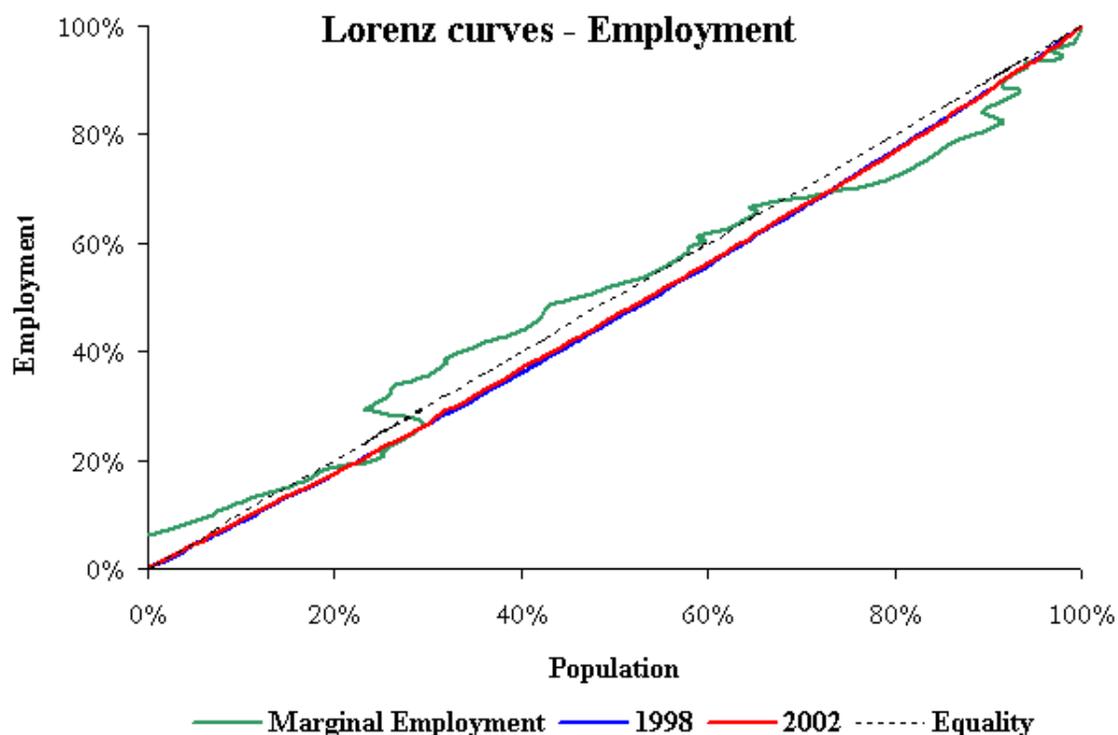
The figure above verifies that the distribution of the marginal increase in employment has been haphazard. Considering the inherent challenges in improving employment within many regions this has been a very good result for the Australian economy.

Chapter 5 of this report presents this year's results for employment and unemployment at the regional level.

2.3.2   Wages, salaries and farm income

Whilst the equitable distribution of employment has been successful, the same cannot be said for incomes. Inequality has increased considerably since 1999. Over 43 per cent of the increase in income has been provided to the 20 per cent of people in the regions that were already doing the best.

This result is an indictment on the inability of our economic planning mechanisms to successfully manage economic growth. In a period of three years, the same three years that has delivered substantial economic growth, strong employment growth, a construction boom, near record commodity prices, and a 15 per cent devaluation of the dollar, the gap between our rich and poor regions has widened.

In 1999, the ratio of top to bottom regions was 1.87, whereas this has dramatically deteriorated to 2.13 by 2002. Two hundred years of differential regional economic development produced a gap of 87 per cent, while in three years this difference has increased to 113 per cent. In reality, this increase is the cumulative effect of fifteen to twenty years of weak monetary policy and passive government policy on incomes and industry development

The significance of this change is clear in the Lorenz curve and the Gini coefficient. The Lorenz curves for 1999 and 2002 lie significantly below the dotted line and there is a noticeable gap between the curve of 1999 and 2002. The magnitude of this difference is clearly demonstrated by the marginal curve which lies lower than the two curves.

Table 2.3 Wages salaries and farm income				
	1999	2001	2002	Marginal, 1999 – 02
Gini coefficient	0.124	0.143	0.148	0.304
Bottom 20 % of population	14.8	14.1	14.1	8.9
Top 20% of population	27.7	29.1	30.1	43.7
Ratio top / bottom	1.87	2.06	2.13	4.91

Inequality of total income between Australia's regions is continuing to grow. In 1999, the poorest regions that covered 20 per cent of the population earned only 14.8 per cent of the income, whereas the richest earned 27.7 per cent. These amounts had moved to 14.1 and 30.1 respectively by 2002, a gap of only three years.

The difference in the Lorenz curves results of employment and wages is a serious concern for Australia. By defining the nation's economic objective as the control of inflation through monetary policy, Australia produced the outcome that economic theory suggested. The economy grew strongly and official employment growth was achieved, spurred on by the household sector being seduced to spend on credit. The cost has been that the increase in money supply caused an asset price boom and further concentration of wealth.

Lorenz curves - Wages, Salaries & Farm Income

Legend: Marginal Wages — 1999 — 2002 - - - - Equality
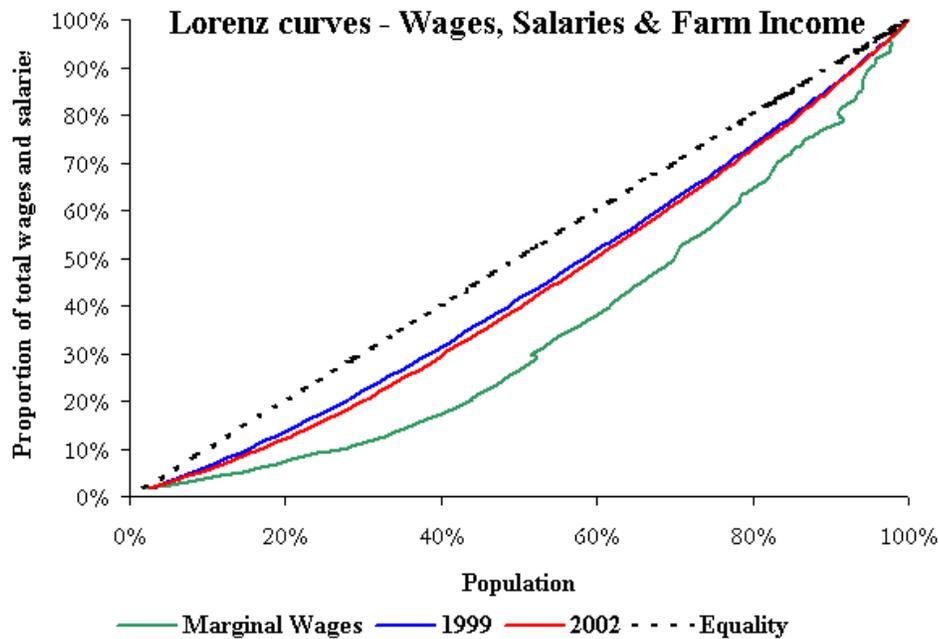
2.3.3 Net flow of funds

First developed in the "State of the Regions" 2001, the net flow of funds is a measure used to assess a region's consumption capacity. The measure is calculated in the following manner;

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

By incorporating the issues of incomes, taxes and the costs of servicing debt it is a measure of income that is more closely related to the amount of money that can be spent by households than a simple gross income earned value.

As it includes taxation policy and the cost of credit the results reflect a broader range of policy initiatives that government could use in the equitable distribution of economic advantage.

The table below, along with the Lorenz curves that follow, show that the impact of taxation policy and the cost of credit has only marginal impact on the evaluation of Australia's performance in sustaining equitable regional economic development.

Table 2.4 Net flow of funds				
	1999	2001	2002	Marginal, 1999 – 02
Gini coefficient	0.092	0.103	0.108	0.239
Bottom 20 % of population	16.4	16.2	16.2	14.5
Top 20% of population	25.9	26.9	27.5	40.2
Ratio top / bottom	1.58	1.66	1.70	2.77

The net flow of funds shows similar results to those of wages, salaries and farm income. In general the cost of living in the wealthiest regions of Australia including associated level of housing debt, along with Australia's progressive taxation regime tends to move the net flow of funds towards equality. This can be seen by the lower values of the Gini coefficient, which is 0.108 in 2002 compared to a value of 0.148 for wages salaries and farm income for the same period.

With sustained growth in the retail sector there has been strong growth in the level of GST paid. In terms of the measurement of flow of funds the GST paid is considered an outflow from the region. As the wealthier regions incomes have continued to outpace other areas, these regions have also tended to spend the bulk of these gains. The tax paid has reduced their net flow of funds.
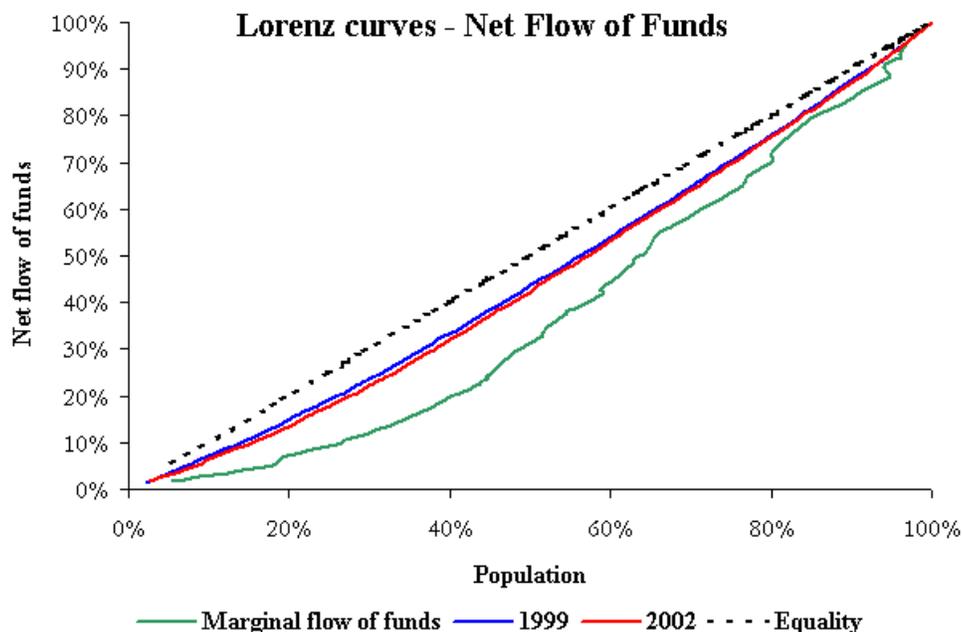
2.3.4   House prices

The previous two sections have shown the trends in employment, incomes and consumption capacity and have noted that whilst improvements in employment have been equitably distributed the same cannot be said of income and consumption increases.

The final component of the puzzle of economic equality is wealth. In Australia we have amongst the highest levels of wealth concentration in housing[2], with the ratio of dwelling wealth to household disposable income of 3.55 compared with 1.63 in the US and 2.93 in the UK. As we need to govern and manage an economy that places most of its eggs in one basket, it would be preferable that increases in housing wealth were distributed evenly across the regions..

The following Lorenz curves and Gini coefficient clearly shows that regional equality in the wealth invested in housing has been significantly reduced. In 1996, the regional differences in the value of housing stock produced a moderately high Gini coefficient of 0.174 with the ratio of total housing stock value of top 20 per cent to bottom 20 per cent of 2.37. Since then the increases in house prices in the major cities has delivered a marginal Gini coefficient of 0.331 and almost seven times the growth in housing stock value to the top 20 per cent of regions to the bottom.

---

2   City Sizes, House Prices and Wealth, Reserve Bank Bulletin, December 2001

Table 2.5	House prices			
		1996	2002	Marginal, 1996 - 02
Gini coefficient		0.174	0.230	0.331
Bottom 20 % of population		13.1	10.8	6.0
Top 20% of population		31.1	34.8	41.4
Ratio top / bottom		2.37	3.22	6.90

The dramatic nature of these differences can be seen in the Lorenz curves that follow. The marginal curve especially is considerably lower in each of the two years and also below the dotted line of equality. This demonstrates the magnitude of the inequality of wealth creation that the housing boom has created.

A full commentary on housing prices and the likely movements in the future follows in Chapter 3. In terms of regional development if the gap continues to grow at its current rate, the ability of regions other than metropolitan Sydney and Melbourne to generate future wealth by themselves will be greatly diminished.
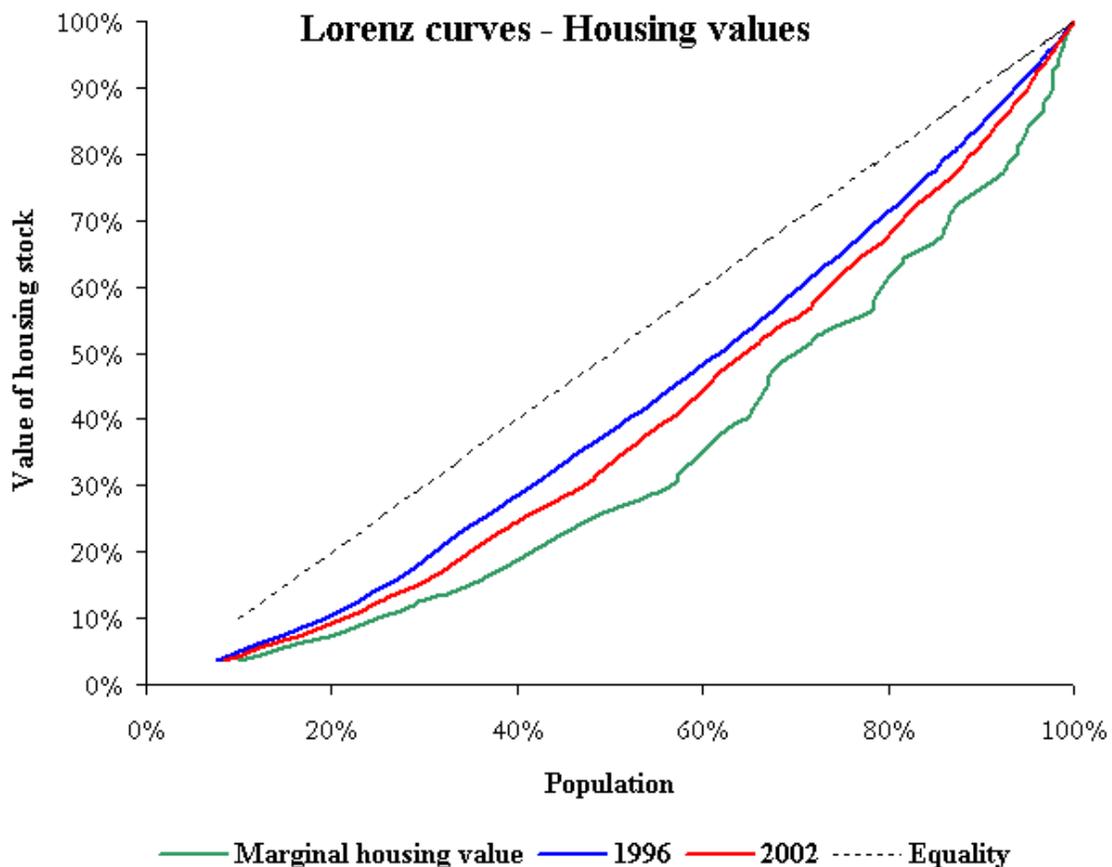
2.4   Regional equality: Conclusions

The change at the margin over the past few years has been simply dramatic and if allowed to continue will transform permanently the Australian political and economic landscape. What the analysis of this section is pointing to is a breakdown in the drive for regional convergence in living standards, which has been the hallmark of Australian economic growth. What role public policy had in driving this convergence is, of course, debatable. But there is little doubt that in the past when the cost of living substantially increased in a particular region there was a significant shift by industry and households to lower cost regions.

What has changed in the past fifteen years is the advent of the knowledge economy and the key role of innovation in driving competitiveness and high income employment. As this report shows later when benchmarking Australian regions to its US counterparts, Australia has very few regions that are highly competitive in the modern global economy. It is not surprising therefore that it is these regions that have captured a large share of Australia's increased economic output and income.

The advent of this new type of economy means that the market mechanism now works in reverse. That is, resources are pulled into these high cost high income regions rather than being pushed with the result that marginal changes identified in this chapter have the capacity to be sustained for a very long period of time.

These changes are well known in foreign jurisdictions especially in Western Europe. Currently an enormous effort is going into the allocation of resources, changes in governance and regional development policies not only to try and slow down the growth of inequality but in the long term to reverse it. These changes are documented in Chapters 8 and 9 of this report. The lack of interest and significant debate within the Australian context in the light of the trends identified in this section compared with the dynamism that is being exhibited overseas is simply inexplicable. Some attempt at explaining why this is the case is made in Chapter 7.

3.   House prices

3.1   Introduction

It has been well documented that over the past five years the Australian economy has experienced a housing price boom. With approvals for new homes and flats continuing to outstrip the number of people entering the house purchase years or household forming years, it seems inevitable a correction is just around the corner. In this section of the report we analyse the trends in house prices and average mortgage payments over the last six years for each region to gather insight into which areas are likely to be most effected by the proposed price fall. Since the purchase of a home is probably the largest investment most Australians will ever make and therefore the greatest vehicle for their own individual wealth, movements in the housing market have important ramifications for all regions.

3.2   Synopsis of argument

The results of this section identify the following features of house price movements and their effects.

❑   The average mortgage payment has shown moderate growth between 1996 and 2002.

❑   House prices have grown in excess of 12% per annum in parts of Melbourne and Sydney, although most regional centres have experienced small and sometimes negative growth.

❑   In the major centres house price growth has exceeded growth in actual mortgages paid.

❑   Low interest rates and the first home buyers grant have increased affordability of houses in many regional areas in Australia.

❑   In contrast for most major cities, particularly Sydney and Melbourne, affordability based on actual mortgages paid has been reduced significantly.

❑   The impact is a significant reduction in the number of people who can afford housing at the current price levels. This will result in decreased demand regardless of interest rate movements, leading ultimately to significant price reductions.

❑   Metropolitan evidence, suggesting a large increase in the number of people with mortgages combined with a significant reduction in implied yields, points to a contraction in the investment market for housing, further reducing demand.

❑   In 2002 housing is less affordable and is significantly less attractive as an investment. Therefore a price correction seems imminent.

❑   If interest rates increase there will be a further deterioration in regard to affordability.

❑   The analysis here focuses on the demand side, not taking into account the fact that the supply of housing stock has increased to historic high levels. This will further aggravate the degree of adjustment that will result from demand side adjustment

3.3   Data and Concepts

This chapter is built on a number of data series and concepts. The first data series is the average actual mortgage payments for a household in a region.

The first concept is that of implied house prices. This is the price that the household could afford on the basis of actual mortgage payments. The second data series used in this chapter is the Valuer General's median house price series which is then used as a proxy for the market price of housing in a region.

The second concept used is the excess growth of market house prices. This is determined by the average annual rate of growth of established house prices (that is, Valuer General prices), less the rate of growth of the average mortgage payment. The implied yield between 1996 and 2002 is the change in mortgage payments less the change in Valuer General house prices. In analytical terms this concept is a measure of the effective yield from rental property. This is because, as a general rule, growth in rental payments will not exceed the growth in mortgage payments. The reason for this is, if the reverse is true, households will buy new homes instead of renting. Therefore, if the implied yield falls significantly, as it has in many regions, it is a sign that property returns are in disequilibrium as the incentive is there for the property investor to sell and place the funds in better yielding investments.

The fall in implied yields means that the regions in which this has occurred are at risk of withdrawal of property investor interest which, in turn, has underpinned the recent price increases for housing.

The third concept is the mortgage payment implied by the Valuer General market prices. This is the average mortgage that new entrants to a region would have to pay to live in the region.

The fourth concept is non-affordability. This is a key concept which measures the ability of households living in an area to purchase their current home given market prices. If the non-affordability percentage is 60 per cent, this means that 60 per cent of households could not afford to purchase an average home in the region in which they live. An assumption made in these calculations is that the ability to pay for such a new mortgage is based on the average characteristics of those currently paying mortgages in the region. This of course is open to criticism in that there may be additional mortgage paying capacity in a region for some households. However, the measure is used here in terms of changes from the 1996 base. So the assumption being relied upon is a much stronger one. Thus, as the trends in mortgage payment ratio reflect, the trend is the capacity of a region to pay mortgages.

The implication is that to sustain house price growth the non-affordability ratio should not vary greatly over a five year period. If it does the implication is that the effective size of the market to purchase properties is declining. This will continue until the price mechanism restores affordability.

The deterioration in non-affordability by this measure is reinforced by another four factors. They are:

(i)   the over-supply of housing;

(ii)   the deterioration in relative investment attractiveness of rental property as indicated by the falls in implied yield;

(iii)   the risk of medium term interest rate rises; and

(iv)   poor ability of many regions to create high income full time employment.

The intellectual advance of this chapter's analysis is that it uses actual mortgage payments as the indicator of affordability. The traditional measure of looking at mortgage required at current house prices and interest rates as a per cent of income is a poor measure in the era of low interest rates and high real long term debt burden because of low inflation. Yes, people starting off in their 20s may well be able to afford 35 to 40 per cent of household income on mortgage debt servicing. But with child costs in their 30s, education costs in their 40s and retirement savings in their 50s, households can only afford a fraction of their 20s mortgage costs in latter years, especially now that seniority wage determination has ended. That is, in this context actual average mortgage payments are likely to be a better measure of affordability, a concept which is exploited in Chapter 3.

The difference between now and the 1970s and 1980s is that low inflation now prevails and the household real debt burden will stay constant, rather than decline rapidly as was the case in earlier decades. The analysis of Chapter 3, therefore, strongly suggests that households may well be locking themselves into debt burdens which are not affordable on a life-cycle basis.

3.4   Distribution of mortgage payments

There are two mechanisms in which house prices will fall and both are directly related. The first is associated with the mismatch between supply and demand associated with a reduction in affordability over the past six years. The second is via a reduction in property investment as a result of low yields. Both factors are caused ultimately by excess growth in the housing market over and above that observed in the mortgage market.

To gain insight into the mortgage market we first construct a distribution of mortgage payments for both 1996 and 2002 using Census data for each region. Later this will be used to show how affordability has decreased in many of our major cities but improved regionally. Initially we use the distribution to determine the average mortgage payment for each region.

3.5   Average mortgage payment

Average mortgage payments are generated for each region by taking the average of the reported Census payments. Across time we will always have some households who are at the start, some in the middle, and some who are nearly finished paying off their mortgages. In addition, we will have some households who paid more than they could afford for their home, and others who paid less than they could afford. It is our contention there is a 3 way link between average payments, incomes and house prices. When the idiosyncrasies of each household's situation removed by taking the average payment the relationship should be at its strongest. As such when imbalances can be seen in the average characteristics of regions they should be considered noteworthy.

The 3-way relationship can be summarised as:

❑   On average, mortgage payments will reflect the cost of housing in the area;

❑   Average mortgage payment should not rise significantly faster than the regions income growth.

From time to time we know that relationship between house prices and average payments will become disjointed, especially in periods of high inflation or unforeseen economic shocks. When rapid prices rises occur there is potential for the most recent entrants to be paying significantly more than the previous amounts.

To investigate this three-way this relationship 1996 is taken as a base. In 1996, the economic environment was relatively stable, with historically average interest rates and moderate to low inflation.

We intend to show is that from the current housing boom, fuelled by historically low interest rates together with the introduction of the first home buyers grant, the relationship between the average house price and the average mortgage payment has been severely altered. During this time this has led to a reduction in the percentage of households in each region who can afford to pay the median mortgage price. It is through this mechanism that we believe a mismatch between supply and demand will occur and drive the price of houses down. Additionally, the pull forward of a number of people taking out mortgages, especially first home buyers, has pulled forward future demand. The rise in demand can be seen in the current levels of lending in the following graph.

Loans to First Home Buyers
(12 month moving total)
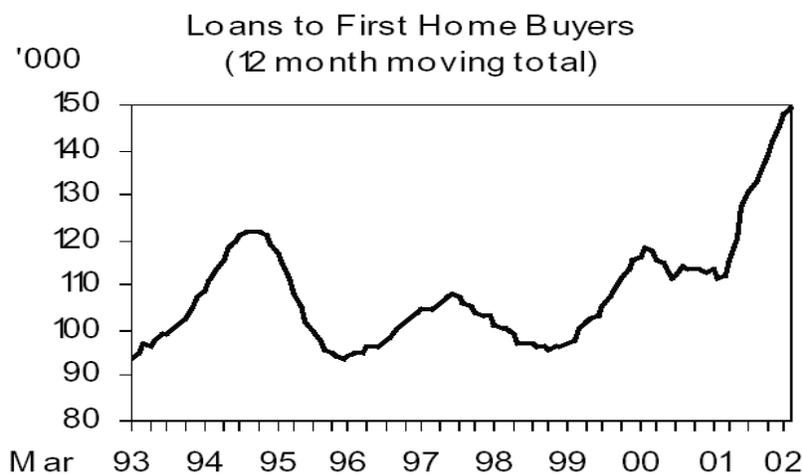
ABS 5609.0

In Table 3.1, we select a number of regions and provide the average monthly mortgage payment for both 1996 and 2002, as well as the relationship observed between the two years. Throughout the course of this report the same selected group will be examined.

Table 3.1	Average Actual Mortgage Payments for 1996 and 2002		
SOR	Average actual monthly mortgage paid in 1996	Average actual monthly mortgage paid in 2002	Annual growth between 1996 to 2002
NSW North	746	855	2.3%
NSW Central Coast	916	1,154	3.9%
Global Sydney	1,227	1,739	6.0%
Sydney Outer West	925	1,183	4.2%
Sydney Mid West	978	1,281	4.6%
Melbourne East	894	1,275	6.1%
VIC Gippsland	637	826	4.4%
Melbourne Inner	1,074	1,612	7.0%
Melbourne West	799	1,065	4.9%
QLD Fitzroy	779	851	1.5%
QLD Sunshine Coast	822	950	2.4%
Brisbane City	926	1,103	3.0%
Adelaide Central	816	1,013	3.7%
SA Murraylands	575	679	2.8%
Adelaide Plains	659	761	2.4%
Perth Central	886	1,196	5.1%
Perth Outer South	791	944	3.0%
TAS Hobart-South	823	941	2.3%
Darwin	943	1,108	2.7%
ACT	971	1,065	1.5%

The table above illustrates that across the board there have been significant increases in the average mortgage paid in each region. Of the selected regions, the greatest growth has occurred in WA Pilbara

Kimberley at 9.6%, with average payments rising from $554 in 1996 to $876 in 2002. The smallest growth has occurred in the regions ACT (1.5%) and QLD Fitzroy (1.5%).

Sydney metropolitan areas have grown moderately including Global Sydney (6.0%), Sydney Mid West (4.6%), Sydney Outer West (4.2%). The NSW Central Coast has grown steadily at 3.9% while smaller growth has occurred in NSW North (2.3%).

Across the entire state of Victoria there has been solid to moderate mortgage growth, with Melbourne Inner recording 7.0%, followed by Melbourne East with 6.1%, Melbourne West (4.9%) and VIC Gippsland (4.4%).

The Queensland mortgage market has been relatively subdued compared to the rest of Australia. Of the selected regions the greatest growth occurred in Brisbane City (3.0%), followed by the QLD Sunshine Coast (2.4%) and as mentioned QLD Fitzroy (1.5%).

There has been moderate to low growth in South Australian. Adelaide Central (3.7%) leads the pack in this state, SA Murraylands (3.4%) is next, finally Adelaide Plains is growing at 2.4%.

In the West strong growth in Perth Central (5.1%) and moderate growth in Perth Outer South (3.6%) was experienced.

In the remaining regions, TAS Hobart-South (2.3%) has grown at a relatively small rate, Darwin has been steady (2.7%), while as mentioned ACT has shown the least growth.

In general the prises in average payment has been matched by nominal income increases. Reaffirming the relationship between income and mortgage payments. For instance, Global Sydney has experienced an income in net flow of funds (a measure of consumption capacity) of approximately 8 per cent for last four years. Alternatively, the Adelaide Plains which show a low level of mortgage payment growth (2.5%) also had a low growth in net flow of funds (1.7%) since 1998.

Whilst there has been strong growth in payments despite the lowering of interest rates the rises appear to be in line with general income growth. Converting these payments into an amount of debt that it could service provides us with the implied house price calculated in the next section.

3.6   House prices implied from average mortgage payments

With a few underpinning assumptions, an average implied house price can be constructed for each average mortgage payment. First, it is assumed that the mortgage payment is made at the fixed interest rate prevailing in each time period. For 1996 this figure is 9.5% and for 2002 the assumed rate is 6.8%. The second assumption is that for each region the purchase of the home is accompanied by a 20% deposit. Finally, it is assumed that the mortgage is paid off over a 20 year period in a constant and equal stream of payments, at the end of which the home is fully owned.

The important point to note here is that implied house prices will go up because interest rates have fallen between 1996 and 2002. Hence, whilst it is important to look at the change in mortgage payments there are two key elements. The first is the interest rate charged and the second is the amount borrowed. We can currently afford to borrow more due to low interest rates while having a greater capacity to the service the debt. However, as will be demonstrated in the following sections actual house prices have dramatically exceeded the growth in implied house prices. On the expectation that interest rates can only increase in the future one would expect further reductions in affordability. In Table 3.2, 1996 and 2002 implied house prices for our selected group of regions are presented, including growth between the two years.

Due to the close relationship between the average mortgage payment and the implied house price the relative ranking in growth rates between regions should stay approximately the same as that observed in Table 3.1. The only difference is that since households can effectively borrow more in 2002

compared to 1996 as a result of lower interest rates, implied house prices growth will exceed the growth observed in mortgage payments. It has been found that the difference between the growth rates in each measure is approximately 3.5%. Using the fastest growing region as an example, Melbourne Inner has experienced an implied house price increase of 10.6%, while mortgage payments have grown by 7.0%. During the past six years implied house prices or the effective amount one is able to borrow has jumped from $143,992 in 1996 and $264,050 in 2002.

From this table it is clear that based on the amount the average mortgage holder was paying in 2002, the combination of increasing payments and decreasing interest rates could have driven house price at least as fast as the table above suggests, if the same level of debt / equity was to be maintained.

The next section details the actual price growth.

Table 3.2	House prices implied from average actual mortgage payments in 1996 and 2002		
Statistical Region	1996 implied house price ($)	2002 implied house price ($)	Annual growth between 1996 and 2002
NSW North	100,068	136,979	5.4%
NSW Central Coast	122,863	184,892	7.0%
Global Sydney	164,509	282,159	9.4%
Sydney Outer West	124,067	189,460	7.3%
Sydney Mid West	131,134	206,116	7.8%
Melbourne East	119,940	208,832	9.7%
VIC Gippsland	85,470	135,226	7.9%
Melbourne Inner	143,992	264,050	10.6%
Melbourne West	107,150	174,360	8.5%
QLD Fitzroy	104,406	139,319	4.9%
QLD Sunshine Coast	110,175	155,551	5.9%
Brisbane City	124,238	180,657	6.4%
Adelaide Central	109,365	165,845	7.2%
SA Murraylands	77,069	111,115	6.3%
Adelaide Plains	88,387	124,557	5.9%
WA Pilbara Kimberley	74,255	132,936	10.2%
Perth Central	118,854	181,484	7.3%
Perth Outer South	106,136	143,122	5.1%
TAS Hobart-South	110,340	154,127	5.7%
Darwin	126,401	181,398	6.2%
ACT	130,256	174,321	5.0%

3.7   House price growth

Valuer General

The Valuer General price is the market median price of all market house sales (auctions and private sales) made during the year in question. For most it is considered the best guide to house values in Australia. Table 3.3 lists the Valuer General price in 1996 and 2002 for our selected regions as well as the growth associated with that time period. The results show that house prices have grown

considerably faster than the implied house prices observed in Table 3.2 for many of our major centres, particularly Sydney and Melbourne.

As mentioned previously this indicates a general fall in affordability because the affordable average mortgage is no longer buying what it did before. This will reduce the potential number of new buyers and cause a reduction in price. Another way of getting a perspective of the current situation is to observe the graph of real house prices in Melbourne and Sydney below.
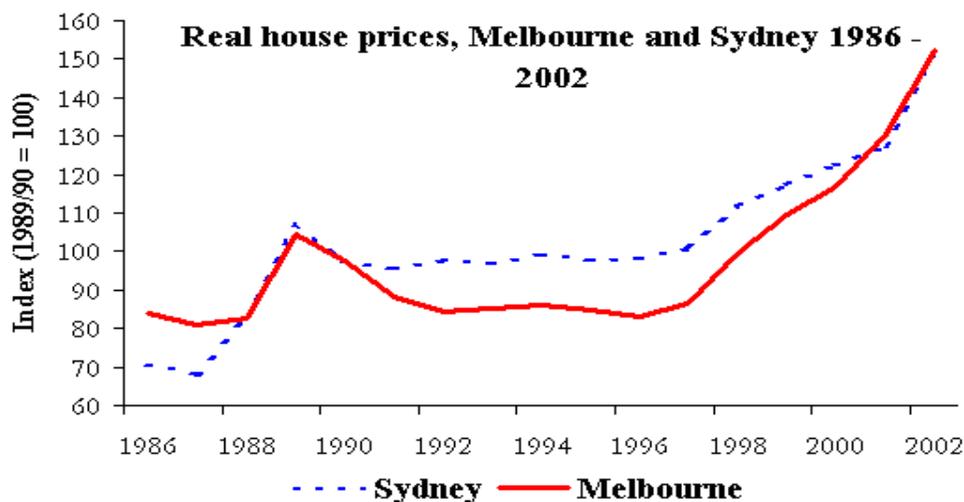
In 1989 we observed the peak of the late 1980s housing boom. Because this was also a period of moderate to high inflation, people did not see nominal house prices falling even though real house prices actually declined (as shown in the graph above). This experience has provided people with the false belief that house prices never fall, despite the graph above clearly shown that it the past 16 years periods of price growth have actually occurred less often than price falls or stability. In a period of low inflation which is currently anticipated to continue this illusion will not exist.

The myth that house values have always risen is clearly wrong; between 1986 and 1996/97 there was no real capital growth. Those relying on capital growth to underpin aggressive negative gearing assumptions do not have historical price movements to in their favour, especially if their debt is based on current prices.

In the low inflation environment of 2002, if a similar decline in real prices were to occur we could see nominal house price fall significantly.

Valuer General prices have shown a strong upward trend in the past five years. The regions with the highest growth rates include the major centres of Sydney and Melbourne although most of the major cities have experienced solid growth. In contrast, growth in regional areas, particularly those that are not considered lifestyle regions have experienced subdued growth in relative terms and in some instances have actually declined.

More specifically for NSW, the metropolitan regions of Global Sydney, Sydney Outer West and Sydney Mid West all grew uniformly at just over 10%. The popular lifestyle regions of NSW Central Coast grew at a similar rate of 10.4%. In contrast the rural region of NSW North experienced growth of only 1.6%.

Victoria is a similar story to NSW, with high growth in each of the metropolitan regions listed and only minor growth in regional areas. In particular, the outer suburban regions of Melbourne East and Melbourne West have both grown at 12.4% and are the highest growing regions in Australia.

Followed closely behind is Melbourne Inner at 12.3% which continues to build on its already high initial stock of wealth. The rural region of VIC Gippsland, however, has only experienced small relative growth of 2.1%.

Table 3.3	Valuer General prices, 1996 and 2002		
Statistical Region	1996 Valuer General Price	2002 Valuer General Price	Growth between 1996 and 2002
NSW North	89,341	97,980	1.6%
NSW Central Coast	131,041	237,033	10.4%
Global Sydney	384,117	685,683	10.1%
Sydney Outer West	136,425	246,681	10.4%
Sydney Mid West	159,629	283,786	10.1%
Melbourne East	155,859	314,743	12.4%
VIC Gippsland	75,362	85,306	2.1%
Melbourne Inner	226,748	453,887	12.3%
Melbourne West	111,972	225,893	12.4%
QLD Fitzroy	93,858	101,363	1.3%
QLD Sunshine Coast	133,810	177,833	4.9%
Brisbane City	140,300	199,332	6.0%
Adelaide Central	156,223	261,994	9.0%
SA Murraylands	67,673	91,086	5.1%
Adelaide Plains	90,029	138,005	7.4%
WA Pilbara-Kimberley	144,913	130,573	-1.7%
Perth Central	176,973	307,326	9.6%
Perth Outer South	116,462	154,618	4.8%
TAS Hobart-South	121,000	135,355	1.9%
Darwin	219,586	281,998	4.3%
ACT	153,000	219,000	6.2%

Overall growth in the Queensland housing market has been surprisingly moderate in metropolitan regions and low in regional areas. For example, Brisbane City grew at a rate of only 6.0% which apart from Hobart and Darwin is the lowest growth rate of all major cities. The lifestyle region of QLD Sunshine Coast may have experienced strong population growth in recent times, but this has not been translated into high house prices to any great degree with only 5.9% growth recorded. It therefore comes as no surprise that the rural region encompassing QLD Fitzroy has growth of only 1.3%.

In South Australia overall house price growth can be described as steady with both metropolitan and rural areas experiencing moderate to solid growth. In particular, Adelaide Central has grown by 9.0% and this is followed by Adelaide Plains with 7.4%. The rural region of SA Murraylands has experienced a moderate jump of 5.1% which is high relative to most other regions.

Western Australia has mixed results with a high degree of variance between regions. For instance, Perth Central has increased at a rate of 9.6% which is close to Sydney levels. At the same time Perth Outer South has grown only moderately at 4.8%, and the outback region of WA Pilbara-Kimberly has seen median prices actually fall at a rate of 1.7%.

For the remaining centres TAS Hobart-South has grown slowly at 1.9%, Darwin has experienced steady growth of 4.3% and the ACT has grown moderately at 6.2%.

Some of these seemingly anomalous results have complicated explanations, including the possibility there may have been a significant change in the nature and/or size of total housing stock in the region. Such changes might include:

❑ a large increase in the number of cheaper houses being built to accommodate transient workers in remote towns, thereby causing the median house price to fall although the individual value of existing homes actually show no decline at all or may rise;

❑ the development of new housing estates; consisting of bigger homes with more facilities than existing dwellings (e.g. two/three bathrooms, five bedrooms) and

❑ the redevelopment of older regions, with old houses being:

(a) torn down and replaced with a number of smaller but expensive units;

(b) renovated to a high standard, at substantial cost to the owner; or

(c) large blocks being subdivided for additional dwellings.

Because the growth in the median Valuer General house prices includes the net effect of such changes in the nature of the stock, the measure does not necessarily reflect a comparison of "apples with apples". That is, the growth rate should not be applied to the value of individual dwellings in 1996 to determine value of individual dwellings in 2002.

3.8 Excess growth and implied yields

Excess growth measures the average annual growth rate in market prices relative to the growth in average actual mortgage payments. Large positive numbers signify regions where there has been a large shift in the relationship between the average mortgage price and average house prices. Under these conditions there are fewer mortgage holders are able to afford the median house price. By the same token negative excess growth indicates improved affordability for the average mortgage holder.

The implied yield is constructed as a ratio of the average mortgage payments ratio and the Valuer General price ratio. In purchasing a home as a business investment the implied yield measures the amount the earnings on your invesment, which is typically through rental payments. Due to low interest rates and the introduction of the first home buyers grant as shown earlier there has been a dramatic rise in the amount of loans been given to first home buyers. At the same time this has created a pull forward effect of future demand for people who otherwise would have been renting. In recent years this has caused vacancy rates to rise as can be observed in the graph on the next page.

Using the implied mortgage payments from the distribution of mortgage payments a ratio between the 2001 payment and 1996 payment can be constructed. Likewise, this can also be done for the Valuer General prices. For simplicity they will be called the mortgage ratio and the VG ratio respectively.

The results of this analysis are presented in the Table 3.4 to 3.19 for all 64 regions.
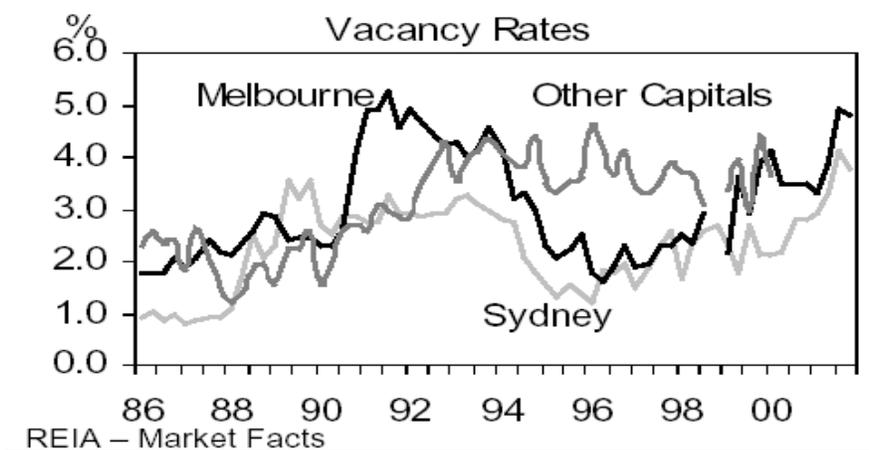
Vacancy Rates

REIA – Market Facts

3.8.1 New South Wales

Table 3.4	Excess Growth and Implied Yields in New South Wales Regions			
SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
NSW Central West	1.16	1.29	1.8%	-10%
NSW Far and North West	1.15	1.06	-1.4%	9%
NSW Hunter	1.20	1.42	2.9%	-16%
NSW Illawarra	1.23	1.48	3.1%	-17%
NSW Murrumbidgee	1.22	1.36	1.8%	-10%
NSW Murray	1.17	1.24	1.1%	-6%
NSW Mid North Coast	1.17	1.22	0.7%	-4%
NSW North	1.15	1.10	-0.7%	4%
NSW Richmond-Tweed	1.16	1.32	2.2%	-12%
NSW South-East	1.16	1.46	3.9%	-21%
NSW Central Coast	1.26	1.81	6.2%	-30%
Global Sydney	1.42	1.79	3.9%	-21%
Sydney Inner West	1.40	1.81	4.4%	-23%
Sydney Outer North	1.41	1.81	4.3%	-22%
Sydney Outer South West	1.24	1.66	5.0%	-25%
Sydney Outer West	1.28	1.81	6.0%	-29%
Sydney Mid West	1.31	1.78	5.2%	-26%
Sydney South	1.36	1.60	2.8%	-15%

In all regions the mortgage ratio has exceeded 1.1 representing a significant increase in the average implied mortgage payment between 1996 and 2001. The highest ratio has occurred in Global Sydney at 1.42, although the Sydney Inner West, Sydney Outer North and Sydney South also experienced big growth. However, even in the cheapest areas of Sydney such as Sydney Outer West and Sydney Outer South West has hovered around the 1.25 mark. For the rural localities average mortgages have not increased to the same degree as the metropolitan regions but still remain high.

The average mortgages paid can also be gleaned from the VG ratio. The Sydney metropolitan regions have experienced huge growth in the past years as mortgage payments pertain to house prices. For Global Sydney the ratio is a massive 1.79, although the Sydney Inner West, Sydney Outer North and Sydney Mid West have all exceeded 1.78. Even the cheapest areas of Sydney, such as the Sydney Outer West and Sydney Outer South West have experienced strong growth with ratios in excess of 1.65. For many this has put the first home out of reach.

Of the remaining areas the NSW Central Coast with a ratio of 1.81 has also experienced massive growth as people move to these areas as a lifestyle destination. There has been strong growth in NSW Illawarra (1.48) and NSW South East (1.46) and NSW Hunter (1.42),. Moderate growth in a relative sense has been experienced in the rural regions of NSW Central West (1.29), NSW Murrumbidgee (1.36), NSW Murray (1.24) and NSW Richmond-Tweed (1.32). Despite being on the lowest end of the scale in state the SOR regions of NSW Far and North West (1.06), NSW Mid North Coast (1.22) and NSW North (1.10) have still experienced reasonable growth in the last five years.

If one compares the mortgage ratio with the VG ratio in most cases one will find the VG ratio exceeds that produced in the mortgage ratio series. This can be partly explained since VG prices for each year are current while the mortgage paid data is lagged. That is, respondents my have started to pay off their mortgage more than five years ago and in some cases up to 20 years perhaps house prices and interest rates were stable. Therefore the extent of the recent boom would only be reflected in the mortgage payments of the most recent buyers.

Even though house prices should be expected to grow faster than mortgage payment growth in a rising market the extent of the excess growth in metropolitan Sydney is enormous. In Global Sydney the excess growth per annum in VG prices over mortgage payments is 3.9%. However, the places in Sydney in which these excesses are the greatest are the places where people can least afford it such Sydney Outer West (6.0%) and Sydney Outer South West (5.0%), implying yields of –29% and –25% respectively. In fact all regions in metropolitan Sydney have moderate to high excess percentage values.

Outside Sydney, NSW Central Coast (6.2%) and NSW South-East (3.9%) have also been hit by this growth and become much less affordable for the average mortgage buyer. Implied yields for these regions are currently –30% and –21% respectively. This excess has also been felt in NSW Central West (1.8%), NSW Hunter (2.9%), NSW Illawarra (3.1%), NSW Murrumbidgee (1.8%), NSW Murray (1.1%) and NSW Richmond Tweed (2.2%) with associated falls in implied yields.

In the rural regions of NSW Mid North Coast (0.7%) the effects have been minor, while in NSW Far and North West (-1.4%) and NSW North (-0.7%) the average mortgage payments have actually exceeded those derived from the VG price. This has resulted in positive implied yields of 9% and 4% respectively.

3.8.2   Victoria

SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
Table 3.5 Excess Growth and Implied Yields in Victorian Regions				
Melbourne East	1.43	2.02	6.0%	-29%
VIC Gippsland	1.30	1.13	-2.2%	14%
VIC Barwon	1.32	1.62	3.5%	-19%
VIC Goulburn	1.26	1.30	0.6%	-3%
Melbourne Inner	1.50	2.00	4.9%	-25%
VIC Loddon	1.27	1.36	1.2%	-7%
VIC Mallee – Wimmera	1.30	1.34	0.5%	-3%
Melbourne North	1.33	2.13	8.2%	-38%
VIC Ovens-Hume	1.23	1.20	-0.4%	2%
Melbourne South	1.43	2.09	6.5%	-31%
Melbourne West	1.33	2.02	7.2%	-34%
VIC West	1.27	1.25	-0.2%	1%
Melbourne Westernport	1.23	1.81	6.7%	-32%
VIC Central Highlands	1.25	1.40	1.9%	-11%

A similar picture to that analysed in Sydney has also emerged in Melbourne. The regions of Melbourne Inner (1.50), Melbourne East (1.43), Melbourne South (1.43), Melbourne North (1.33), and Melbourne West (1.33) have experienced significant growth in mortgage payments. The metropolitan region of Melbourne Westernport has produced slightly less levels of growth (1.23). In the rural regions the picture is much the same but not quite to the same degree. The greatest growth has occurred in VIC Barwon (1.32), VIC Gippsland (1.30) and VIC Mallee – Wimmera (1.30) although the remaining regions of VIC Goulburn (1.26), VIC Loddon (1.27), VIC Ovens-Hume (1.23), VIC Central Highlands (1.25) and VIC West (1.27) are no too far behind.

In terms of house prices growth in metropolitan Melbourne has been also been similar to that experienced in Sydney. The biggest growth has occurred in Melbourne North (2.13), followed by Melbourne South (2.09), Melbourne East (2.02), Melbourne West (2.02), Melbourne Inner (2.00), and Melbourne Westernport (1.43). In terms of the rural regions there has been strong growth in VIC Barwon (1.62), and moderate growth in VIC Goulburn (1.30), VIC Loddon (1.36), VIC Mallee – Wimmera (1.34), VIC Central Highlands (1.40) and VIC West (1.25). The lowest growth has occurred in the regions of VIC Gippsland (1.13) and VIC Ovens – Hume (1.20).

As explained above what is probably more important than the individual ratios is excess between them as this indicates a regions ability to afford the housing in a certain location. If the rise in house prices over and above that experienced in the mortgage market is excessive then this implies that there will be less new households capable of buying a home in this area. This will certainly be the case for first home buyers but will also impact on people who would like to sell their home to buy one more closer to the city. Again, the regions with the greatest excess growth are metropolitan in nature. This includes Melbourne East (6.0%), Melbourne Inner (4.9%), Melbourne North (8.2%), Melbourne South (6.5%), Melbourne West (7.2%) and Melbourne Westernport (6.7%) with implied yields in each of these regions above –25%. It is of some significance that despite having the lowest growth in house prices and mortgage payments of the metropolitan regions Melbourne Westernport has one of the highest excess growth rates.

In the rural sector there was strong excess growth in the VIC Barwon region (3.5%) and moderate growth in VIC Central Highlands (1.9%) leading to respective implied yield drop of –19% and –11%. There has been smaller excess growth in VIC Loddon (1.2%), VIC Mallee –Wimmera (0.5%) and VIC Goulburn (0.6%) which are associated with small negative yields. There has been reasonable negative excess growth in VIC Gippsland (-2.2%) whereby mortgage payments actually exceeded that produced in the housing market and this has resulted in moderate implied yields of 14%. The regions VIC Ovens-Hume (-0.4%) and VIC West (-0.2%) have also experienced negative growth and positive implied yields but are only minor.

3.8.3   Queensland

Table 3.6	Excess Growth and Implied Yields in Queensland Regions			
SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
QLD Pastoral	1.12	1.16	0.6%	-3%
QLD Agricultural SW	1.16	1.27	1.5%	-9%
QLD Far North	1.06	1.00	-0.9%	6%
QLD Fitzroy	1.09	1.08	-0.2%	1%
QLD Mackay	1.15	1.16	0.2%	-1%
QLD North West	1.12	1.04	-1.1%	7%
QLD North	1.13	1.12	-0.3%	2%
QLD Wide Bay-Burnett	1.09	1.05	-0.6%	3%
QLD West Moreton	1.04	1.06	0.3%	-2%
QLD Gold Coast	1.10	1.28	2.6%	-14%
QLD Sunshine Coast	1.16	1.33	2.3%	-13%
Brisbane North	1.12	1.28	2.2%	-12%
Brisbane City	1.19	1.42	3.0%	-16%

There has been moderate mortgage payment growth in Queensland. Unlike Sydney and Melbourne the growth in Brisbane has not significantly exceeded the ratios produced in the rural regions. For instance Brisbane City (1.19) which is only slightly more the QLD Agricultural SW (1.16). In fact the growth attained in Brisbane North (1.12) is actually lower. Other regions on the higher end of the scale include QLD Pastoral (1.12), QLD Mackay (1.15), QLD North West (1.12), QLD Gold Coast (1.10), QLD North (1.13) and the QLD Sunshine Coast (1.16). Of the remaining regions we have QLD Far North (1.06), QLD Fitzroy (1.09), QLD Wide Bay Burnett (1.09) and QLD West Moreton (1.04). Relative to the previous two states the growth in the mortgage market has been fairly uniform across regions.

As expected house prices increased strongly in metropolitan QLD with Brisbane City recording a ratio of 1.42 and Brisbane North a ratio of 1.28. Strong growth was also experienced in the popular lifestyle regions of QLD Gold Coast (1.28) and QLD Sunshine Coast (1.33). Given the growth attained in the Victorian and NSW market these figures look rather low although this does help illustrate the enormity of the growth in our two most populated states. Of the remaining QLD regions the only other place with significant house price growth is the QLD Agricultural SW (1.27). There was moderate growth in QLD Pastoral (1.16), QLD Mackay (1.16) and QLD North (1.12). Small Growth was produced in the rural regions of QLD Fitzroy (1.08), QLD North West (1.04), QLD Wide Bay-Burnett (1.05) and QLD West Moreton (1.06). In the QLD Far North (1.00) no growth was reported.

In terms of excess growth in house prices over growth in mortgage payments the four most heavily populated areas of QLD Gold Coast (2.6%), QLD Sunshine Coast (2.3%), Brisbane North (2.2%) and Brisbane City (3.0%) which tends to follow the trends of the previous two states. The implied yields for each these regions are −14%, -13%, -12% and −16% respectively.

In the rural regions QLD Agricultural SW experienced the greatest excess growth (1.5%) and this is associated with an implied yield drop of 9%. There is also small positive excess growth in QLD Pastoral (0.6%), QLD Mackay (0.2%) and QLD West Moreton (0.3%) which all correspond with small negative implied yields. Negative excess growth and conversely positive implied yields are reported in QLD Far North (-0.9%, 6%), QLD Fitzroy (-0.2%, 1%), QLD North West (-1.1%, 7%), QLD North (-0.3%, 2%) and QLD Wide Bay-Burnett (-0.6%,3%).

3.8.4   South Australia

Table 3.7	Excess Growth and Implied Yields in South Australian Regions			
SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
Adelaide Central	1.24	1.68	5.1%	-26%
SA Eyre and York	1.14	1.31	2.3%	-13%
SA Murraylands	1.18	1.35	2.2%	-12%
Adelaide Plains	1.15	1.53	4.8%	-25%
SA South East	1.13	1.49	4.7%	-24%
Adelaide Outer	1.13	1.58	5.7%	-28%

Mortgage payments growth, like Queensland is fairly uniform across regions in South Australia. The highest growth occurred in Adelaide Central (1.24) followed by SA Murraylands (1.18), Adelaide Plains (1.15), SA Eyre and York (1.14), SA South East (1.13) and Adelaide Outer (1.13).

House prices growth was very strong across the entire metropolitan and rural regions which is different to the trends experienced in the other states. The highest growth in house prices occurred in the metropolitan region of Adelaide Central (1.68), followed by Adelaide Outer (1.58), SA South East (1.49), SA Murraylands (1.35), SA Eyre and York (1.31) and then a drop to Adelaide Plains (1.21).

From a state wide basis South Australia encountered the highest average level of excess growth. The highest levels of growth were encountered in Adelaide Outer (5.7%) and Adelaide Central (5.1%) although Adelaide Plains (4.8%) and SA South East were not too far behind (4.7%). In all regions the implied yield exceeded −24%. In the remaining regions SA Eyre and York (2.3%) and SA Murraylands (2.2%) experienced moderate levels of excess growth contributing to a drop in the implied yield of 13% and 12% respectively.

3.8.5   Western Australia

SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
Table 3.8	**Excess Growth and Implied Yields in Western Australian Regions**			
WA Pilbara-Kimberly	1.58	0.90	-9.0%	76%
WA Gascoyne-Goldfields	1.14	0.97	-2.7%	18%
WA Wheatbelt-Great Southern	1.26	1.23	-0.4%	2%
WA Peel – South West	1.21	1.31	1.3%	-7%
Perth Central	1.35	1.74	4.3%	-22%
Perth Outer North	1.20	1.37	2.3%	-13%
Perth Outer South	1.19	1.33	1.8%	-10%

There is some volatility in mortgage payments growth across regions in WA. The highest growth has occurred in the rural region of WA Pilbara – Kimberley (1.58) but there has also been strong growth in Perth Central (1.35) and WA Wheatbelt-Great Southern (1.26). Of the remaining regions we have WA Gasgoyne – Goldfields (1.14), WA Peel – South West (1.21), Perth Outer North (1.20) and Perth Outer South (1.19).

Following in the footsteps of the other major cities covered Perth has shown the greatest growth in house prices. Strong growth was produced in Perth Central (1.74), with solid growth in Perth Outer North (1.37) and Perth Outer South (1.33). Out of the rural regions WA Peel – South West also experienced solid growth (1.31) as well as WA Wheatbelt-Great Southern (1.23). In WA Pilbara-Kimberly (0.90) and WA Gascoyne-Goldfields (0.97) negative growth in house prices has occurred.

In terms of excess growth all metropolitan regions produced positive excess growth. The highest growth was reported in Perth Central (4.3%) and is associated with an implied yield of –22%. For Perth Outer North 2.3% of excess growth is observed while Perth Outer South encountered slightly less excess growth at 1.8%. Implied yields in these regions were –13% and –10% respectively. The rural region of WA Peel – South West (1.3%) was the only place to encounter positive excess growth and hence a positive implied yield. The region of WA Wheatbelt – Great Southern (-0.4%) had marginal negative excess growth and a small implied yield of 2%. Conversely WA Pilbara –Kimberly (-9.0%) significant negative excess growth and an implied yield of 76%. The remaining region of WA Gascoyne-Goldfields encountered moderate negative excess growth of –2.7% which is associated with an implied yield of 18%.

3.8.6   Tasmania

Table 3.9	Excess Growth and Implied Yields in Tasmanian Regions			
SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
TAS Hobart-South	1.14	1.12	-0.4%	2%
TAS North West	1.08	0.91	-2.7%	18%
TAS North	1.08	1.12	0.6%	-4%

Uniform conditions in the mortgage market in Tasmania with TAS Hobart-South (1.14), TAS North West (1.08) and TAS North (1.08) all encountering reasonable growth in average mortgage payments. In contrast changes in house prices been a little mixed. In TAS Hobart-South (1.12) and TAS North (1.12) there has been some positive growth, however in TAS North West (0.91) there has been a significant decline.

Marginal positive excess growth was reported in TAS North (0.6%) corresponding to an implied yield of 4%. Elsewhere, TAS North West (-2.7%) experienced moderate negative excess growth and a healthy implied yield of 18%. The final region of TAS Hobart-South was basically unchanged with only minor negative excess growth and hence a small positive implied yield (2%).

3.8.7   Northern Territory

Table 3.10	Excess Growth and Implied Yields in Northern Territory Regions			
SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
Darwin	1.18	1.28	1.5%	-8%
NT Lingiari	1.11	1.05	-0.9%	6%

In Darwin and NT Lingiari there has been a moderate rise in the mortgage market with ratios of 1.18 and 1.11 respectively. House prices have also increased in both regions although in Darwin growth has been solid (1.28) while in NT Lingiari (1.05) there have only been slight increases. This has resulted in excess growth in Darwin (1.5%) but negative growth in NT Lingiari (-0.9%) with implied yields of –8% and 6% respectively.

3.8.8   Australian Capital Territory

Table 3.11	Excess Growth and Implied Yields in Australian Capital Territory Regions			
SOR	Average Actual Mortgage Payment Ratio 2002/1996	Valuer General House Price Ratio 2002/1996	Excess Growth	Change in Implied Yield
ACT	1.10	1.43	4.6%	-23%

For the ACT there has been a moderate rise in mortgage market as indicated by the ratio of 1.1, however this has totally been outstripped by a strongly growing housing market (1.43). Subsequently, the region has experienced strong excess growth (4.6%) resulting in a negative implied yield of –23%.

3.9   Summary of analysis of price and mortgage payments

3.9.1   New South Wales

Table 3.12	Implied House Price and Valuer General Price in New South Wales					
1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
NSW Central West	106,753	90,297	1.18	148,342	116,546	1.27
NSW Far and North West	98,669	84,122	1.17	135,554	88,982	1.52
NSW Hunter	111,064	114,119	0.97	159,226	162,531	0.98
NSW Illawarra	121,179	143,808	0.84	178,532	212,997	0.84
NSW Murrumbidgee	99,592	90,801	1.10	144,323	123,259	1.17
NSW Murray	99,501	88,373	1.13	138,258	109,951	1.26
NSW Mid North Coast	101,308	110,351	0.92	141,567	134,258	1.05
NSW North	100,068	89,341	1.12	136,979	97,980	1.40
NSW Richmond-Tweed	107,775	125,579	0.86	149,574	166,057	0.90
NSW South-East	111,932	82,053	1.36	155,214	119,799	1.30
NSW Central Coast	122,863	131,041	0.94	184,892	237,033	0.78
Global Sydney	164,509	384,117	0.43	282,159	685,683	0.41
Sydney Inner West	162,552	298,555	0.54	275,303	540,229	0.51
Sydney Outer North	160,535	299,893	0.54	273,269	543,532	0.50
Sydney Outer South West	129,449	128,052	1.01	192,427	212,928	0.90
Sydney Outer West	124,067	136,425	0.91	189,460	246,681	0.77
Sydney Mid West	131,134	159,629	0.82	206,116	283,786	0.73
Sydney South	147,878	281,382	0.53	241,864	449,980	0.54

The table above shows the average implied house price for each region based on mortgage payments for 1996 and 2001. It also provides the average Value general price for each year. Finally a ratio between the two prices is shown for each year.

In 1996 for the richest areas of Global Sydney, Sydney Inner West, Sydney Outer North and Sydney South the ratio of mortgage prices to house prices was very low hovering within the vicinity of 0.43 to 0.54. More specifically for Global Sydney in 1996 the mortgage implied price was 164,509 while the corresponding VG price was 384,117 leading to a ratio of 0.43. The ratio is generally low in the richest areas due to higher deposits and underlying wealth. Extending to 2002 mortgage implied prices have risen to 282,159 while VG prices have jumped to 685,683, although more importantly the ratio only fell slightly to 0.41. This illustrates that with the rise in each market people have just got wealthier. Due to this wealth people have been able to outlay even greater deposits while being able to service higher mortgages. Effectively the affordability of homes in this region has not changed for the residents since people have become wealthier in line with the house boom.

The situation in the newest and cheapest areas of Sydney where new construction continues to take place has been different with ratios falling between 1996 and 2002. These areas include Sydney Outer South West, Sydney Outer West and to some extent Sydney Mid West. For example in 1996 Sydney Outer West had an average mortgage implied house price of 124,067 and an average VG price of 136,425 equating to ratio of 0.91. However, in 2002 the mortgage implied price was 189,460 while prices jumped to 246,681 leading a fall in the ratio to 0.77.

This suggests that there has been an overall fall in people's ability to buy homes in this region since the average loan no longer buys what it used to. This will particularly be the case for the first home buyer who now has to outlay a much higher deposit in order to obtain a mortgage at the same affordability as 1996.

A secondary affect is that with less affordability and due to the inclusion of the first home buyers grant there will be a rapidly diminishing supply of new potential buyers in the market. For many people wanting to sell their home there wont be enough new buyers and this could lead to falls in house prices. Basically a situation in Sydney is occurring where for first home buyers have no place they can afford to live, even in the cheapest areas of Sydney. The same situation is also occurring in the NSW Central Coast who have also experienced a huge drop in their ratio between 1996 and 2002.

For the rest of NSW the situation is either unchanged or has actually improved as ratios have actually risen in most rural regions. This has lead to greater affordability in these regions.

3.9.2 Victoria

Table 3.13	Implied House Price and Valuer General Price in Victoria					
1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
Melbourne East	119,940	155,859	0.77	208,832	314,743	0.66
VIC Gippsland	85,470	75,362	1.13	135,226	85,306	1.59
VIC Barwon	90,894	94,612	0.96	146,536	153,667	0.95
VIC Goulburn	93,374	90,462	1.03	143,667	117,806	1.22
Melbourne Inner	143,992	226,748	0.64	264,050	453,887	0.58
VIC Loddon	88,406	88,693	1.00	136,797	120,908	1.13
VIC Mallee – Wimmera	80,495	74,333	1.08	128,198	99,743	1.29
Melbourne North	109,916	124,523	0.88	178,667	265,604	0.67
VIC Ovens-Hume	94,251	93,655	1.01	142,008	112,748	1.26
Melbourne South	123,319	179,574	0.69	216,052	375,468	0.58
Melbourne West	107,150	111,972	0.96	174,360	225,893	0.77
VIC West	84,068	79,146	1.06	129,921	98,954	1.31
Melbourne Westport	104,394	103,580	1.01	156,181	187,775	0.83
VIC Central Highlands	89,665	81,215	1.10	136,815	113,631	1.20

The trend that has been occurring in Sydney has also taken place in Melbourne and it anything has been more intense. Melbourne East, Melbourne Inner, Melbourne North, Melbourne South, Melbourne West and Melbourne West have all experienced drop in their ratios of mortgage implied prices to VG prices.

The largest changes have occurred in the areas with the cheapest prices. For instance, Melbourne West has had implied mortgage prices rise from 107,150 to 174,360, while during the same period house prices have risen from 111,972 to 225,893 resulting in a fall in the ratio of 0.96 to 0.77. As mentioned above this has undoubtedly caused affected new buyers ability to purchase homes in these areas.

While regions become less affordable in the city the rural region has become more affordable. Following in the trend of the rural regions in NSW with the exception of VIC Barwon which remained virtually unchanged all rural regions in Victoria became more affordable. For instance in VIC Gippsland shifted from a ratio of 1.13 in 1996 to 1.59 in 2002 but there was also strong shifts in VIC Goulburn, VIC Mallee-Wimmera, VIC Ovens-Hume and VIC West.

3.9.3   Queensland

1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
QLD Pastoral	87,883	54,387	1.62	120,188	63,084	1.91
QLD Agricultural SW	95,349	88,798	1.07	135,394	113,052	1.20
QLD Far North	125,938	131,411	0.96	162,459	131,101	1.24
QLD Fitzroy	104,406	93,858	1.11	139,319	101,363	1.37
QLD Mackay	109,227	102,900	1.06	152,913	119,293	1.28
QLD North West	110,013	93,252	1.18	149,988	97,295	1.54
QLD North	109,968	107,232	1.03	152,239	119,739	1.27
QLD Wide Bay-Burnett	90,522	86,191	1.05	120,451	90,838	1.33
QLD West Moreton	100,952	81,634	1.24	127,682	86,262	1.48
QLD Gold Coast	120,989	132,508	0.91	162,847	170,079	0.96
QLD Sunshine Coast	110,175	133,810	0.82	155,551	177,833	0.87
Brisbane North	111,649	107,431	1.04	153,196	137,776	1.11
Brisbane City	124,238	140,300	0.89	180,657	199,332	0.91

Table 3.14   Implied House Price and Valuer General Price in Queensland

The housing market in QLD has not behaved in the same way it has done in Victoria and NSW. In all metropolitan and rural regions between 1996 and 2001 mortgage implied prices outstripped the growth in VG prices. For Brisbane City the ratio increased slightly from 0.89 to 0.901 while in place such as QLD North West the ratio rose from 1.18 to 1.54. As a result of these increases for the average mortgage there is high affordability in these regions.

3.9.4   South Australia

1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
Table 3.15	**Implied House Price and Valuer General Price in South Australia**					
Adelaide Central	109,365	132,960	0.82	165,845	242,612	0.68
SA Eyre and York	74,876	66,269	1.13	103,977	83,570	1.24
SA Murraylands	77,069	65,356	1.18	111,115	84,711	1.31
Adelaide Plains	88,387	77,185	1.15	124,557	132,879	0.94
SA South East	84,640	69,996	1.21	117,265	100,952	1.16
Adelaide Outer	94,981	91,974	1.03	131,073	153,671	0.85

South Australia has followed the lead of Victoria with all metropolitan regions indicating a drop in affordability. For Adelaide central mortgage implied prices have risen from 109,365 to 165,845 with a corresponding increase in VG prices of 132,960 to 242,612. This has seen the mortgage to VG ratio fall from 0.82 to 0.68 and significantly reduced the affordability of first time home buyers in the region. In Adelaide Plains and Adelaide outer the falls in their respective ratios have been even more significant in places where most people would buy there first home. Not surprising the rural regions of SA Eyre and York and SA Murraylands based on the average mortgage implied price have become more affordable, although the region of SA Outer East became relatively more expensive.

3.9.5   Western Australia

1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
Table 3.16	**Implied House Price and Valuer General Price in Western Australia**					
WA Pilbara-Kimberly	92,541	144,913	0.64	133,823	130,573	1.02
WA Gascoyne-Goldfields	138,345	119,356	1.16	151,887	115,573	1.31
WA Wheatbelt-Great Southern	104,971	79,278	1.32	125,987	97,662	1.29
WA Peel – South West	126,627	103,469	1.22	147,046	135,392	1.09
Perth Central	150,284	176,973	0.85	188,057	307,326	0.61
Perth Outer North	136,737	131,182	1.04	156,793	179,391	0.87
Perth Outer South	132,092	116,462	1.13	151,010	154,618	0.98

The housing boom has also impacted significantly on the WA market with all metropolitan regions recording VG House price growth in excess of that implied by mortgage prices. This has caused significant ratio falls in the 3 regions described. Perth Central has experienced the greatest fall with the ratio falling from 0.85 to 0.61 which is almost in line with the ratio of Inner Melbourne. Slightly different to the other states a number of rural regions also experienced a drop in effective affordability. This includes WA Wheatbelt-Great Southern (ratio drop from 1.32 and 1.29) and WA Peel-South West (1.22 to 1.09). Of the remaining regions WA Pilbara-Kimberley and WA Gascoyne-Goldfields experienced a strong shift towards affordability in a rising mortgage market but falling house market.

3.9.6   Tasmania

Table 3.17 Implied House Price and Valuer General Price in Tasmania						
1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
TAS Hobart-South	110,340	121,000	0.91	154,127	135,355	1.14
TAS North West	77,795	82,606	0.94	102,330	75,491	1.36
TAS North	83,637	112,600	0.74	110,422	126,564	0.87

In the southern state VG housing prices have not increased by a great deal in relative terms and in TAS North West have actually fallen. At the same time the mortgage implied prices have increased sharply leading to a strong increase in affordability in all 3 regions as the average mortgage is now paying for more than it did before.

3.9.7   Northern Territory

Table 3.18 Implied House Price and Valuer General Price in Northern Territory						
1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
Darwin	126,401	219,586	0.58	181,398	281,998	0.64
NT Lingiari	122,806	149,804	0.82	166,205	157,289	1.06

The region of Darwin has witnessed a slight improvement in affordability over the last five years based on the average mortgage payment. During this time the average VG home increased from 219,586 to 281,998 and corresponding increase in the mortgage implied price of 126,401 to 181,998. This has lead to a small increase in the ratio of 0.58 to 0.64. For NT Lingiari the trend has been much stronger with its ratio increasing from 149,804 to 157,289.

3.9.8   Australian Capital Territory

Table 3.19	Implied House Price and Valuer General Price in Australian Capital Territory					
1996	House prices implied by 1996 average actual mortgages payments	1996 Valuer General Price	1996 Ratio of house price implied by average actual mortgage payments to Valuer General	House prices implied by 2002 average actual mortgages payments	2002 Valuer General Price	2002 Ratio of house price implied by average actual mortgage payments to Valuer General Price
ACT	130,256	153,000	0.85	174,321	219,000	0.80

For the capital city there has been a slight deterioration in affordability for the regions residents. The housing boom has brought about stronger VG house price growth than that implied by average mortgage paid. This has lead to a ratio decrease of 0.80.

3.10   Affordability index

In order to gain a direct measure of affordability in each region the average VG price is used to work out an implied mortgage payment. The basic assumptions of this calculation were to assume that the current interest rate during each time period is used, a 20% deposit if the house price is outlaid and the mortgage is to be paid over 20 years. The only exceptions to these assumptions are made for Global Sydney, Sydney Inner West, Sydney Outer North and Sydney South where rather than a 20% being outlaid a larger $100,000 deposit is used in 1996 and this is increased to $200,000. It is felt that in these regions that due to the magnitude of the house prices that most buyers will not be first home buyers and will have probably come from selling a previous home allowing for greater underlying wealth.

Private dwelling approvals and housing finance

Private dwelling approvals (LHS)   Housing finance all lenders construction of dwellings (RHS)
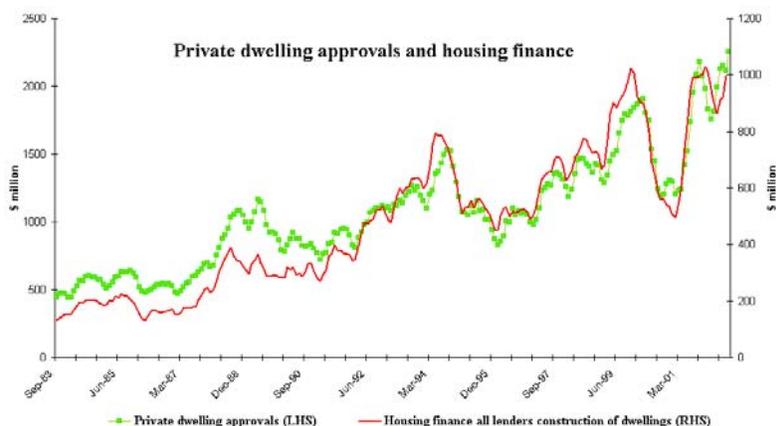
For each year using the distribution of mortgage payments data described earlier one can determine where the average implied VG mortgage payment falls in the distribution. One can then ask the question regarding what percentage of household currently in the mortgage can not afford the median Valuer General price. This is what is considered our non affordability index and is displayed in the table below for each year and includes the change in the non affordability index between 1996 and 2002. (See 3.10.1 below for example)

For Global Sydney the distribution function of mortgage payments in 1996 is displayed in Figure 1.1. In this year the average mortgage payment based on VG prices which includes a deposit of $100,000 is $1,932 per month. Based on these figures and using the graph 79% of the current mortgage payers in Global Sydney would not be able to afford the median VG house price. In Figure 1.2 the corresponding distribution for 2002 is shown. In this year the average mortgage payment based on VG prices has risen to $3,717 per month, which also allows for a larger deposit of $200,000. This has now led to 92% of people in the current mortgage marker being unable to pay the median VG price. Therefore the net effect of affordability is a 13% reduction for the current stock of mortgage payers in Global Sydney, even allowing for a greater deposit.

Table 3.20	Non Affordability Index				
	1996 Implied mortgage payments implied by Valuer General house prices	% Non Affordability	2002 Implied mortgage payments implied by Valuer General house prices	% Non Affordability	% Change 1996 to 2002
NSW North	666	47%	598	34%	-12.8%
NSW Central Coast	977	58%	1,447	78%	19.9%
Global Sydney	1,932	79%	3,707	92%	13.3%
Sydney Outer West	1,017	60%	1,506	80%	19.5%
Sydney Mid West	1,190	68%	1,733	82%	13.6%
Melbourne East	1,162	74%	1,922	88%	14.7%
Melbourne Inner	1,691	80%	2,772	93%	12.7%
Melbourne West	835	57%	1,379	82%	24.5%
VIC Gippsland	562	46%	521	34%	-12.5%
QLD Fitzroy	700	45%	619	33%	-11.9%
QLD Sunshine Coast	988	61%	1,086	71%	1.3%
Brisbane City	1,046	63%	1,217	68%	5.1%
Adelaide Central	991	69%	1,482	85%	16.0%
SA Murraylands	487	44%	517	41%	-2.7%
Adelaide Plains	576	43%	811	65%	22.2%
Perth Central	1,320	81%	1,877	86%	5.1%
Perth Outer South	978	69%	1,095	71%	1.8%
WA Pilbara Kimberley	1,081	87%	797	57%	-29.8%
TAS Hobart-South	902	64%	827	52%	-12.0%
Darwin	1,637	90%	1,722	89%	-1.4%
ACT	1,141	74%	1,337	82%	7.3%

The problem is even more of concern in the outer suburban regions of Sydney, Melbourne and Adelaide where housing is historically cheap and where most young families by their first home. In the Sydney Outer West the non-affordability index has risen from 60% to 80%, Melbourne West has increased from 57% to 82% while the Adelaide Plains has risen from 43% to 65%. What this suggests is that there will potentially be less people who will be able to afford to live in these areas. However this the area at which the poorest enter the market, and it is the platform from which people trade-up re-investing in more expensive housing. The table above show however than entire metropolitan system have moved from having a number of areas with 50% non-affordability, which one would expect, to the entire system being unaffordable to at least 70% of the residents.

With a significantly reduce market of purchasers people will find it increasingly difficult to sell and this could lead to a demand driven price fall. Additionally the current trend of people buying houses for investment purposes which could have filled should be deflated by high rental vacancies and reducing yield as previously shown

In all the remaining states the affordability index has increased moderately. Brisbane City and Perth Central have experienced a 5% shift in affordability although Perth was already beginning from a high percentage base. While in our capital city of ACT affordability has deteriorated by 7%. Darwin remains largely unchanged although the ability to buy is low. In Tasmania affordability has increased with the index dropping from 64% to 52%.

In most rural regions affordability has actually increased significantly. For instance, in NSW North there was an affordability change of –12.8% and currently sits at 34%. The situation in VIC Gippsland and QLD Fitzroy is similar. There has been a huge improvement in affordability in WA Pilbara Kimberley with a percentage change of 29.8%. The fall in SA Murraylands was low (-2.7%) although affordability was already high. In these markets they have had the advantage of the lower servicing costs without suffering from the excessive asset price inflation.

3.10.1   Calculation of affordability index

Using the cumulative distribution of the monthly payments as shown below the non-affordability percentage can e simply read from drawing a vertical line form the Valuer general implied price and reading of the appropriate level on the Y-axis.

The example of the cumulative distribution for Global Sydney for 1996 and 2002 is shown below.

Non-affordability, Global Sydney 2002
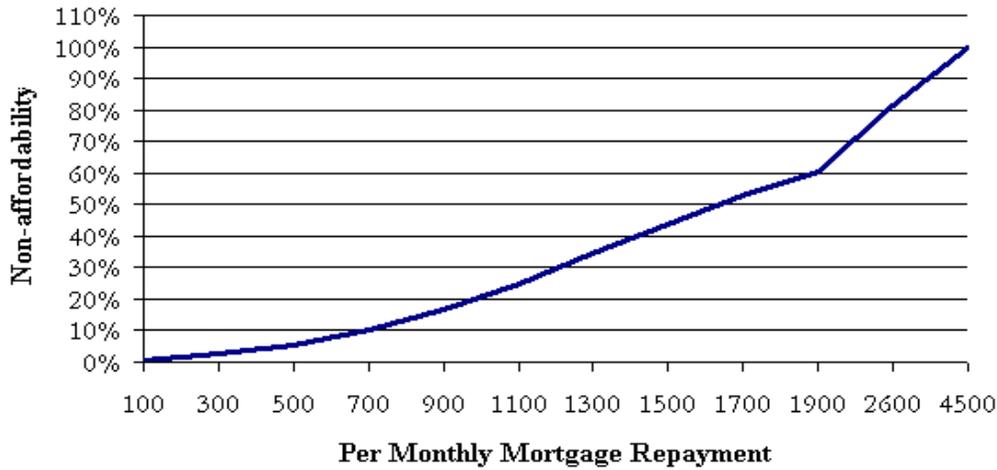
Non-affordability, Global Sydney 1996
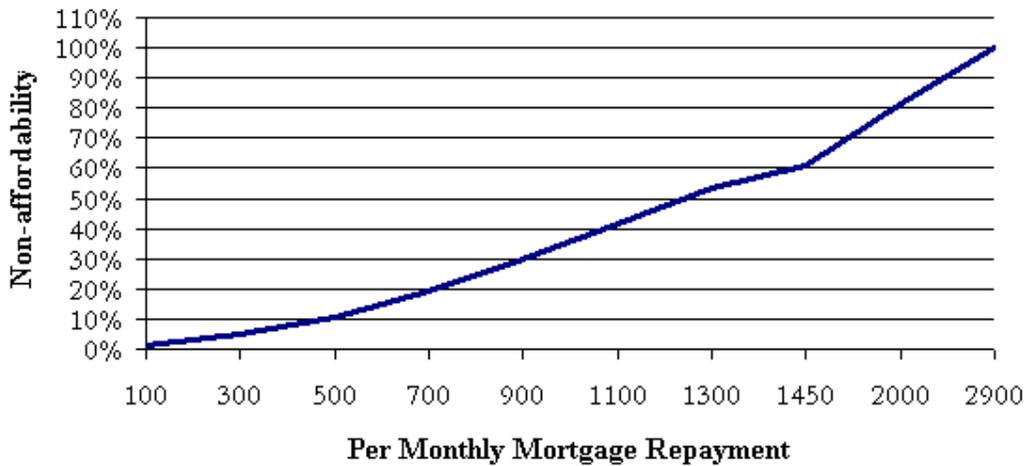
3.11   Interest rate movements

With interest rates at historically low levels the expectation is that in the future they can only go up. For the next household entering the mortgage market this will only serve to reduce affordability in the areas where affordability has already deteriorated significantly in the past 6 years. To quantity the impact of such an event interest rates were increased by 1%, from 6.8% to 7.8% while keeping all remaining factors constant. As expected this caused a drop in the estimated number of people affording the median price, with the drop being in proportion to the difference in affordability following the interest rate rise.

Table 3.21	Changes in the number of people in the mortgage market who could afford the median house price due to an interest rate rise	
	Drop in mortgages	% Change
NSW North	656	5.3%
NSW Central Coast	1,317	4.7%
Global Sydney	1,163	2.9%
Sydney Outer West	1,463	4.1%
Sydney Mid West	3,591	3.9%
Melbourne East	1,088	1.4%
VIC Gippsland	739	5.1%
Melbourne Inner	1,357	6.8%
Melbourne West	2,065	4.0%
QLD Fitzroy	824	5.4%
QLD Sunshine Coast	1,143	5.4%
Brisbane City	5,088	6.2%
Adelaide Central	876	2.4%
SA Murraylands	339	6.0%
Adelaide Plains	3,356	6.5%
WA Pilbara Kimberley Perth	140	3.1%
Perth Central	691	1.8%
Perth Outer South	4,192	6.4%
TAS Hobart-South	304	6.7%
Darwin	271	2.4%
ACT	1,543	4.2%

The descriptions refer to a fall in the number of mortgages as a measure of the hollowing out of the available markets to purchase at current prices.

In NSW of the selected series the places to be affected the most from the interest rate rise include NSW North and the NSW Central Coast with corresponding drops in the number of people paying off a mortgage of 5.3 and 4.7%. This is followed by Sydney Outer West with an estimated drop of 1463 mortgages which equates to a fall of 4.1%. A similar drop is expected to occur in Sydney Mid West. Finally, Global Sydney is expected to only fall by 2.9% which may have to do may the underlying wealth of the region but may partly due to the fact that affordability in the region was already low.

The picture in Victoria is a little different. The region with the greatest sensitivity to an interest rate rise is Melbourne West which is estimated to lose 6.8% mortgage payers, which is the greatest margin of all the selected regions. This is followed by VIC Gippsland with 5.1% and Melbourne Inner with 4.0%. Finally, Melbourne East is estimated to lose only 1.4% mortgage payers and actually out of all the selected regions appears to have the greatest resilience to the interest rate shock. (FIX –Melb West and Melb-Inner have been changed).

The effects of an interest rise are fairly uniform in QLD with the number of mortgage payers all falling in excess of 5%. This includes a fall of 5.4% in QLD Fitzroy and QLD Sunshine Coast and a fall of 6.2% in Brisbane City which corresponds to in excess of 5000 mortgage payers.

In South Australia an interest rate rise is not expected to affect Adelaide central greatly but is expected to impact significantly on SA Murraylands (6.0%) and Adelaide Plains (6.5%).

There are mixed results in Western Australia with Perth Outer South falling by 6.4% from the interest rate rise. The impact on WA Pilbara Kimberley (3.1%) and Perth Central (1.8%) are less profound.

Of the remaining regions TAS Hobart – South (6.7%) would be expected to be hit hard by an interest rate rise. The effects would still be moderate in ACT (4.2%) while relatively speaking the effects in Darwin would be small (2.4%), although affordability is already low there to begin with (2.4%).

3.12   1996 affordability

Following a short term drop in the number of mortgages payers able to afford a region the stimulus will exist for house price reductions to return to higher levels of affordability. This may occur because of a mismatch between the number of home owners wanting to sell and between the number of households who are willing to pay the higher price. There is empirical evidence to suggest the volume of sales are significantly less volatile that prices, people sell housing for a vast range of reasons that are often independent of price. With an interest rate rise, prices will tend to move to a level that implies a level of affordability closer to 1996 than current levels.

This could be significantly exacerbated if investor, anticipating the lack of capital growth unwind the leverage negative gearing positions that they currently have. A conservative assumption would be to model a movement of halfway (or 50%) to the level of 1996 affordability.

Table 3.22 shows the results associated with this scenario, calculated for each of the selected regions. The last column provides a percentage change in the value of housing as compared to its current level.

Table 3.22 House prices fall towards 1996 affordability			
	2002 price	1996, 50% affordability price	% change in price
NSW North	97,980	102,443	Stable
NSW Central Coast	237,033	186,075	-21.5%
Global Sydney	685,683	538,292	-21.5%
Sydney Outer West	246,681	194,138	-21.3%
Sydney Mid West	283,786	228,704	-19.4%
Melbourne East	314,743	239,304	-24.0%
VIC Gippsland	85,306	86,656	Stable
Melbourne Inner	453,887	394,400	-13.1%
Melbourne West	225,893	173,315	-23.3%
QLD Fitzroy	101,363	102,119	Stable
QLD Sunshine Coast	177,833	163,559	-8.0%
Brisbane City	199,332	178,906	-10.2%
Adelaide Central	261,994	218,323	-16.7%
SA Murraylands	91,086	84,283	-7.5%
Adelaide Plains	138,005	118,702	-14.0%
WA Pilbara Kimberley	130,573	165,525	Stable
Perth Central	307,326	264,307	-14.0%
Perth Outer South	154,618	144,366	-6.6%
TAS Hobart-South	135,355	134,228	-0.8%
Darwin	281,998	266,965	-5.3%
ACT	219,000	192,643	-12.0%

In those regions, which have had an increase in affordability the increase in interest rates and the movement back towards 1996 levels of affordability would suggest an increase in prices. This is counter-intuitive and unlikely to occur, as these regions most often have structural economic reasons that caused the lack of price rise in the past 6 years. As such we note that prices are likely to be stable in these areas.

Following the assumptions described above, in moving towards 50% of 1996 affordability house prices would fall significantly in all but one of the selected NSW regions.

These regions include NSW Central Coast (-21.5%), Global Sydney (-21.5), Sydney Outer West (-21.3) and Sydney Mid West (-19.4).

The main beneficiaries of the above scenario in Victoria include the outer metropolitan regions of Melbourne West (-23.3%) and Melbourne East (-24.0%). For Melbourne Inner house prices are estimated to fall from an average of 453,887 to 394,400, equating to a drop of 13.1%. For VIC Gippsland prices are expected to increase slightly.

In QLD smaller overall gains will be made than the previous two states discussed. In moving towards 50% of 1996 affordability Brisbane City can expect a 10.2% drop in house prices, QLD Sunshine Coast a drop of 8%, while as has been common in regional areas generally QLD Fitzroy can expect a slight increase in prices (0.7%).

In South Australia moderate to strong falls in house prices are expected across the board in the selected regions. This includes Adelaide Central (-16.7%), followed by Adelaide Plains (-14.0%) and SA Murraylands (-7.5%).

In the metropolitan areas of Western Australia Perth Central can expect reasonable falls (-14.0%) while Perth Outer South could expect a 6.6% drop. Conversely WA Pilbara Kimberley might expect a significant increase of 26.8%.

In the remaining states ACT can expect moderate falls of 12.0%, Darwin a small fall of 5.3% while TAS Hobart-South will almost stay unchanged (-0.8%).

3.13   Conclusion

The analysis not only points to a dramatic adjustment that will occur in house prices over the next two years. It also points to longer term structural problems for regional development and equality of access to employment. Prices for established homes in core metropolitan regions will fall. What this will do is allow high skilled households to exploit the window of opportunity to displace the lower skilled in the region. The net effect is a further widening in the gap between regions, and a reduction in the ability of regions to converge in terms of living standards, over the longer term.

4. Regional age and income distribution

4.1 Introduction

For the past four "State of the Regions" reports we have highlighted the wide range of socio-demographics and economic trends at play in Australia's' regions. Issues of technological change, lifestyle, innovation and the employment have provided a context by which we can understand the enormous differences in the outcomes and future of Australia regions. The result of these changes both past and anticipated have been measured and forecasted. Chapter 3 showed how rapidly these differences are growing.

One of the simplest impacts that the identification of differing economic outcomes should be supported by is change in the make-up of the population. As such this section of the report will look at the simple difference in the age distribution of across our regions along with the distribution of incomes that they receive.

For the past two generations rural and regional communities especially have struggled to maintain the stock of young people due to the lack of employment opportunities. This has tended to be exacerbated by the quality of education infrastructure. The determinant to the social structure of communities is now being matched by the detriment to the regions skill base. Without youth and the training that they receive, the ability of the regions to turn employment into incomes growth is significantly curtailed. Chapter 2 showed how regions have experienced employment rises without significant incomes growth, only part of this trend is . This is despite the fact that most communities have successfully developed their industry base, and increased their levels of productivity, and now more than ever require a higher level of skills.

Just as the rural and regional areas are losing their youth, the core metro regions are soaking them up, providing strong employment and incomes growth. The opportunity cost of being young and not being in the core metropolitan region of Australia is now stark. In addition to the incomes and employment advantages, Chapter 6 of this years report utilises Australian evidence based on US trends which support the assertion that income growth, high tech jobs are fundamentally related to the social values of diversity and tolerance. Our core metro regions offer high levels of diversity and tolerance, providing a nurturing environment for the young and highlight skilled to innovate.

The trend of population change is not one-way traffic though, larger numbers of older Australians are moving back towards the regional areas. In large part they don't quite make it however, preferring to stop in the lifestyle regions. The lifestyle regions, which have been introduced in previous State of the regions reports, are predominantly the areas of northern NSW and coastal non-metropolitan Queensland. In previous reports we have highlighted the amenity issues as being the strongest pull towards these regions. Based on recent Census 2001 data this chapter shows that there are also deeper issues of poverty and lack of opportunities that are driving these large-scale migrations.

The results do not augur well for the long-term relative prosperity of these regions, especially as a base for strong local employment. The issues raised also highlight concerns for implementing a future of Australia where the regional inequality identified in the previous chapter is reduced.

4.2   Synopsis of results

❑   The income differentials driven by the youth orient core metro regions will continue to drive youth migration.

❑   The aged migration phenomenon is partly a response to low incomes and weak employment opportunities for the over 55+ in the core metro regions. The movement to the lifestyle regions is occurring despite the lack of opportunities there either.

4.3   Analysis

The aim of the analysis is to highlight emerging issues, verify past trends that have previously been identified and speculate on the impact that these changes will have regional equality. In some of the information presented clearly demonstrates that further work on policy and governance is required if we are to come to terms with the trends identified.

From the table of top ten youngest regions, that is those with the highest ratio of youth aged 15 to 34, are dominated by the core metro regions. These regions including Melbourne Inner and Global Sydney are the same regions that have experienced the tremendous growth in incomes and employment as highlighted in Chapter 2. This indicates that at the same time as being the wealthiest, highest skilled and best employed regions they are also amongst the youngest. The driving forces behind the social trends that underpin this youth orientation are highlighted in Chapter 6 of the report.

Table 4.1	Ratio of share of 15-34 yr olds to national average				
Rank	SOR Name	Ratio of national average	Rank	SOR Name	Ratio of national average
1	Melbourne Inner	1.325	64	NSW Mid North Coast	0.713
2	NT Lingiari	1.273	63	NSW Richmond-Tweed	0.770
3	Darwin	1.175	62	QLD Wide Bay-Burnett	0.778
4	QLD North West	1.169	61	QLD Sunshine Coast	0.779
5	Global Sydney	1.148	60	VIC Mallee-Wimmera	0.842
6	Sydney Outer South West	1.139	59	SA Eyre and Yorke	0.844
7	ACT	1.137	58	NSW Central Coast	0.846
8	WA Pilbara-Kimberly	1.130	57	VIC Gippsland	0.851
9	Brisbane City	1.117	56	SA Murraylands	0.854
10	Sydney Mid West	1.107	55	NSW South-East	0.860

At the other end of the rankings of youth orientation are the following regions. These regions include the lifestyle regions of northern NSW and Queensland, as well as old rural communities such as the Mallee-Wimmera in Victoria.

Perhaps not surprisingly when we investigate the proportion of over 55 year olds by region almost a mirror image of the previous tables is presented. Whilst in Australia it would be clear to many that those regions without a large share of youth would be likely to have a large share of aged, this need not necessary be the case. The fact that we may normally assumed that it was, tells us a lot about the strength of the aging migration that is occurring.

Table 4.2	Ratio of share of over 55 yr olds to national average				
Rank	SOR Name	Ratio of national average	Rank	SOR Name	Ratio of national average
1	NSW Mid North Coast	1.390	64	NT Lingiari	0.623
2	QLD Wide Bay-Burnett	1.326	63	Darwin	0.641
3	QLD Sunshine Coast	1.304	62	Sydney Outer South West	0.690
4	NSW Richmond-Tweed	1.283	61	ACT	0.755
5	NSW Central Coast	1.246	60	WA Pilbara-Kimberly	0.767
6	VIC Mallee-Wimmera	1.210	59	QLD North West	0.784
7	Adelaide Central	1.184	58	Melbourne Inner	0.784
8	SA Eyre and Yorke	1.178	57	Sydney Outer West	0.784
9	VIC Gippsland	1.166	56	Perth Outer North	0.798
10	SA Murraylands	1.164	55	Melbourne West	0.846

The overall trends based on the regions types are presented in the following table and graph.

Table 4.3	Age distribution by region type including description of dominant trend			
Region	15-34	35-54	55+	Description
Lifestyle	0.892	0.999	1.139	Aged dominated
Core Metro	1.082	0.949	0.962	Youth oriented
Production Zone	1.030	0.987	0.980	Even distribution
Rural	0.915	1.010	1.096	Lack of youth
Resource-based	1.010	1.043	0.930	Lack of elderly
Dispersed Metro	0.998	1.039	0.952	Middle aged
Australia-wide	**1.000**	**1.000**	**1.000**	
(percentage)	35.6	36.6	27.8	

From the previous graph a number of clear trends emerge;

❑ Core metro regions have few children and far more than there share of youth

❑ Lifestyle regions population shortfall is in the youth 15to 34 years range.

❑ Although lifestyle regions have levels of population aged over 55 they are not as significantly over presented in the over 75 category yet. The relatively new phenomenon of moving to the beach has not yet had a chance to grow that old. The pressure on future resources that this implies will be important to future generations.

❑ Australia's distribution of middle-aged people aged between 35 and 44 is remarkably uniform.

❑ Despite starting with high levels of children rural areas rapidly lose their share of youth.

Age distribution by region-type

Legend: Lifestyle, Core, Production zone, Rural, Resource - based, Dispersed Metro
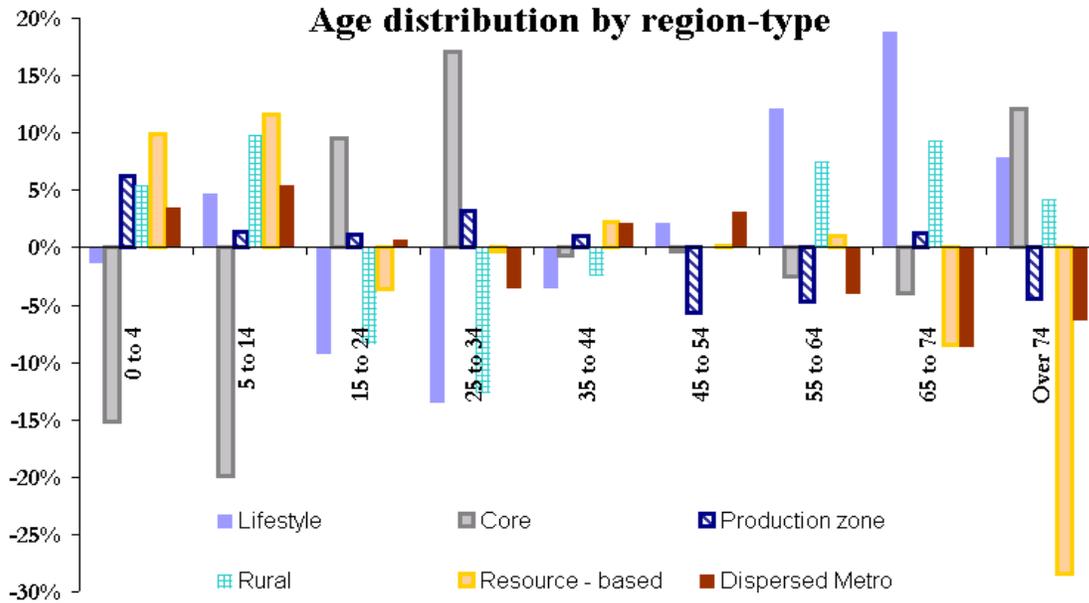
Based on these tends it will be important to ask the following questions in order to determine the economic impact that these population movements have on regional economic policy.

❑ Are those youth left behind in rural areas well employed, i.e. after the lack of jobs is taken into account is the quality of employment remaining viable in the long run

❑ Is there a discernable pattern in the income of older people participating in the migration

The following sets of tables contain answers to these questions. For both the youth and over 55 segment of the population a simple income distribution is provided.

Table 4.4	Youth income distribution by region type			
	Low< $10,000 p.a.	$10,000-$30,000 p.a.	$30,000-$50,000 p.a.	High> $50,000 p.a.
Lifestyle	33.1	42.2	19.6	5.1
Core Metro	25.3	29.8	28.8	16.1
Production Zone	30.6	36.1	25.2	8.1
Rural	32.7	40.7	20.3	6.3
Resource-based	32.2	35.0	22.5	10.3
Dispersed Metro	29.6	34.1	26.5	9.8
Australia-wide	**29.6**	**35.1**	**25.1**	**10.1**

Income distribution differences for youth aged 15 to 34 by region type

Legend: Lifestyle, Core, Production zone, Rural, Resource - based, Dispersed Metro
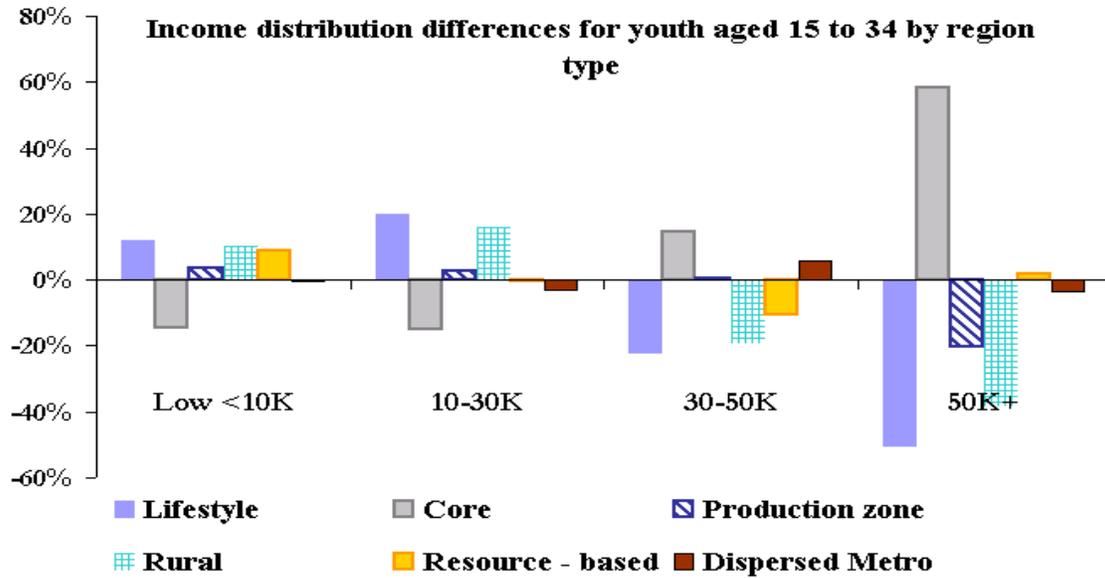
The table and graph clearly show that those remaining in the rural areas suffer a significant disadvantage, especially in the range of moderate to high incomes over 50K. Youth aged 15 to 34 are almost three times more likely to earn more than 50K in the core metro regions as compared to their rural or lifestyle based counterparts.

Turning to the older age groups the results are just as significant. Those people who are choosing to leave the core metro and dispersed metro regions are forming communities of exceptionally low incomes. Although not equivocal it is highly likely that those leaving tend to be on average less well off.

The geographical distinctions that these migration processes have resulted in will tend to get worse in the short run.

Table 4.5	Older aged, income distribution by region			
	Low< $10,000 p.a.	$10,000-$30,000 p.a.	$30,000-$50,000 p.a.	High> $50,000 p.a.
Lifestyle	34.0	53.1	8.6	4.3
Core Metro	27.2	49.4	13.0	10.4
Production Zone	39.4	48.5	8.2	4.0
Rural	34.4	52.5	8.6	4.4
Resource-based	33.9	50.2	9.6	6.3
Dispersed Metro	31.5	50.0	11.6	6.9
Australia-wide	**32.9**	**50.4**	**10.3**	**6.4**

Income distribution differences for over 55 year olds by region type

Legend:
- Lifestyle
- Core
- Production zone
- Resource - based
- Dispersed Metro
- Dispersed Metro
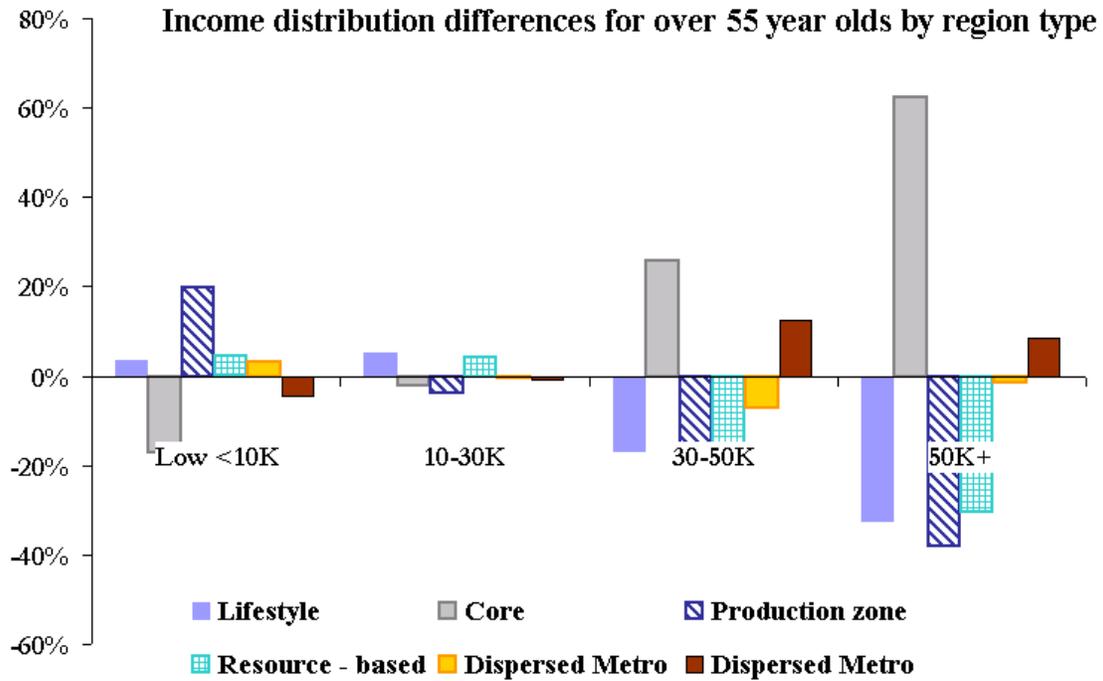
The two results highlighting the lack of youth opportunities and the low levels of retirement incomes is important considered as the remaining chapters highlight other issues of regional inequality. In essence these two tens that are drive graphical dislocation at each end of the working live remain important undercurrent in the wider debate on governance and development policy.

5.   Labour market, employment and unemployment

5.1   Introduction

This section of the report estimates the level of unemployment by region using the NIEIR corrected unemployment rate. The requirement for an alternative estimate of regional employment and unemployment has been documented in previous reports. In essence the labour force area estimates produced from the official labour force survey are not appropriate for the estimates of the real level of unemployment within a region. 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. Consistent with the trend in the other parts of the report, this section highlights the needs for a new model of governance that seeks to address a consistent set of economic parameters that can measure regional advantage and disadvantage and seek to redress the imbalances of the current model.

5.2   Synopsis of Results

❑   Unemployment in Australia has fallen from 10.02 per cent in 2001 to 9.21 per cent in 2002.

❑   The level of employment growth has been substantial, although the majority of this job creation has been part-time and casual.

❑   Despite this years political controversy surrounding the Disability Support Pension (DSP) and the proposed initiatives of the Federal Government to remove the unemployed from the ranks of the DSP, the number of DSP recipients once again grew.

❑   Approximately 5.4 per cent of all people aged between 18 and 65 years now receive the DSP.

❑   Higher levels of DSP and Single Parent Payments were offset by falls in the levels of long-term unemployed to reduce the number of structurally unemployment from 1.31 million in 2001 to 1.28 million in 2002.

❑   There continues to be large differences in the levels of growth in the DSP between regions, with the "lifestyle" regions witnessing an 80 per cent increase in recipient since 1991 versus the core metro regions growth of under 30 per cent. Benefit reassignment continues to be a strong pointer to the failure of economic policy to address regional imbalances building in the economy.

❑   The lowest levels of unemployment are once again in Sydney with 4 of Sydney's 7 regions occupying the top four places in Australia.

❑   Conversely although major infrastructure initiatives and a generally positive economic outlook exists for Tasmania, its three regions occupy places in the bottom six of 64.

❑   Undobutebd the proiibilty and productivity of the agricultural secotr in the past few years has made an important ocntribtuin to the positve meployment results of 2001 and 2002 togeter with the housing recovery. Gvien the droguh oof 2002/3 and the significant cotraction in housing ocnstrcutionacivyt in 2003/4 it is ikely that over the next couple of years there wil be afurthe deterioration in labour makrte conditions

5.3   NIEIR Corrected Unemployment

5.3.1   Derivation

The NIEIR estimates of unemployment are based on recipient information in the September quarter of each year. The following formula shows its components.

$$NIEIR \; Unemployment \; = \; \frac{\left(\begin{array}{l} Newstart + Mature\,Age\,Allowance + Excess\,growth \\ in\,DSP + Estimate\,of\,unemployed\,youth \end{array}\right)}{\left(\begin{array}{l} Adjusted\;Labour\,Force = Official\,Labour\,Force \\ + Excess\,growth\;in\;DSP \end{array}\right)}$$

5.3.2   Background

In June 1991 there were 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. Other changes have included the introduction of 'mutual obligation' and the blurring of definitions of study and job seeking amongst youth.

To illustrate the magnitude of the changes and their different regional impacts it is necessary to present a number of summary tables. Table 5.1 outlines the total number of recipients of the disability and sickness type benefits. The vast majority (95 per cent) receives the Disability Support Allowance. Other benefit types include Mobility, Sickness and Rehabilitation allowances (year dependent).

Table 5.1	Disability Support Pensions (DSP)		
Year	DSP* recipients	% adults 18-65	Excess growth
1991	384304	0.036	0
1996	515092	0.045	141243
1998	570613	0.048	154800
2000	638406	0.054	178320
2001	625903	0.052	189565
2002	648657	0.054	209924

Note: * includes sickness and mobility allowance recipients
Source: NIEIR's LGA YourPlace database.

When an individual moves from unemployment benefits to a disability support pension, their circumstances are likely to remove them from estimates of the size of the labour force. As a result, the unemployment rate, which is a measure of the number of people who are unemployed in the labour force, will improve. The official unemployment rate will report that unemployment has decreased, without any additional people becoming employed, without any improvement in the welfare of the individual or the community they live in.

To illustrate imagine there are nine people in a room of whom five are unemployed.

$$\text{Unemployment Rate}^1 \ = \ 5/9 \ \cong \ 55\%$$

Now one person leaves to access the DSP.

$$\text{Unemployment Rate}^2 \ = \ 4/8 \ \cong \ 50\%$$

The unemployment rate has fallen by 5 percentage points without one job being created.

This magnitude of the number of adults moving out of the labour force is witnessed in the labour force estimate. The size of the labour force can be expressed as a percentage of adults aged between 18 and 65 years. Using this measure, the size of the labour force has fallen by approximately 1.6 per cent, almost identically matching the rise in DSP payments.

The artificiality of the constructed official unemployment rate is highlighted by the fact this DSP trend alone is responsible for a reduction in the official rate of 2.1 per cent. Considering the economy has experienced significant change, including a period of extraordinary economic growth it is alarming that up to 60 per cent of the improvement in the official unemployment rate is attributable to a growth in the number of Australians who are unable to work due to a classified disability.

Examination of the tables that follow reveals the enormous regional differences in these effects. Certain areas have received far higher rates of growth in number of DSP recipients, hence their local unemployment estimates have been distorted even more than the national average.

Table 5.2 Percentage of population receiving DSP							
Region	2002	2001	2000	1998	1996	1995	1991
Rural	4.0	3.9	3.7	3.5	3.2	3.1	2.3
Core Metro	2.8	2.7	2.8	2.9	2.8	2.8	2.2
Production Zone	3.9	3.8	3.4	3.5	3.2	3.2	2.5
Lifestyle	4.0	3.8	4.5	3.2	3.0	3.0	2.2
Dispersed Metro	2.4	2.4	2.0	2.3	2.1	2.1	1.5
Resource Based	2.8	2.8	4.4	2.5	2.4	2.4	1.9
Australia - wide	3.3	3.2	3.2	3.0	2.8	2.8	2.1

The rural and lifestyle regions have had the highest level of growth between 1991 as can be seen in the following graph. The population measure above is defined as the percentage of all people regardless of age.

Growth in Disability Support payments per capita since 1991
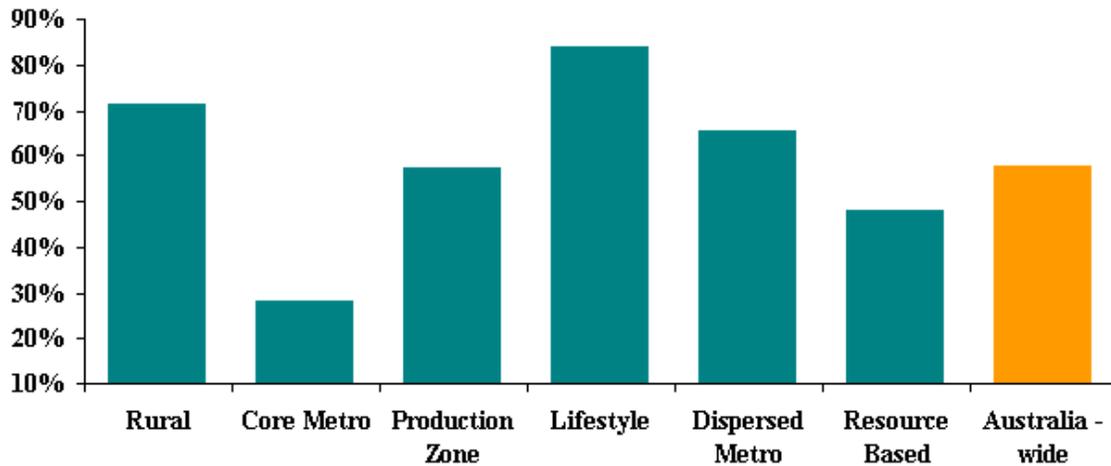
Armed with the actual growth in the level of DSP recipients by region along with the population growth that has occurred we can determine the excess growth in DSP since 1991[1].

5.3.3   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 a *corrected unemployment rate*. To derive the *corrected unemployment* the first step is to take out the effect of the increase in disability support pensioners on the labour force. The DSP changes have made the labour force smaller.

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

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

---

[1]   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 bay-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 highest lees of excess DSP number in the adjusted labour force. As alluded to, three of the top ten regions have had less growth in DSP than would be suggested by population growth. These regions in order are Melbourne Inner, Global Sydney and Sydney Inner West.

Table 5.3	Excess DSP in effective labour force, top ten regions	
Rank	SOR Name	% of workforce
1	Melbourne Inner	-0.9
2	Global Sydney	-0.3
3	Sydney Inner West	-0.3
4	Sydney Outer North	0.3
5	Sydney South	0.7
6	Perth Central	0.7
7	QLD Pastoral	0.9
8	Darwin	1.1
9	Perth Outer South	1.2
10	Brisbane City	1.2

The tenth best region, Brisbane City still has more than 1.2 per cent of its effective work force transferred to DSP at a faster rate than 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 6.7 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.

Table 5.4	Excess DSP in effective labour force, bottom ten regions	
Rank	SOR Name	% of workforce
64	TAS North West	6.7
63	QLD Wide Bay-Burnett	6.7
62	NSW Richmond-Tweed	5.5
61	TAS Hobart-South	5.3
60	NSW Mid North Coast	4.8
59	SA Eyre and Yorke	4.8
58	QLD West Moreton	4.7
57	NSW South-East	4.4
56	NSW Central West	4.3
55	Adelaide Plains	4.2

NIEIR has noted that in the past those regions with the least opportunities for employment tend to have had the largest increase in DSP. This is clearly demonstrated in the graph below, which shows the percentage of DSP that represents excess growth for each of the region types. The rural and lifestyle regions have almost 40 per cent of all DSP recipients being in excess of natural increase.

% of DSP receipents considered excess growth
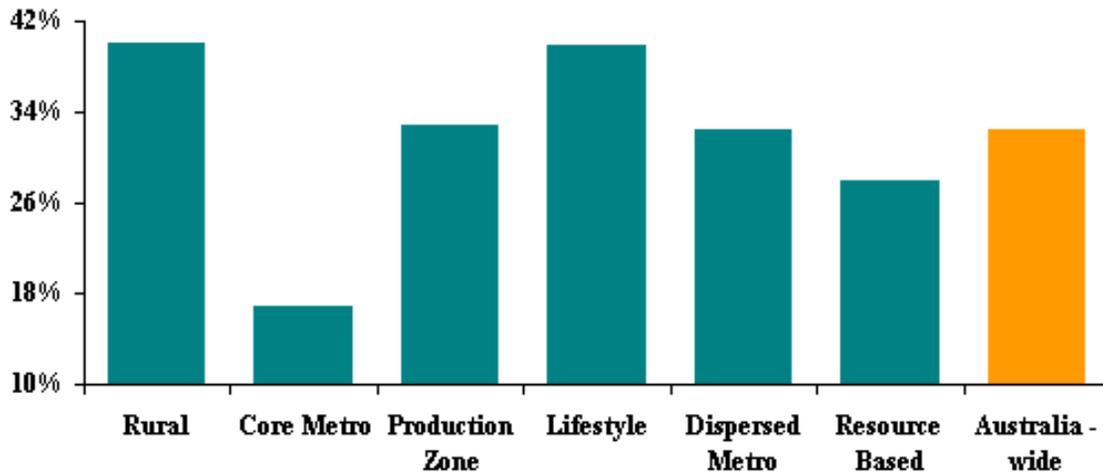
5.3.4   Corrected unemployment rates

Table 5.5 below shows that in 1991, the number of recipients was below measured unemployment in the labour force. This was due to two factors. Firstly, 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 means tests. However if they remain unemployed and their personal finances deteriorate they then become eligible, the end result recipients should approximate the levels of unemployment.

Table 5.5 shows there is still more people who directly receive unemployment benefits than the official figure estimates are unemployed. The imperfections of the current official method has the effect of not estimating the correct levels of unemployment. In the third quarter of 2001 Australia experienced negative growth, with large losses of employment especially in the housing sector. The official rates failed to pick up on the movements, whereas simply counting the number of recipients shows a clear increase. With the subsequent revival of the housing sector the number of recipients has once again fallen.

Table 5.5	Comparison of official unemployment and "unemployed" recipients	
Year	Labour force unemployed	Recipients*
1991	802635	643614
1996	760131	819995
1998	735045	803388
2000	627169	720431
2001	648218	799706
2002	659860	711022
Note: * Includes: Newstart, estimates of Youth Allowance unemployed and Mature Age Allowance circa. September each year *Source:* NIEIR's LGA YourPlace database.		

Comparison of Official / NIEIR Unemployment
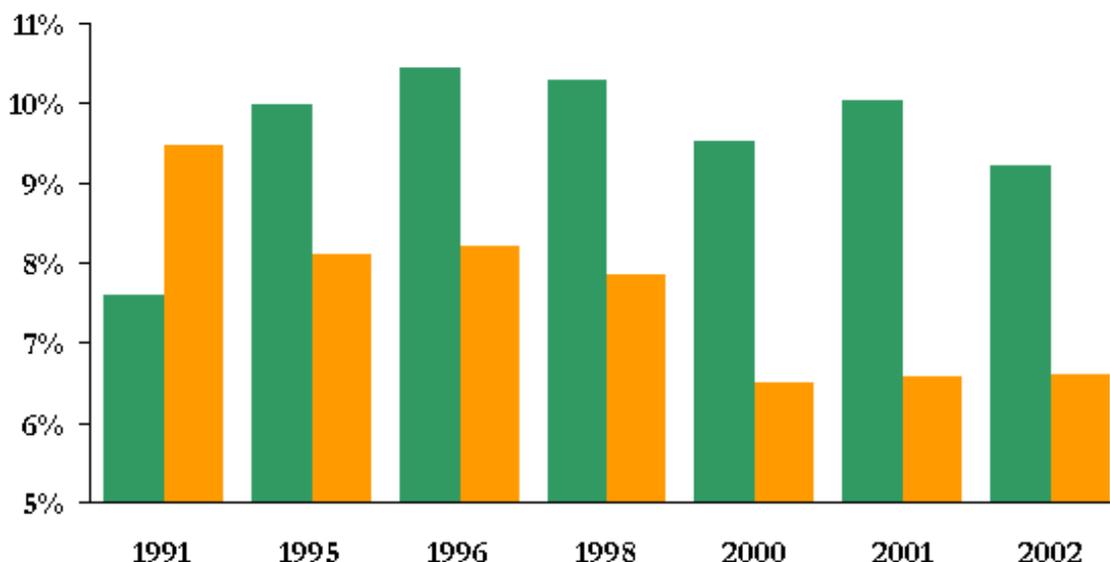
Looking at the trends at a regional level the top ten and bottom ten regions are detailed. The top ten includes four of the seven Sydney regions occupying the first four places. The pre-eminence of Sydney as a centre of income, employment and wealth creation is once again shown. It is worth noting that despite the very low levels of unemployment that the top ten regions had in 2001 compared to a national average of 10.21 per cent, all regions improved in the year.

To demonstrate the scale of the difference between the official figure and the corrected unemployment rates the 10th ranked region of Sydney Outer West has a corrected unemployment equal to the official national average. In other words, 54 of the 64 regions have a corrected unemployment rate that is worse than the official national average.

Table 5.6	NIEIR Unemployment rate, top ten regions		
Rank	SOR Name	2002, % of workforce	2001, % of workforce
1	Sydney Outer North	2.0	2.2
2	Sydney Inner West	3.3	3.5
3	Global Sydney	3.6	3.7
4	Sydney South	4.0	4.4
5	Melbourne East	4.6	5.0
6	QLD Pastoral	4.7	6.1
7	ACT	5.1	5.5
8	Melbourne South	5.8	6.2
9	Melbourne Inner	6.4	7.3
10	Sydney Outer West	6.7	7.3

The levels of regional inequality are starkly portrayed in the table of the bottom 10 regions. There is ample evidence in the tables that there are many regions of Australia that have unemployment significantly in excess of 10 per cent. The bottom ten regions lay in five separate states and a territory, the diverse membership of the list highlights the regional spread of unemployment.

Table 5.7	NIEIR Unemployment rate, bottom ten regions		
Rank	SOR Name	2002, % of workforce	2001, % of workforce
64	NT Lingiari	25.5	25.6
63	QLD Wide Bay-Burnett	20.1	20.8
62	NSW Richmond-Tweed	19.8	21.3
61	NSW Mid North Coast	19.4	21.3
60	TAS North West	18.6	19.2
59	TAS Hobart-South	16.0	16.6
58	SA Eyre and Yorke	15.6	16.7
57	Adelaide Plains	14.5	15.8
56	VIC Gippsland	13.9	15.7
55	TAS North	13.8	15.1

On the following page a *cartogram* of the NIEIR corrected unemployment rates is presented. The cartogram is used to display regions of different scale on a single map. The regions of high population density are enlarged and the sparsely populated areas reduced, allowing the richness of the entire nations results to be placed side-by-side.

An analysis of the difference between the official DEWSRB unemployment and the NIEIR corrected unemployment shows the combined effects of under counting of recipients and no allowance for the excess growth in DSP producing markedly lower results for the official rates in the poorer areas of Australia.

Table 5.8	Difference DEWSRB / NIEIR unemployment, top ten regions	
Rank	SOR Name	% of workforce
1	NT Lingiari	-15.1
2	NSW Mid North Coast	-9.3
3	NSW Richmond-Tweed	-8.8
4	NSW Far and North West	-8.0
5	NSW North	-7.8
6	QLD Wide Bay-Burnett	-7.7
7	TAS North West	-7.3
8	NSW Central West	-7.3
9	TAS Hobart-South	-6.9
10	SA Eyre and Yorke	-6.9

NIEIR Unemployment
percentage of population, 18 to 65 years

- 13.2 to 25.6
- 10.8 to 13.2
- 9.2 to 10.8
- 7.9 to 9.2
- 2 to 7.9

On the other hand the DEWRSB official figures, may actually overstate the levels of unemployment in the wealthiest parts of Australia. This is predominantly due to the very low number of DSP recipients in these communities, predominantly due to income and cost restrictions.

Table 5.9	Difference DEWSRB / NIEIR unemployment, bottom ten regions	
Rank	SOR Name	% of workforce
64	Sydney Outer North	1.0
63	Sydney Outer South West	1.0
62	Global Sydney	0.5
61	Melbourne East	0.0
60	Sydney Inner West	-0.2
59	Brisbane City	-0.2
58	ACT	-0.2
57	Sydney South	-0.3
56	Melbourne Inner	-0.7
55	Melbourne South	-0.7

5.3.5   NIEIR Unemployment rates by region type

Combining the 64 regions into the six region types provides the trend in unemployment for Australia in various types of regions. The regional inequality changes that were identified in Chapter 2 are once again reinforced when considering the distribution of unemployment and the changes in unemployment over the previous seven years. By far the largest fall in the NIEIR unemployment rate have occurred in the Core Metro regions.

Change in NIEIR unemployment rate since 1995
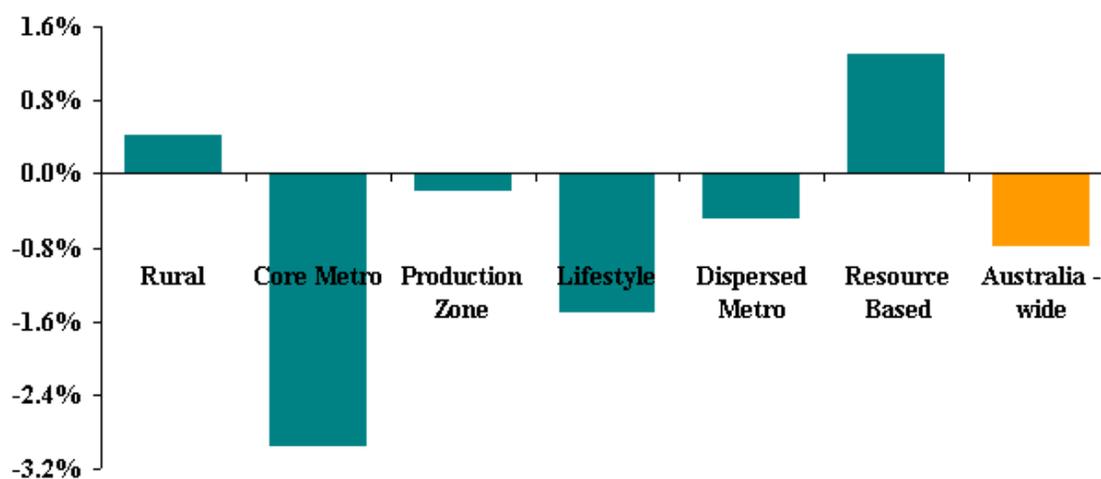
Turing to the level of unemployment by region the most pleasing trend has been the almost across the board reduction in unemployment for the past year. Notwithstanding, it is important to note that the rural, production, lifestyle and resources based regions of Australia still have unemployment levels above 10 per cent.

Table 5.10	NIEIR Unemployment rates by region						
Region	2002	2001	2000	1998	1996	1995	1991
Rural	11.33	12.50	12.33	11.94	11.98	10.91	8.34
Core Metro	6.69	7.46	7.36	9.11	9.50	9.63	6.97
Production Zone	10.89	11.55	10.14	11.65	12.04	11.06	8.65
Lifestyle	13.55	15.34	15.72	14.87	15.37	15.05	10.68
Dispersed Metro	6.22	6.73	5.66	7.13	7.50	6.70	5.28
Resource Based	11.82	11.45	14.89	9.75	9.91	10.53	8.70
Australia - wide	**9.21**	**10.02**	**9.53**	**10.29**	**10.61**	**9.98**	**7.60**

A graph of the performance of the six regions since 1991 using the NIER measure follows. The important point to note from this graph is the maintenance of relative position within the six region types. With the exception of the resources based regions which tend to have a greater degree of volatility.

NIEIR Unemployment by region type
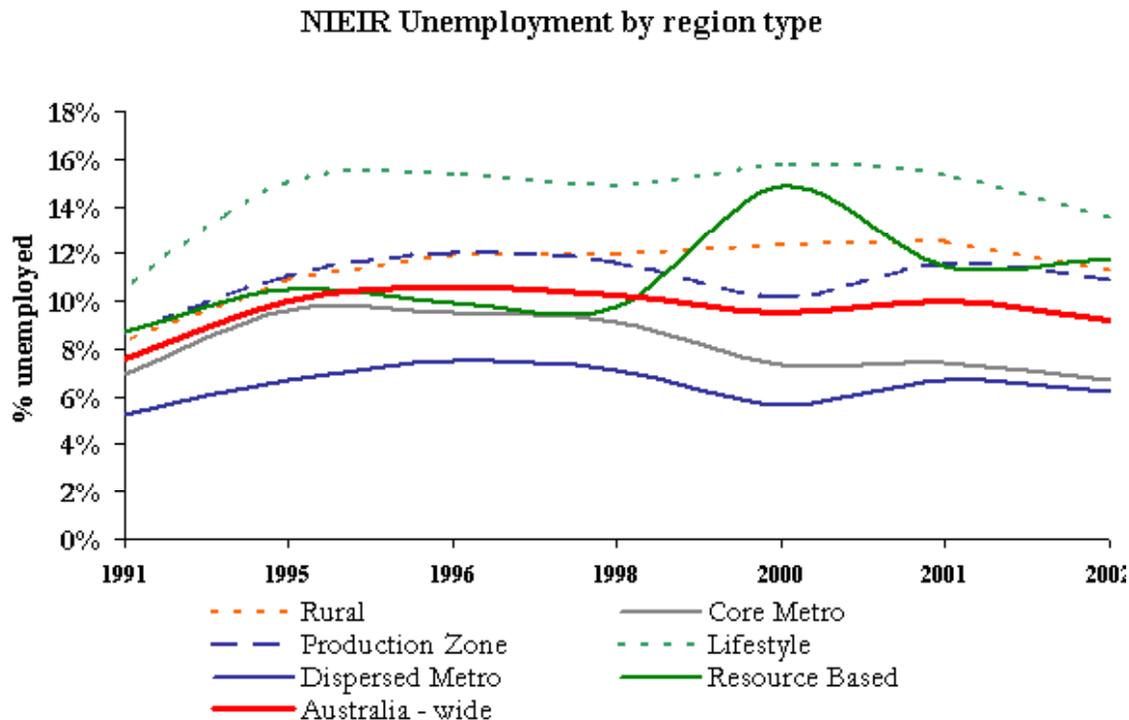
5.3.6   Structural unemployment

In the 1999 State of the Regions report, National Economics introduced a new measure of unemployment that accounted for those in the population who where considered to be structurally unemployed. Base upon detailed DSS and Centrelink data the constructed series allowed us to identify regions that had very high effective rates of under-employment due to structural issues in their workforce. Structural barriers that were 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: 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 everyone on disability support pensions, 50 per cent of people from a non-English speaking background on Newstart allowance, 20 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.

Single parent pensions have been steadily increasing since 1991. Population growth and changing household structures have been driving this growth. The geographical concentration of this growth however has not been uniform, with a familiar pattern of limited growth in the core metro regions and higher levels in the lifestyle regions.

Table 5.11 Single parent recipients	
	Single Parent Pension
1991	262800
1996	339166
1998	364628
2000	400218
2001	423964
2002	436660

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 64th ranked region the NSW Mid North Coast having 19.6 per cent of its population classified as structurally unemployed versus only 3.0 per cent for Sydney's Outer North.

Growth in Single Parent payments per capita since 1991
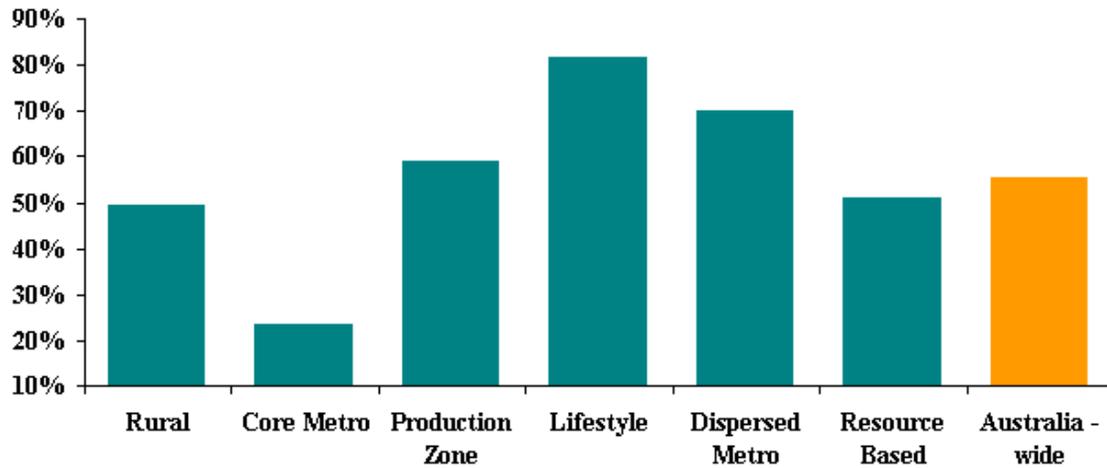
Table 5.12	NIEIR structural unemployment rate, bottom ten regions	
Rank	SOR Name	% of population aged 18 - 65
64	NSW Mid North Coast	19.6
63	VIC Gippsland	19.5
62	NSW Richond-Tweed	19.4
61	QLD Wide Bay-Burnett	18.6
60	NT Lingiari	18.6
59	Adelaide Plains	16.5
58	NSW Far and North West	16.2
57	SA Eyre and Yorke	15.4
56	TAS Hobart-South	15.3
55	QLD West Moreton	14.8

Table 5.13	NIEIR Structural unemployment rate, top ten regions	
Rank	SOR Name	% of population aged 18 - 65
1	Sydney Outer North	3.0
2	Global Sydney	5.6
3	Sydney South	5.7
4	Melbourne East	5.8
5	ACT	6.2
6	Sydney Inner West	6.3
7	Melbourne South	7.0
8	QLD Pastoral	7.6
9	Brisbane City	8.2
10	Melbourne Inner	8.3

The results for each of the 64 regions are presented in the regional summaries as part of appendices. The same results are presented using the cartogram format on the following page. The cartogram designed allows us to clearly see the trend of unemployment fanning out from the centres of the major cities.

5.3.7   Long-term unemployment

A subset of the corrected and structural unemployment is the long-term unemployed[2]. 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 all seven Sydney regions occupying places in the top ten.

Table 5.14	Long-term unemployment, top ten regions	
Rank	SOR Name	% of workforce
1	Sydney Outer North	0.6
2	Sydney South	1.3
3	Melbourne East	1.3
4	Sydney Inner West	1.4
5	Global Sydney	1.6
6	ACT	1.6
7	Sydney Outer West	1.7
8	QLD Pastoral	1.8
9	Melbourne South	1.9
10	Sydney Outer South West	2.1

Table 5.15	Long-term unemployment, bottom ten regions	
Rank	SOR Name	% of workforce
64	NT Lingiari	13.6
63	NSW Mid North Coast	7.9
62	NSW Richmond-Tweed	7.7
61	QLD Wide Bay-Burnett	6.8
60	TAS North West	6.3
59	SA Eyre and Yorke	6.0
58	TAS Hobart-South	5.7
57	Adelaide Plains	5.3
56	TAS North	5.1
55	NSW Far and North West	5.1

---

[2]   Definition as per Centrelink records, indicates recipient receiving benefits for a period greater than 12mths

Structural Unemployment
percentage of population, 18 to 65 years

- 13.9 to 19.6
- 11.7 to 13.9
- 10.6 to 11.7
- 9.4 to 10.6
- 3 to 9.4
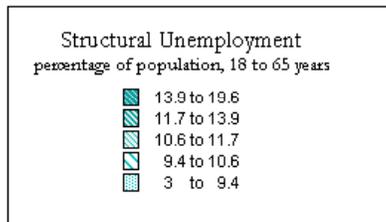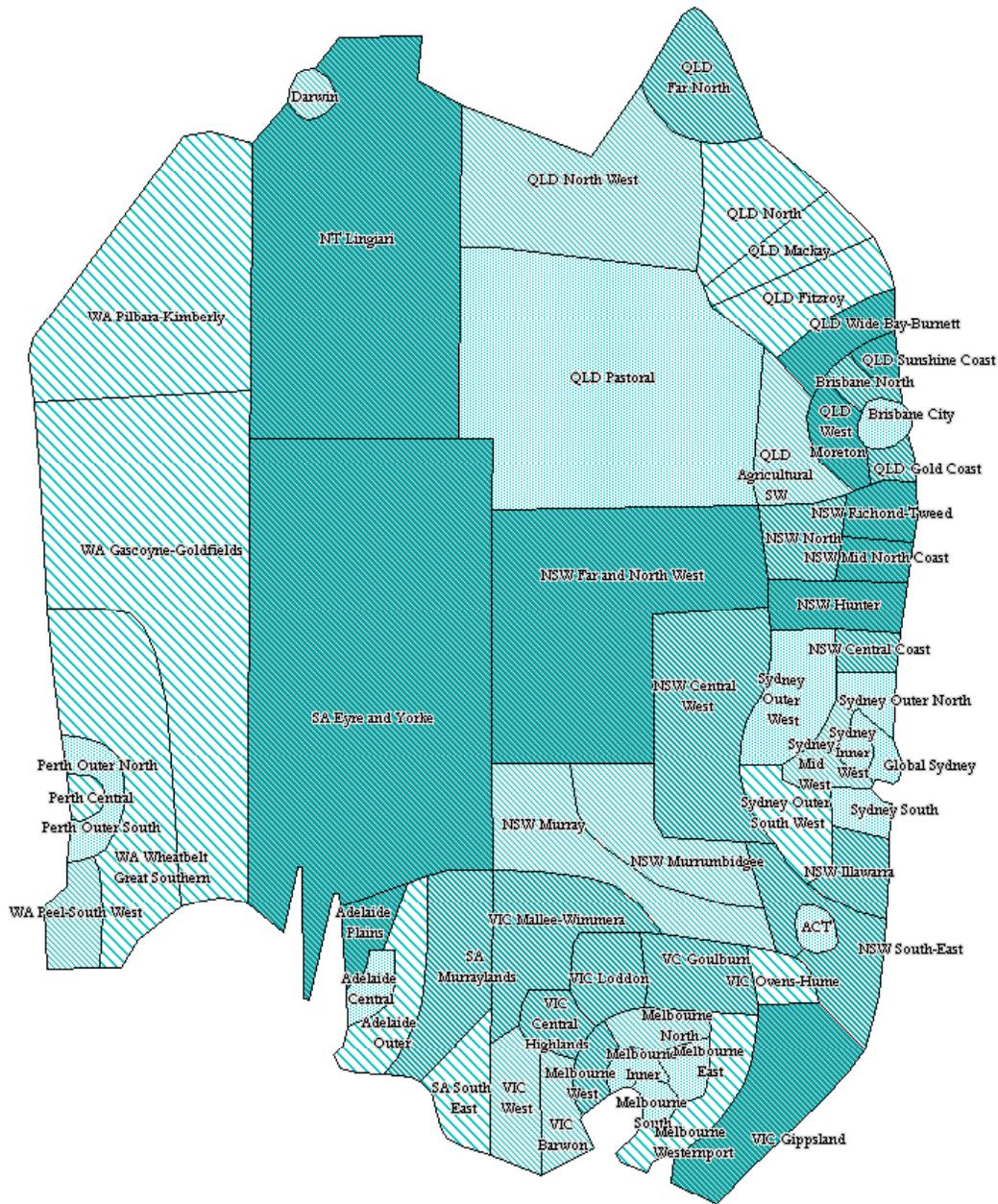
5.4 Relationship between corrected levels of employment and regional inequality

The results for the labour market, employment and unemployment section have highlighted the success of the economy in creating employment over the past year. It has also however shown how long-term unemployment, levels of disability support and single parent status continue to display significant regional variation.

With these regional variation being maintained it points towards the need to develop new aims for government, whereby these gaps are addressed by similar target policies that are identified in the US and Europe in later chapters.

6.   Benchmarking Australian regions with United States regions

6.1   Introduction

The rise of the new economy has radically altered the ways that cities and regions establish and maintain their competitive advantage. In the new economy, regions develop advantage based on their ability to quickly mobilize the best people, resources, and capabilities required to turn innovations into new business ideas and commercial products.[1]

Leading regions establish competitive advantage through their capabilities. They are vehicles for resource mobilization that can almost instantaneously bring together the resources required to launch new businesses and turn innovations into successful products. For these reasons, the nexus of competitive advantage shifts to those regions that can generate, retain, and attract the best talent. This is particularly so since knowledge workers are extremely mobile and the distribution of talent is highly skewed.[2]

This begs the question, how do regions attract this type of talent to their communities? How do these talented individuals make their residential decisions? What are the distinguishing factors that set the high-technology centres apart from other areas?

Richard Florida and his colleagues in America theorize that a city's tolerance and acceptance of diversity—its level of tolerance for a wide range of people—is key to its success in attracting talented people. Diverse, inclusive communities that welcome unconventional people – same sex households, immigrants, artists, and free-thinking "bohemians" – are ideal for nurturing the creativity and innovation that characterize the knowledge economy.[3] More specifically he has created the "creative capital theory". This theory postulates that economic growth is determined by the locational choices of the holders of creative capital. The theory identifies the type of human capital, creative people who are the key to economic growth, and secondly, it identifies the underlying factors that shape the locational decisions of these creative people.[4]

Consequently, Florida has developed a suite of indicators which benchmark regions against others in order to identify areas with a high "Creative Class"[5] component in their regional demography.   We have adopted Florida's techniques to derive the same set of indicators for Australian regions, to facilitate comparison between the two countries and identify correlations between the indicators and high-tech regions.

---

[1]   *"Competing in the Age of Talent" - National Version* – Richard Florida, Jan 2000.

[2]   *"Competing in the Age of Talent" - National Version* – Richard Florida, Jan 2000.

[3]   www.brook.edu/press/REVIEW/winter2002/florida.htm

[4]   Florida, R., "The rise of the creative class and how it's transforming work, leisure, community and everyday life", Basic Books, USA, 2002, pp.223-234

[5]   The creative class includes, designers, engineers, health care professionals, essentially It includes anyone who uses creativity as a key factor in their work

6.2   Synopsis of argument

❑   The widening gap between the higher skilled and the lower skilled members of the workforce is driving an important social trend worldwide. Those whose skills are in high demand know it, and they are choosing to locate in communities and cities that please them, knowing work will follow.

❑   Within this new paradigm local communities need to understand the underlying forces which are driving these decisions, and how successful their regions are in harnessing these forces.

❑   This report shows that Australia is well placed in the attraction and development of high concentrations of creative forces

❑   Combing USA research with National economics analysis this report shows areas of Sydney and Melbourne would be placed within the top ten USA cities.

❑   According to the research conducted by Richard Florida the primary determinant of regional economic growth is a concentration of "Creative Capital". Creative capital is responsible for the innovation, which drives high-tech industries and dynamic economic outcomes. Increasingly the location of high-tech firms is dictated by where there are high concentrations of creative capital. That is, firms are now following the talent as opposed to the converse. The key to identifying regions where there will be concentrations of high-tech industries and dynamic growth outcomes is understanding how the creative class make their decisions on where to locate.

❑   The decision parameters used by the creative class on where to locate, are based on the characteristics of an area, that is its openness with regard to acceptance of social and sexual diversity, bohemian and alternative lifestyles, and multiculturalism. In conjunction with a preference for a vibrant street culture, music scene, nightlife and open spaces. The indices derived to measure these parameters accurately predict regions where the proliferation of high tech industries and economic growth are, and will occur.

❑   The areas which consistently score the highest in terms of their diversity (percentages of same sex households, foreign born, and bohemians) and amenities are the regions that have the highest concentrations of the creative class and capital.

❑   The regions with the greatest concentrations of creative capital, Global Sydney, Sydney Outer North and Inner West, Melbourne's Inner and East, Perth Central and Brisbane City are where there is the greatest levels of high-tech industries and innovation, producing superior economic outcomes.

❑   Regions abilities to innovate are underpinned by the presence of the creative class; this is evident in the research conducted in America by Richard Florida, and the analysis conducted in Australia by NIEIR.

6.3   Creative capital and location choice

According to the results of Florida's research there a select group of major factors pre-eminent in the locational choices of the creative class. The major factors include, thick labour markets, lifestyle, social interaction, diversity, authenticity, identity and quality of place.

Firstly, given the amount of time people stay with a particular company has trended downwards, regions need to have a job market which is conducive to horizontal movement. Industry clusters are an example, where there is the creation of a labour pool for companies and a "thick labour market"[6] for people who need jobs.

---

[6]   ibid. p.224

Lifestyle options are also sited as a driving force in location choice. Given the unpredictable nature of the creative class' work schedules they require access to entertainment and recreation on a "Just-in-time" basis. The notion that some cities are for fun and others for making money is considered insufficient. A range of "scenes" is sited as an important factor. These scenes include music, arts, technology, nightlife and so on.

Opportunities for social interaction play an important role in location choice of the creative class. Social interaction opportunities are facilitated by having venues suitable to the formation of casual acquaintances, such as coffee shops, bookstores, cafés and restaurants.

Diversity in terms of visible ethnicity, sexual preferences, religion and so on signals to employers and people "that a community embraces the open meritocratic values of the Creative age"[7] The creative class desire a cosmopolitan atmosphere where there is a free exchange of different opinions, cultural, political and gastronomic options.

A location must also have authenticity. For instance a particular mix of old buildings and cultural heritage. The preferred areas have a certain feel or character which gives it a sense of authenticity.

The creative class is beginning to substitute reference points for self-identity. That is, traditionally people identified themselves with where they worked, however, according to Florida the creative class increasingly identifies with where they live.

The above creative class location characteristics are used in conjunction to arrive at the concept of "Quality of place". Florida conceptualises this using three dimensions:[8]

1. *What's there*: the combination of the built environment and the natural environment; a proper setting for pursuit of creative lives.

2. *Who's there*: the diverse kinds of people, interacting and providing cues that anyone can plug into and make a life in that community.

3. *What's going on*: the vibrancy of street life, café culture, arts, music and people engaging in outdoor activities – altogether a lot of active, exciting, creative endeavours.

6.4   High-tech regions

The following section endeavours to emulate Florida's High-tech index, to rank Australia's regions and benchmark them against the North American regions, on the basis of their contribution to high-tech output.

6.4.1   High-Tech Index

Calculation: The high-tech index ranks a region on two criteria. One is the percentage of the output of the nation's high-tech industry that is contributed by the particular area; and, the other compares the percentage of high-tech output in the particular area to the percentage of high-tech output for the nation as a whole. The combination of these two criteria purports to identify regions that contribute significantly to the nation's high technology output.[9]

---

[7]   ibid. p.227

[8]   ibid. p.231

[9]   http://irascibleprofessor.com/comments-7-2-01

Context: Of importance is what constitutes a high-tech industry. So it was possible to compare the analysis with the analysis undertaken in the USA, the same definitions were required. Broadly, high-tech industries include: industrial chemical/plastics manufacturing, manufacturing of electrical parts and equipment, and electrical, telecommunication, IT and specialized services.

A measure of 'high-techness' should capture innovative, highly skilled activities that promise long term dynamism and resiliency for regions.

The table below presents the top ten regions as measured by the high-tech index for Australia benchmarked against the top ten American regions.

Table 6.1	Top 10 Regions – High-Tech Index		
Region	Rank (to USA regions)	Region - USA	Rank
Global Sydney	24	San Francisco	1
Melbourne Inner	33	San Diego	2
Melbourne East	45	Seattle	3
Sydney Mid West	53	Los Angeles	4
Sydney Outer North	56	Washington Baltimore	5
Perth Central	71	Minneapolis-St Paul	6
Melbourne West	71	Atlanta	7
Melbourne North	71	Phoenix	8
Brisbane City	71	Albuquerque	9
Sydney Inner West	86	Chicago	10

The highest ranked region in the USA is San Francisco in terms of the high-tech index. This is no surprise considering the proliferation of high-tech firms in the area, and it is considered a global technology centre. Despite being Australia's highest ranked region, Global Sydney would have only been ranked 24th in the USA. This shows that Australia is well behind the USA in terms of output in high-tech industries.

As would be expected the inner regions of metropolitan Sydney and Melbourne are ranked highest in terms of the High-Tech index, given these are the areas which have the highest concentrations of high-technology industries in Australia. That is, these areas display "thickness of labour markets", which Florida sites as one of the prerequisites to the attraction of creative capital. Mentioned previously, concentrations of Creative capital is the primary factor in the provision of regional competitive advantage, it is the basis for high rates of innovation, high-tech business formation and resultant dynamic growth outcomes.

In addition these are the regions which are most highly endowed with the amenities and social characteristics that Florida purports are necessary to attract the personnel required to support such knowledge industries. That is, these are the same regions which rank the highest in terms of the other Creative Class indices. For example, Global Sydney is consistently ranked in the top five in the measurement of: the number of people employed in the super creative core; the level of Bohemians in the respective regions; the proportion of people in same sex relationships; the level of cultural diversity; the level of innovation; and, talent. A priori this connotes the existence of the nexus between high levels of the creative class and knowledge based industries to which Florida hypothesizes.

The primary reasons we see concentrations of the creative class in these areas is the greater diversity of the lifestyle options offered, which make it easier to "attract top managerial and technical talent."[10]

6.4.2   Creativity, Diversity, Talent and High Technology

Defining the Classes

Context: The following are different groupings used to categorize the workforce. Analysis undertaken by Florida in the United States showed that the higher the proportion of the workforce in the "creative class", the better chance of economic prosperity within the region, particularly in regard to high-tech industry.

The distinguishing characteristics of the creative class is that its members engage in work whose function is to "create meaningful new forms." The super-creative core of this new class includes scientists and engineers, university professors, poets and novelists, artists, entertainers, actors, designers, and architects, as well as the "thought leadership" of modern society: non-fiction writers, editors, cultural figures, think-tank researchers, analysts, and other opinion-makers. Members of this super-creative core produce new forms or designs that are readily transferable and broadly useful--- such as designing a product that can be widely made, sold and used; coming up with a theorem or strategy that can be applied in many cases; or composing music that can be performed again and again.

Beyond this core group, the creative class also includes "creative professionals" who work in a wide range of knowledge-intensive industries such as high-tech sectors, financial services, the legal and healthcare professions, and business management. These people engage in creative problem-solving, drawing on complex bodies of knowledge to solve specific problems. Doing so typically requires a high degree of formal education and thus a high level of human capital. People who do this kind of work may sometimes come up with methods or products that turn out to be widely useful, but it's not part of the basic job description. What they are required to do regularly is think on their own. They apply or combine standard approaches in unique ways to fit the situation, exercise a great deal of judgment, perhaps try something radically new from time to time." [11]

Creative Class

The creative class is divided into the super creative core and creative professionals. These metrics are used to identify regions where there are high concentrations of human/creative capital.

Super creative core, consists of the following:

❑   Computer and mathematical occupations

❑   Architecture and engineering occupations

❑   Life, physical and social science occupations

❑   Education, training and library occupations

❑   Arts, design, entertainment, sports and media occupations

---

[10]   Florida, R., "The rise of the creative class and how it's transforming work, leisure, community and everyday life", Basic Books, USA, 2002, p.216

[11]   www.washintonmonthly.com/features/2001/0205.florida.html by Richard Florida

Calculation: The number of people working in the occupations above are divided by the total workforce to get a proportion of the workforce employed in super creative core occupations.

The tables below present the top 10 regions ranked by the percentage of workers in the super creative core benchmarked against the USA, and the bottom ten ranked regions.

Table 6.2	Top 10 Regions - Super creative core		
Region	% Workforce	Region - USA	% Workforce
ACT	14.6%	Raleigh-Durham	16.9%
Global Sydney	12.5%	Rochester, NY	15.8%
Melbourne Inner	12.5%	San Francisco	15.4%
Sydney Outer North	11.4%	Washington, DC	15.0%
Sydney Inner West	11.4%	Boston	14.6%
Melbourne East	10.8%	Austin	14.6%
Perth Central	10.6%	Seattle	14.6%
Adelaide Central	10.3%	San Diego	13.8%
TAS Hobart-South	9.6%	Denver	13.5%
Darwin	9.4%	Houston	13.3%

Table 6.3	Bottom 10 Regions - Super creative core
Region	% Workforce
SA Murraylands	5.0%
SA South East	5.1%
WA Wheatbelt-Great Southern	5.5%
QLD Pastoral	5.7%
QLD Mackay	6.0%
VIC Mallee-Wimmera	6.1%
VIC West	6.1%
NSW Murray	6.1%
QLD Wide Bay-Burnett	6.2%
SA Eyre and Yorke	6.3%

The top regions[12] in the USA in terms of percentage of the workforce employed in the 'super creative core' occupations include Raleigh-Durham, Rochester, NY, San Francisco, Washington, D.C. and Boston. Raleigh-Durham has 16.9 per cent of its workforce employed in this categorization of occupation while all but Boston have 15 per cent or higher. Boston, which is ranked fifth in the USA is equal with Australia's highest performing region, the ACT with 14.6 per cent.

Despite the Australian region's scores being below those of its American counterparts, the top five regions fair comparatively well. However, the bottom five of the top ten regions show a growing differential with their American counterparts. This result must be viewed in the context of the demographic differences between the American and Australian regions. For example, Seattle compared to Perth is significantly larger in terms of its population, output, and diversity of industries. Seattle is considered a global technology centre, whereas the Perth economy is centred on supporting primary industries. Thus it is to be expected that the concentrations of super creative core would be comparatively higher in Seattle.

---

12   Comparison to the USA is made to the 50 regions that have a population of over 1 million people.

Again we see the super creative core clustering around the regions which also have high concentrations of high-tech industry (thick labour markets) and regions which score highly in terms of the location decision factors for creative capital (lifestyle, diversity, opportunity for social interaction, identity, and authenticity). The distribution of results across all indictors[13] for the Australian regions are analogous with the distribution of results for the American regions. Prima facie, this provides sound evidence that Creative Capital theoretical propositions have practical application in the Australian context.

The rankings for the bottom 10 regions and the low levels of super creative core are predominately a function of these economies resource/agricultural orientations.

Creative Professionals

Creative professionals contribute to a regions creative capital and therefore are important in driving dynamic regional economic growth outcomes via the augmentation of high-tech industries.

The creative professional category consists of the following types of occupations:

❑   Management occupations;

❑   Business and financial operations occupations;

❑   Legal occupations;

❑   Healthcare practitioners and technical occupations; and,

❑   High-end sales and sales management.

Calculation: The number of people working in the occupations above are divided by the total workforce to get a proportion of the workforce employed as creative professionals.

Table 6.4 compares the top ten ranked regions on the basis of the percentage of creative professionals in Australia and America.

These results exhibit a great deal of similarity with the American regions, with several of the Australian regional scores being comparatively higher. However, Australia is still deficient n terms of the super creative core.

Table 6.4	Top 10 Regions - Creative Professionals		
Region	% Workforce	Region - USA	% Workforce
Global Sydney	25.4%	Washington, DC	23.4%
Melbourne Inner	24.9%	Austin	21.8%
ACT	23.2%	Boston	21.4%
Adelaide Central	20.4%	Raleigh-Durham	21.3%
Perth Central	19.1%	Minneapolis	20.7%
Sydney Outer North	18.8%	Denver	19.5%
Brisbane City	18.3%	San Francisco	19.4%
Sydney Inner West	17.6%	Hartford, CT	19.2%
Darwin	17.4%	Houston	19.2%
Melbourne East	17.3%	Seattle	17.9%

---

[13]   See the indicator results below

Table 6.5	Bottom 10 Regions - Creative Professionals
Region	**%** Workforce
QLD North West	9.3%
SA Murraylands	9.4%
QLD Pastoral	9.9%
VIC West	10.7%
WA Wheatbelt-Great Southern	10.7%
VIC Central Highlands	10.9%
VIC Mallee-Wimmera	10.9%
WA Gascoyne-Goldfields	11.1%
NSW Far and North West	11.1%
SA South East	11.1%

The top ten rankings show that the composition of the Australian workforce in creative professional terms. Similar to the super creative core results, the differential on average is higher for the bottom five of the top ten. Evident in both sets of results is the emergence of the creative class clustering around areas with concentrations of high-tech industries and areas scored highly in terms of creative class location characteristics.

Table 6.6	Top 10 Regions - Creative Class		
Region	% Workforce	Region - USA	% Workforce
Global Sydney	37.9%	Washington, DC	38.4%
ACT	37.9%	Raleigh-Durham	38.2%
Melbourne Inner	37.4%	Boston	38.0%
Adelaide Central	30.7%	Austin	36.4%
Sydney Outer North	30.1%	San Francisco	34.8%
Perth Central	29.6%	Minneapolis	33.9%
Sydney Inner West	29.0%	Hartford, CT	33.4%
Melbourne East	28.0%	Denver	33.0%
Brisbane City	26.8%	Seattle	32.7%
Darwin	26.8%	Houston	32.5%

Table 6.7	Bottom 10 Regions - Creative Class
Region	% Workforce
SA Murraylands	14.4%
QLD Pastoral	15.6%
WA Wheatbelt-Great Southern	16.2%
SA South East	16.3%
QLD North West	16.5%
VIC West	16.8%
VIC Mallee-Wimmera	17.0%
QLD Mackay	17.3%
NSW Murrumbidgee	17.6%
NSW Far and North West	17.8%

In terms of the creative class (combination of the super creative core and the creative professionals), the top 5 in the USA are Washington, D.C., Raleigh-Durham, Boston, Austin and San Francisco. The top 3 regions in the USA all have 38 per cent or more of their workforce employed in these occupation while in Australia, Global Sydney and the ACT lead the way both with 37.9 per cent, a comparatively good result.

Members of the creative class are not only looking for areas that will provide them with good jobs but areas where "they can have a life".[14] Hence, it is not only the opportunity for high-income and good jobs which attract the requisite talent to these areas, but it is a combination of a myriad of factors which balance employment and lifestyle needs. One of the central themes of Florida's theory is, traditionally people have moved to locations where there is a proliferation of firms which provide good employment, however this trend has reversed. The situation is now more suitably characterized by companies following talent. Talent is now found to reside in areas denoted by social and cultural diversity, openness and acceptance, and the local amenities necessary for the provision of suitable recreational activities for these demographics; "the economy itself increasingly takes form around real concentrations of people in real places."[15] Florida's ideas definitely hold intuitive appeal, and have been implicit in much of NIEIR's work on regional economies. In particular it is a regions endowment of human capital that drives its economic prospects. This challenges the traditional notions of regional growth prospects being entirely determined by proximity to transport or natural resource endowments and other major infrastructure. Florida's work in fact extends further than traditional human capital theories to Creative capital being the primary determinant of regional economic growth.

The following are the other categories of the workforce. No analysis has been undertaken of these categories. However, it should be noted that negative correlations have been found to exist in America between the working class and the existence of high-tech industries and the clustering of the creative class. Where concentrations of working class exist, the requisite locational characteristics to attract the creative class are absent.

Working Class

❑ Construction and extraction occupations

❑ Installation, maintenance and repair occupations

❑ Production occupations

❑ Transportation and material moving occupations

Service Class

❑ Health care support occupations

❑ Food preparation and food-service-related occupations

❑ Building and grounds cleaning and maintenance occupations

❑ Personal care and service occupations

❑ Low-end sales and related occupations

❑ Office and administrative support occupations

❑ Community and social services occupations

---

[14] ibid, p.216

[15] ibid, p2.19

❑   Protective service occupations

Agriculture

❑   Farming, fishing and forestry occupations[16]

6.4.3   Bohemian Index

The Bohemian Index is important in terms of identifying areas where the creative class will chose to reside, as it is used as a proxy for a regions lifestyle amenities. The index does not try to measure regions amenities in the traditional sense, which includes high culture; such as the ballet and opera, or "big ticket sporting events". It pertains to "informal street level variant of amenities", such as a local music scene, vibrant street culture, small art galleries, cafes and so on.[17] The Bohemian Index counts the providers of these types of amenities. Florida has found it to be a very strong predictor of high-tech industry concentrations.

Context: Evidence suggests that artistically and creative-minded people are attracted to regions where a better quality of life is possible. A better way of life in this context consists of a vibrant street culture and other culturally diverse places. A region that is over-represented with 'Bohemians' can be classed as having an appreciation of these cultural amenities that support, produce and showcase these artistic skills.

Calculation: The Bohemian Index is a measure of artistically creative people. It includes authors, designers, musicians, composers, actors, directors, painters, sculptors, artist printmakers, photographers, dancers, artists and performers. The index is calculated by obtaining the proportion of the workforce employed in these occupations and dividing it by the national average.

Table 6.8 below contrasts the Australian and American top ten ranked regions on the level of bohemians in the workforce.

Table 6.8 Top 10 Regions – Bohemians			
Region – Australia	Bohemians (score)	Region - USA	Bohemians (score)
Global Sydney	2.00	Los Angeles-Long Beach, CA	1.93
Melbourne Inner	1.85	New York, NY	1.82
Sydney Inner West	1.58	Washington, DC-MD-VA-WV	1.65
Melbourne South	1.30	San Francisco, CA	1.59
Sydney Outer North	1.24	Seattle-Bellevue-Everett, WA	1.57
Adelaide Central	1.14	Boston, MA-NH	1.54
Melbourne East	1.09	Nashville, TN	1.53
Perth Central	1.05	Portland-Vancouver, OR-WA	1.45
Brisbane City	1.01	Minneapolis-St. Paul, MN-WI	1.42
QLD Gold Coast	1.01	Austin-San Marcos, TX	1.41

---

[16]   The Rise of the Creative Class, Richard Florida

[17]   ibid. p.259

Table 6.9	Bottom 10 Regions - Bohemians
Region	Bohemians (score)
QLD Pastoral	0.35
WA Wheatbelt-Great Southern	0.37
SA South East	0.39
VIC Mallee-Wimmera	0.42
SA Murraylands	0.45
NSW North	0.47
QLD Agricultural SW	0.49
NSW Murrumbidgee	0.52
NSW Far and North West	0.52
VIC Gippsland	0.53

Comparison to the USA: Global Sydney has the highest score of all regions in both Australia and the USA with a score of 2.00. The highest in the USA is Los Angeles-Long Beach, CA with a score of 1.93. Melbourne is ranked third when combining the two countries with a score of 1.85 and then follows New York with a score of 1.82.

The comparison reveals that the inner metropolitan regions of Sydney, Melbourne, Adelaide, Perth and Brisbane are well endowed relative to the regions in the USA. Hence, these Australian regions provide a strong fit with the location choice parameters of the creative class. That is, the high levels of bohemians meet the creative class requirements for quality lifestyle options, such as a music scene and night life. These types of events provide opportunities for "social interaction" within an "authentic" setting and provide the location characteristics which members of the creative class choose to define their "identity" through. Essentially, the level of bohemians contributes significantly toward the satisfaction of the "quality of place" requirement. Vis-à-vis the built environment allows the pursuit of creative lives - *What's there.* There is the existence of a diverse range of people interacting with one another facilitating connectivity between the individual and the community – *Who's there.* In addition there is a vibrancy of street life, affording the opportunity for cultural endeavours – *What's going on*.

Table 6.10	Bottom 10 Regions – Bohemians
Region	Bohemians (% workforce)
QLD Pastoral	0.6%
WA Wheatbelt-Great Southern	0.7%
SA South East	0.7%
VIC Mallee-Wimmera	0.8%
SA Murraylands	0.8%
NSW North	0.8%
QLD Agricultural SW	0.9%
NSW Murrumbidgee	0.9%
NSW Far and North West	0.9%
VIC Gippsland	0.9%

6.4.4   Diversity Index

Context: Perhaps the most striking finding is that a leading indicator of a metropolitan area's high-technology success is a large same sex household population. The presence of same sex households in a region signals a diverse and progressive environment and provides a barometer for a broad spectrum of amenities attractive to adults, especially those without children who are members of the creative class.

Statistical analysis indicates that the Diversity Index is an excellent measure of social and cultural diversity as a predictor and high-tech location. The correlations are exceedingly high and consistently positive and significant. The results of a variety of multivariate regression analyses support these findings. The Diversity Index is positively and significantly associated with the ability of a region both to attract talent and to generate high-tech industry.[18] These findings support the view that encouraging diversity and lowering barriers to entry can help to attract creative capital and generate technology-based growth. This does not imply that same sex households dominate high-tech regions, simply that the presence of same sex households in the community signals to members of the creative class that a region is tolerant of diversity and therefore likely to foster appealing cultural qualities.

Calculation: The Diversity Index is based on research undertaken by Gary Gates and his colleagues at the Urban Institute of Washington. The index is the proportion of same-sex couples of all couples in Australia divided by the national average. These proportions are then comparable to regions in the USA as well as to one-another.

Table 6.11 Top 10 Regions - Diversity			
Region	% same-sex couples	Region – USA	% same-sex couples
Melbourne Inner	8.8%	San Francisco, CA	5.4%
Global Sydney	5.9%	Washington, DC-MD-VA-WV	2.9%
Sydney Inner West	4.9%	Austin-San Marcos, TX	2.9%
QLD Sunshine Coast	1.9%	Atlanta, GA	2.7%
ACT	1.5%	San Diego, CA	2.5%
Brisbane City	1.5%	Seattle-Bellevue-Everett, WA	2.3%
Melbourne South	1.3%	Los Angeles-Long Beach, CA	2.2%
Perth Central	1.2%	Boston, MA-NH	2.1%
Adelaide Central	1.2%	Sacramento, CA	1.7%
NSW Richmond-Tweed	1.1%	Denver, CO	1.7%

---

[18]   www.brook.edu/press/REVIEW/winter2002/florida.htm

Table 6.12	Bottom 10 Regions - Diversity
Region	% same-sex couples
WA Peel-South West	0.1%
QLD North West	0.1%
VIC Mallee-Wimmera	0.1%
SA South East	0.2%
QLD Pastoral	0.2%
QLD Gold Coast	0.2%
QLD Agricultural SW	0.2%
TAS North West	0.3%
QLD Fitzroy	0.3%
SA Murraylands	0.3%

Comparison to USA: Despite San Francisco and Sydney being renowned for their large same sex household communities, the Diversity Index has produced some surprising results. The region with the highest score for the index is Melbourne inner with a score of 8.77. The score for Global Sydney is also high with a value of 5.90, also higher than any region in the USA. As expected, San Francisco has the highest value in the USA with a value of 5.39. Sydney Inner, with a score of 4.88 would also rank it second highest in the USA.

This indicates the top three regions are particularly oriented toward developing concentrations of the creative class, per the Creative capital theorem. Acceptance of the same sex household community is seen to be a signal of diversity, and indicator of low entry barriers to human capital, facilitating innovation and creativity that promotes high-tech growth. The rankings for the Diversity Index when compared to the rankings for the high tech, innovation, and super creative core indices confirm the validity of this point in the Australian context.

Within the American context Florida has found the Diversity Index to be the most statistically significant predictor of regions with high-tech concentrations, and an accurate predictor of its economic growth. The correlation between the high tech index and the Diversity Index has increased over time, suggesting a compounding benefit of diversity on growth outcomes.

6.4.5   Melting Pot Index

Context: The growth and development of great regions comes from their ability to harness diversity, welcome newcomers and turn their energy and ideas into innovations and wealth. The relationship between immigrants in a region and high-tech output is one of the most telling of all demographic trends. There is a high correlation between ethnically diverse regions and high-tech regions; high tech centres are typically places where people from virtually any background can settle and prosper.

Historically it has been argued that diversity is important to economic prosperity. This has typically been in relation to diversity of business industrial structure. Now, regional economies will benefit from not only diverse companies and industries, but in the knowledge economy, ethnic, social and cultural diversity is likely to be even more important. In the US there is a strong relationship between areas with high levels of immigrants and regional growth. For example, nearly a quarter of people in Silicon Valley are foreign born. Nearly a quarter of businesses started in Silicon Valley since 1980 were started by foreign-born immigrants. This increased to 30% of business started after 1995.[19]

---

[19] ibid. p.253

Although, there is a strong correlation between the high-tech index and the level of foreign-born workers in the labour force, the effect of the melting pot index on the creative class and the innovation index is not statistically significant.

Calculation: The melting pot index is simply the proportion of the population who are foreign born.

Table 6.13	Top 10 Regions – Foreign Born		
Region – Australia	Foreign born (% population)	Region - USA	Foreign born (% population)
Sydney Mid West	39.9%	Miami, FL	38.5%
Sydney Inner West	36.2%	Los Angeles-Long Beach, CA	27.8%
Global Sydney	33.9%	New York, NY	23.2%
Perth Outer North	32.8%	San Francisco, CA	21.8%
Melbourne West	32.4%	Honolulu, HI	18.4%
Perth Outer South	31.0%	San Diego, CA	17.5%
Perth Central	30.9%	Chicago, IL	15.4%
Melbourne Inner	28.4%	Houston, TX	14.4%
Melbourne North	28.3%	Boston, MA-NH	13.7%
Melbourne South	27.9%	Washington, DC-MD-VA-WV	13.3%

Table 6.14	Bottom 10 Regions - Foreign Born
Region	Foreign born (% population)
QLD Pastoral	4.9%
NSW Far and North West	5.4%
NSW North	5.5%
VIC West	5.8%
NSW Central West	6.5%
VIC Mallee-Wimmera	6.8%
NSW Murray	7.2%
QLD Agricultural SW	7.5%
NSW Murrumbidgee	7.6%
TAS North West	7.7%

Comparison to the USA: The region with the highest proportion of foreign born people is the Sydney Mid West with just under 40 per cent. This is higher than any other region in the USA. Miami, Fl has the highest proportion of foreign born people in the USA with 38.5 per cent. Interestingly, it is the only region in the USA with over 30 per cent of foreign born people. The other 4 regions that round out the top 5 in Australia all have over 30 per cent of foreign born people.

Also of interest is the lowest region in Australia in terms of foreign born, Qld Pastoral, with 4.9 per cent, is higher than almost 40 per cent of the regions in the USA.

Over 20 per cent of the Australian population was foreign born. This is almost double the proportion of the US foreign born population.

The top ten Australian regions for foreign born people exhibits a high correlation to areas with concentrations of high tech industries. However, the relationship is not as strong as the other indicators presented in this section.

6.4.6 Composite Diversity Index

Context: The argument about diversity is simple and straightforward. Diversity is a key component of the ability to attract creative capital and thereby retain high-tech industry. When we summed the rankings of our three diversity indices to make our composite Diversity Index (CDI), the result is strongly correlated with the High-Tech index. These results offer strong evidence of the importance of the combined effects of social, cultural, and ethnic diversity for both high-tech location and growth.[20]

Calculation: Combines the Diversity Index, the melting pot index and the Bohemian Index (equally weighted) and ranks them compared to regions in the USA.

Table 6.15 Top 10 Regions - Composite Diversity Index			
Region	Rank (to USA regions)	Region - USA	Rank
Global Sydney	1	San Francisco	1
Sydney Inner West	2	Miami	2
Melbourne Inner	2	Santa Fe, NM	3
Melbourne South	20	Boston	4
Adelaide Central	36	Los Angeles	5
Brisbane City	39	Asheville, NC	6
Perth Central	43	Athen, GA	7
ACT	48	Las Vegas	8
Melbourne North	53	Orlando	9
QLD Sunshine Coast	53	Atlanta	10

Table 6.16 Bottom 10 Regions - Composite Diversity Index	
Region	Rank (to USA regions)
QLD Pastoral	199
NSW North	185
VIC Mallee-Wimmera	184
SA South East	182
NSW Far and North West	182
VIC West	180
WA Wheatbelt-Great Southern	178
QLD Agricultural SW	178
SA Murraylands	176
NSW Murrumbidgee	175

Comparison to the USA: If Global Sydney were a region in the USA, then it would rank number 1 in terms of diversity. Sydney Inner West and Melbourne Inner would also rank very high (second) but after these three regions, the next best ranked region in Australia would be Melbourne South, which is ranked 20th.

---

[20]   www.brook.edu/press/REVIEW/winter2002/florida.htm

The highest ranked region in the USA is San Francisco, followed by Miami, San Diego and Boston.

A comparison of the results for the composite Diversity Index and the high-tech index confirms the nexus between creativity and diversity, working in conjunction to promote innovation and power economic growth, particularly in the high-tech sector.[21] Florida has found a statistically significant relationship between the composite Diversity Index and high-tech growth, particularly in regard to the number of graduates in a region and cultural diversity. The Australian results tend to confirm the presence of this relationship.

The cartogram below shows the distribution of the composite diversity ranks for all regions in Australia. The colouring scheme used depicts bands of performance measured against US benchmarks.

---

[21] ibid. p.261
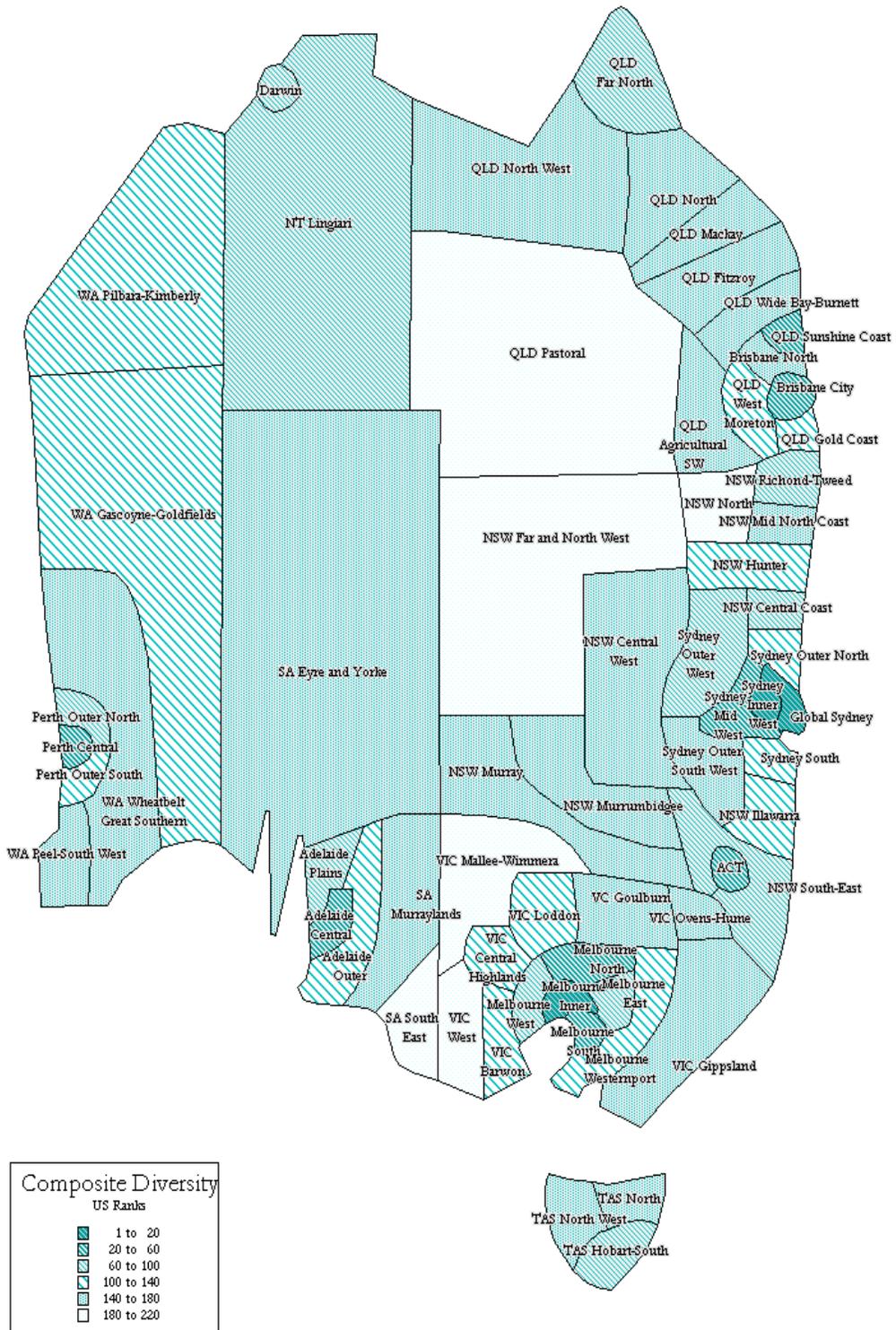
6.4.7   Innovation Index

Context: This measure acts as a proxy for scientific innovation, knowledge endowment and entrepreneurial dynamism. Regions with a high value for this indicator will generally prosper, as innovation leads to greater value added and wealth creation. By definition, patents recognize new ideas. Also, patents are more likely to be valuable and useful to overall economic production rather than other ideas because they require a substantial resource to be issued and maintained.   The correlation between this, the high-tech index and talent is high indicating that patents per capita is an excellent proxy for high-skilled capital as well as 'high-techness'.

Calculation: The innovation index is a measure of the patent applications per 100,000 capita. The data is 2001 patent applications and is provided by the Australian patent office (IP Australia). The number of applications was chosen over patents granted, due to the long delays associated with the granting of patents. In some cases this could be up to 5 years.

Table 6.17 Top 10 Regions – Patents	
Region - Australia	Patents per 100,000 people
Melbourne Inner	46
Global Sydney	36
ACT	27
Brisbane City	19
QLD Gold Coast	17
Sydney Inner West	16
Adelaide Central	16
Perth Central	16
Melbourne South	16
Sydney Outer North	16

Table 6.18 Bottom 10 Regions – Patents	
Region	Patents per 100,000 people
NT Lingiari	2.9
QLD Pastoral	3.0
SA South East	3.0
WA Pilbara-Kimberly	3.3
TAS North West	3.7
NSW Far and North West	3.7
QLD Fitzroy	4.1
VIC Central Highlands	4.2
VIC Ovens-Hume	4.2
Darwin	4.3

Comparison to the USA: The region with the highest patent application per capita in Australia is Melbourne inner with 46 applications per 100,000 people. In the USA, this would rank Melbourne Inner 10th out of the 51 states. Global Sydney with a 36 applications per 100,000 people would rank 12th. The highest ranked state in the USA is Idaho with a 70. This is followed by Massachusetts, Connecticut and Vermont with 55, 54 and 54 respectively.

There is obviously a strong correlation with the innovation index and concentrations of creative capital. Also it is a strong predictor of high-tech industry location. The Australian top ten regional scores highlight the same regions as the previous indicators.

6.4.8   Talent Index

Context: This index does not require a great deal of explanation. A region with higher human capital has better skills at its disposal to innovate and generate wealth and income.

Calculation: The talent index is a measure of the human capital in the region. It is the proportion of the population aged 25 and over who have a bachelor degree or higher.

Table 6.19	Top 10 Regions - Talent index		
Region	% Pop (25+), Degree*	Region – USA	% Pop (25+), Degree*
Melbourne Inner	20.4%	Washington, DC-MD-VA-WV	41.7%
Global Sydney	17.6%	Boston, MA-NH	35.1%
ACT	16.5%	San Francisco, CA	34.1%
Sydney Inner West	15.7%	Austin-San Marcos, TX	32.7%
Sydney Outer North	14.1%	Atlanta, GA	30.1%
Melbourne East	13.0%	Seattle-Bellevue-Everett, WA	29.6%
Melbourne South	12.4%	Denver, CO	29.2%
Perth Central	12.4%	Minneapolis-St. Paul, MN-WI	28.1%
Adelaide Central	12.4%	New York, NY	27.7%
Brisbane City	11.3%	Dallas-Fort Worth-Arlington, TX	27.3%
Note: Degree* means Bachelor Degree or higher			

Table 6.20	Bottom 10 Regions - Talent index
Region	% Pop (25+), Degree*
SA Murraylands	1.1%
Adelaide Plains	2.0%
Perth Outer North	2.4%
SA South East	2.5%
SA Eyre and Yorke	2.7%
QLD Wide Bay-Burnett	3.4%
Adelaide Outer	3.6%
WA Wheatbelt-Great Southern	3.6%
WA Peel-South West	3.7%
TAS North West	3.8%
Note: Degree* means Bachelor Degree or higher	

Comparison to the USA: The region with the highest proportion of Bachelor degrees or higher in Australia is Melbourne inner with 20.4 per cent of the population aged 25 or over. Global Sydney and the ACT are next to follow with 17.6 and 16.5 per cent respectively. In comparison to the USA these scores are very low. If Melbourne Inner were in the US, it would be ranked 43rd of the 50 regions in the USA with a population of more than 1 million.

In Washington DC, over 40 per cent of the population aged 25 and over have a bachelor degree or higher while Boston, San Francisco, Austin and Atlanta all have over 30 per cent.

The talent index exhibits the highest deviation from the American rankings, and may partly explain the comparative shortfall of high-tech industry in terms of the creative capital theory, given the Australian scores are higher for most of the other creative class indicators. Hence, a greater clustering of educated people may be required in the creative class centres to emulate the high-tech success of the American regions.

6.4.9   Creativity Index

Context: Looking at each of the indices individually provides some insight into a region, but for an overall view of how the region ranks in terms of diversity, high-tech output, innovation and human capital, the Creativity Index can be used. Importantly, each index is given the same weight which suggests that no one of the 4 indices is more important than another.

Calculation: This is a measure based on 4 of the previous indices, the innovation index, the high-tech index, the Diversity Index and the creative class. The score is calculated by subtracting the individual rankings of each indicator from 1076. (ie – Global Sydney has the following ranks for the 4 indices above – 54, 24, 1 and 5. This sums to 84. Subtract this from 1076 and the score of 992 is achieved).

Table 6.21	Top 10 Regions - Creativity Index		
Region	Score	Region - USA	Score
Global Sydney	992	San Francisco	1057
Melbourne Inner	985	Austin	1028
ACT	831	San Diego	1015
Perth Central	744	Boston	1015
Adelaide Central	735	Seattle	1008
Sydney Inner West	733	Raleigh-Durham	996
Brisbane City	720	Houston	980
Melbourne South	606	Washington-Baltimore	964
Sydney Outer North	535	New York	962
Melbourne East	519	Dallas	960

Table 6.22	Bottom 10 Regions - Creativity Index
Region	Score
VIC Mallee-Wimmera	7
QLD Pastoral	7
SA South East	7
NSW Far and North West	8
VIC West	8
QLD North West	8
SA Murraylands	8
NSW Murrumbidgee	9
QLD Fitzroy	14
TAS North West	18

Table 6.23	USA Regions - Creativity Index	
Region	Score	Rank
San Francisco	1057	1
Seattle	1008	5
Dallas	960	11
Salt Lake City	798	41
Detroit	708	68
Louisville	622	100
Memphis	530	132
McAllen,TX	451	164
York, PA	360	202
Youngstown, OH	253	239
Enid, OK	73	268

Comparison to the USA: The highest ranked region in Australia is Global Sydney with a score of 992, just followed by Melbourne Inner with 985. Five regions in the USA have a score of over 1000 with San Francisco rating the highest with a score of 1057, followed by Austin (1028), San Diego and Boston (both 1015) and Seattle (1008). Global Sydney ranked 7th compared to the US regions while Melbourne Inner ranked 8th.

The Creativity Index is a measure of a region's underlying creative capabilities. Florida uses it as a proxy to measure regional economies long run economic potential. It incorporates measures of an area's underlying diversity, openness (location advantages) and the ability to translate these advantages into creative outcomes. In a sense the index measures the quantum of creative capital. Places which are tolerant, diverse and open, are attractive to the creative class. The subsequent concentrations of creative capital lead to further knowledge exchange which underwrites technical innovation. Florida conceptualises creative capital using the three T[22] as supporting the innovation, which leads to dynamic economic growth outcomes. In order for a region to grow all three T's must be present in concert:

---

[22] Technology, talent and tolerance.

"…. Creative people are attracted to, and high-tech industry takes root in, places that score high on our basic indicators of diversity…the creative class in general prefer places that are open and diverse...today places grow by …their ability to attract people…"[23]

The cartogram below shows the distribution of the creativity index ranks for all regions in Australia. The colouring scheme used depicts bands of performance measured against US benchmarks.
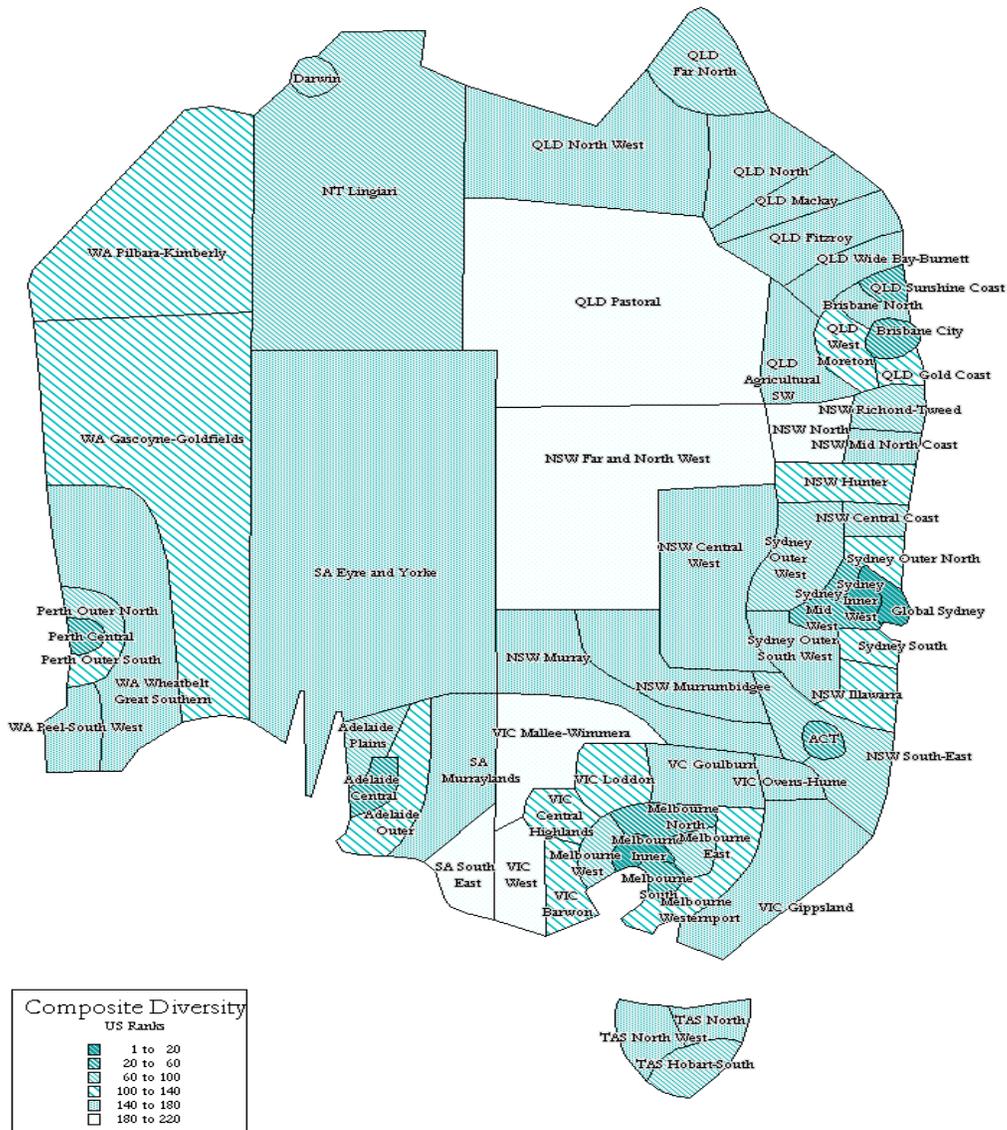
23   Op. cit, p.251

6.4.10   Data correlations

Florida's research shows that the geography of regional competitive advantage is determined by concentrations of creative capital. That is, dynamic economic growth outcomes, which are spurred by concentrations of high-tech industry are positively correlated with the location of clusters of the creative class. The suite of indicators above not only measures where these clusters are, but provides metrics for the location characteristics which are used by the holders of creative capital (creative class) in making decisions on where to reside and work.   The American research shows that high-tech industries ability to innovate is dependant on the providers of creative capital, thus these types of industries tend to locate where there are concentrations of the creative class. This is indicative of new trend within the economy. Traditionally the creative class has made location decisions based on where good companies were located. However the situation is now more aptly characterized by the creative class making location decisions on the basis of regional lifestyle amenities offerings, with companies then making there location decisions on the basis of accumulations of creative capital, vis-à-vis companies are following the talent.

Statistical research undertaken by Florida and his team indicate there are strong positive correlations between the various indicators pertaining to regional diversity and creativity and the location of high-tech industry.   NIEIR has conducted similar statistical analysis, to test whether the theoretical relationships between the indicators and high-tech industry hold in the Australian context.   In general the analysis reveals that a high degree of correlation exists between the variables analysed. However, the strength of the relationships between the variables in the respective countries differ somewhat. For example in the American context the strongest predictor of high-tech growth was the Diversity Index (the number of same-sex couples), whereas the highest correlation in the Australia analysis was with the Bohemian Index.

Statistical analysis of these theories are provided in Table 6.24 below, with correlations calculated between the High-Tech Index and other variables - high correlation between high tech regions and bohemians, foreign born, diversity and talent.

Table 6.24	Statistical analysis of the various theories				
R – Measures	Bohemian Index	Foreign Born	Talent Index	Diversity Index	Composite Diversity
High-Tech Index (Australia)	0.80	0.61	0.73	0.74	0.72
High-Tech Index (USA)	0.62	0.43	0.72	0.77	0.68

1.   *High Tech Index vs. Bohemian Index*

Despite the two variables having the second lowest correlation of those measured in the American research, NIEIR's research shows that the correlation between the two were higher than any other. The reason for the difference can be attributed to a number of factors. Firstly, the analysis on the American regions is based on metropolitan region as opposed to the Australian analysis, which covered both metropolitan and outer regions.

As the preceding tables show the regions with the lower concentrations of bohemians were smaller peripheral regions with economies oriented towards primary industry and low levels of high-tech activity.   The large numbers of these regions in the analysis served to strengthen the relationship between the two variables. Evident in the graph below, a number of regions have low scores for the high tech index as well as low proportions of bohemians.

The graph clearly demonstrates there is strong relationship between the levels of bohemians in area and high-tech industry. Prima facie, this connotes the creative capital theory is operative in the Australian context.

High-Tech Index vs Bohemians
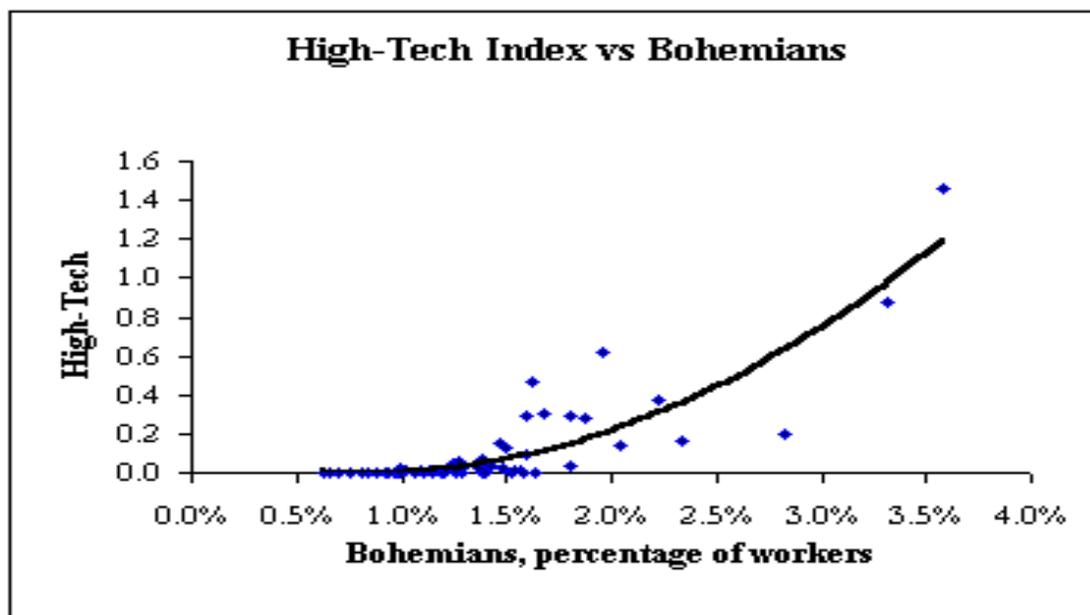
2.   *High Tech Index vs. Foreign Born*

The melting pot index (proportion of population foreign born) shows there is a relatively strong relationship in the US between areas with high levels of immigrants and regional growth. Nearly a quarter of people in Silicon Valley are foreign born, and nearly a quarter of business started in Silicon Valley since 1980 were started by foreign-born immigrants. This proportion increased to 30 per cent of businesses started after 1995.[24]

Despite this, the American analysis found that of all the variables measured, the foreign born variable had the weakest relationship of the variables measured with the High-Tech index. Despite having a higher correlation than the US research, NIEIR's research also found that this correlation was the weakest of those measured. Despite there being evidence that economic growth is positively correlated with high levels of migrants, there is also evidence to suggest that there is not a significant statistical relationship with other key elements of the creative capital theory, particularly innovation.

---

[24]   Richard Florida, "The rise of the creative class", p253

High-Tech Index vs Melting Pot
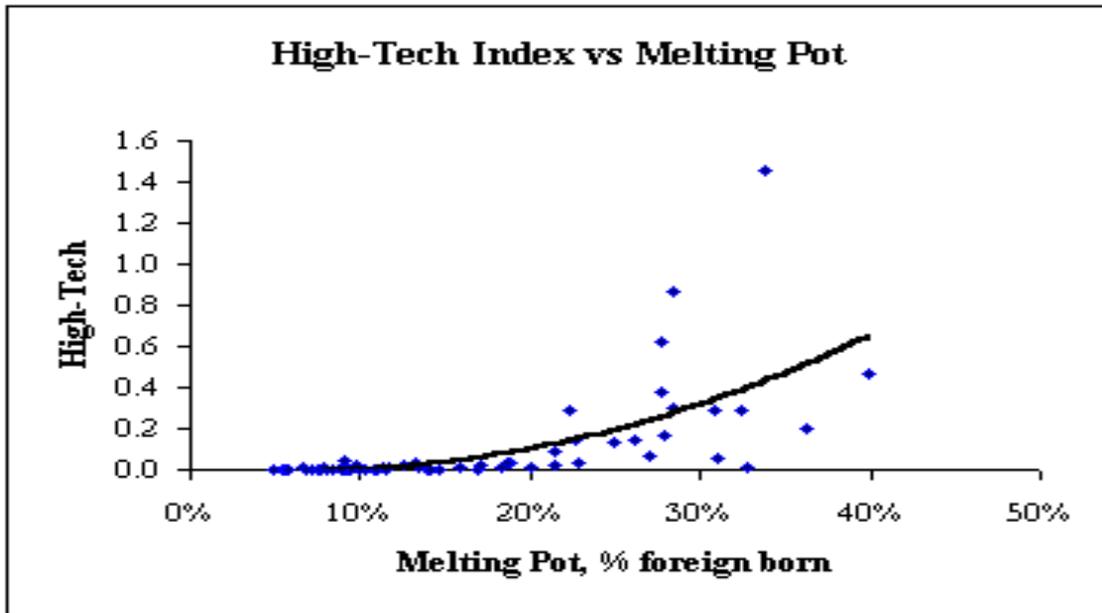
3. High Tech Index vs. Talent

From a logical point of view, if asked what would be most likely to drive high-tech regions, high-skilled labour would probably be the most obvious answer. The research in the US found that there was a high correlation between the proportion of the population aged 25 and over with a bachelor degree or higher and high-tech regions. These same results were found in NIEIR's research, yet in both instances, the Diversity Index (proportion of same-sex couples) had a higher correlation co-efficient. In the USA, talent and the high-tech index had the second strongest relationship while NIEIR's research found it to be the third. The correlation coefficients in both studies were nearly identical.

High-Tech Index vs Talent
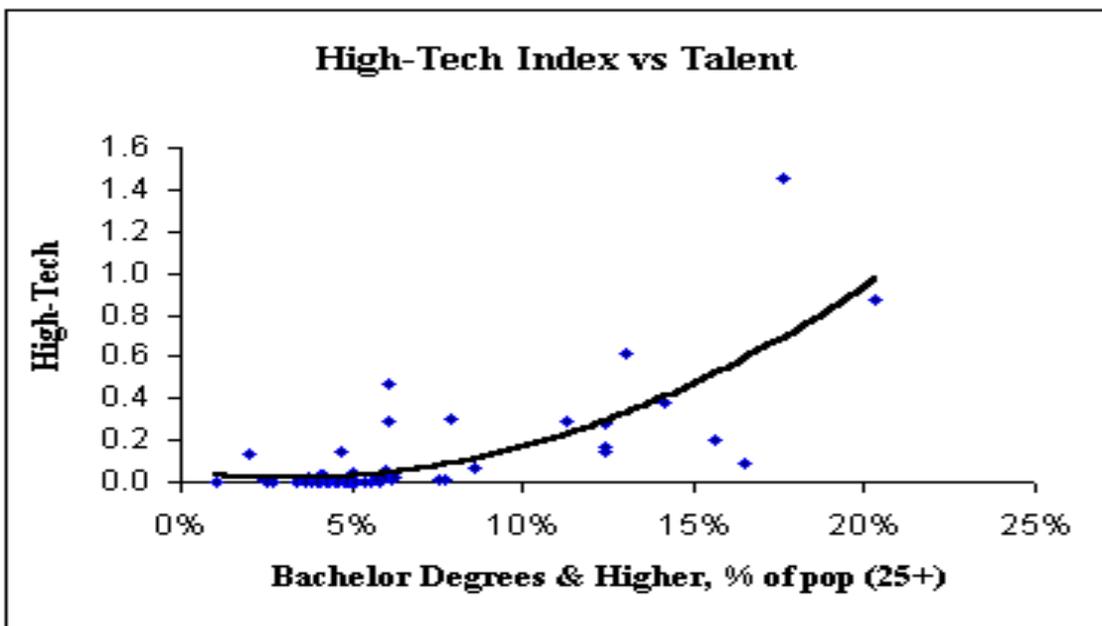
4.   *High Tech Index vs. Diversity Index*

One of the key findings in Florida's research is the relationship between the proportion of same sex couples and high-tech regions.

A strong correlation between the Diversity Index and high tech index is evident. Florida found the Diversity Index to be the most statistically significant predictor of a regions high tech industry concentration and a predictor of its growth. Also, Florida found that the correlation between the high tech index and the Diversity Index has increased over time, suggesting a compounding benefit of diversity. This analysis does not say same sex households dominate the high tech industry; it is merely a good indicator of tolerance and diversity – a locational characteristic favoured by the creative class.

The US research showed that of all the variables used to determine a high-tech region, this variable was the strongest. NIEIR's research showed very similar results. This was only bettered by the Bohemian variable (0.80). These results help to prove the link between a high-tech region and the diversity and acceptance of the people within it.

The two main outliers on the graph are Global Sydney and Melbourne Inner. These two regions have the highest high-tech index ratings as well as the highest proportion of same sex couples.
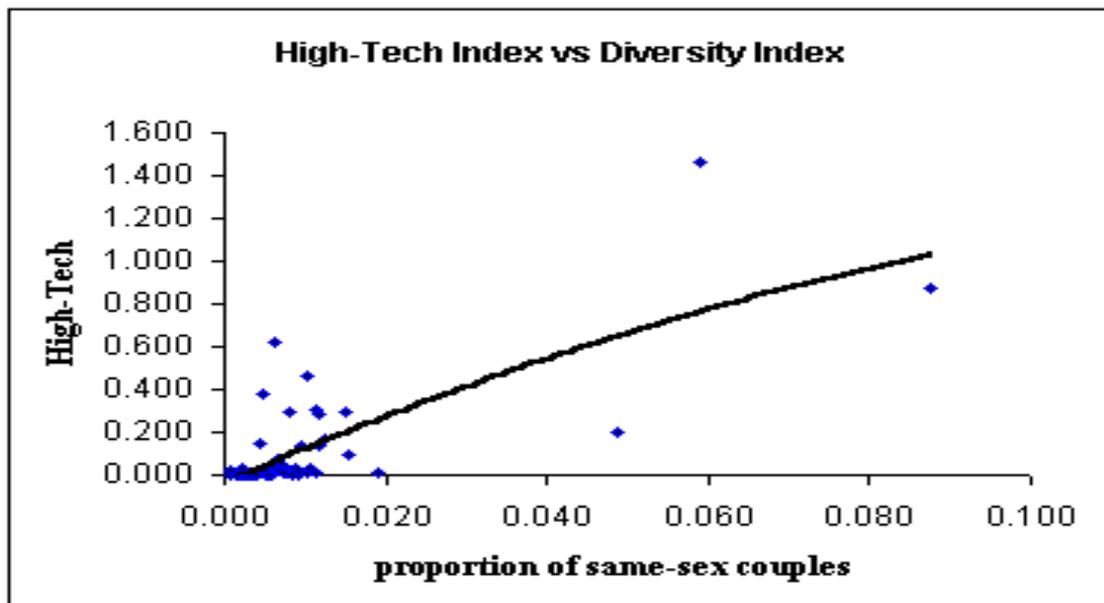
5.   *High Tech Index vs. Composite Diversity Index*

Florida has shown that there is a statistically significant relationship between high-tech regions and diversity, supporting the postulation that "diversity and creativity work together to power innovation and economic growth" [25]

[25] ibid, p262

Both studies found that the composite Diversity Index (a combination of the foreign born, same-sex couples and bohemians) and high tech correlations were similar with an r value of about 0.7. The graph below demonstrates this positive relationship between diversity and high-tech regions.

High-Tech Index vs Composite Diversity Index
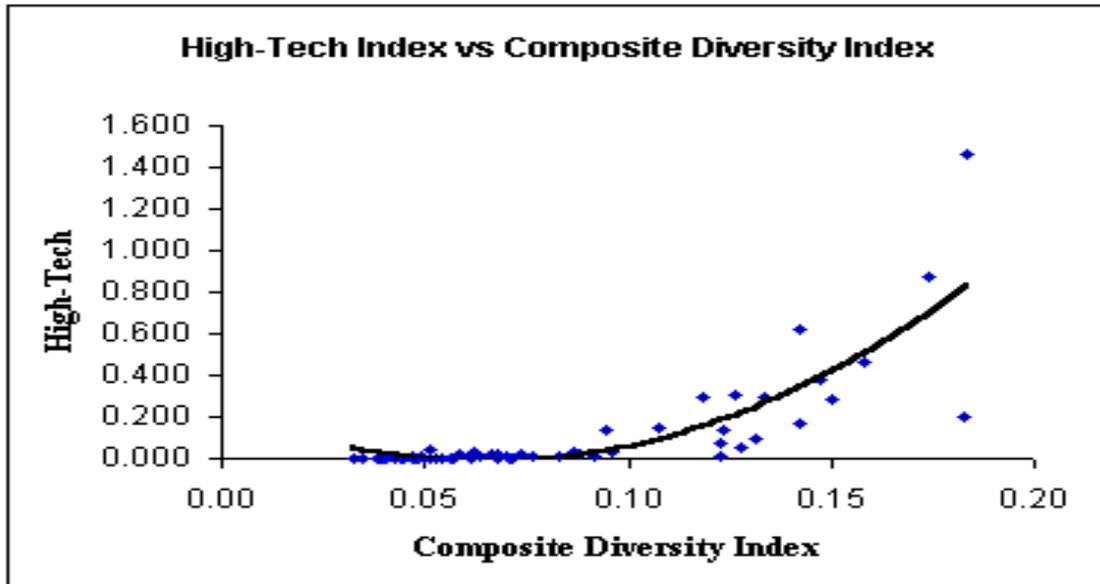
6.   *Other variable relationships*

The following graphs show the relationships between a number of the different indices and variables. Not all these variables have positive or distinct relationships, yet they provide further understanding of how diversity, talent and innovation interact.

High-Tech Index vs Patents

Bohemian Index vs Diversity Index

Bohemian Index vs Melting Pot

Bohemian Index vs Patents

Bohemian Index vs Talent

Melting Pot vs Diversity Index

Melting Pot vs Patents

Melting Pot vs Talent

Y-axis: % Bachelor Degree & Higher (0.000, 0.050, 0.100, 0.150, 0.200, 0.250)
X-axis: % Foreign born (0.00, 0.10, 0.20, 0.30, 0.40, 0.50)

Patents vs Diversity Index

Y-axis: % same-sex couples (0%, 1%, 2%, 3%, 4%, 5%, 6%, 7%, 8%, 9%, 10%)
X-axis: Patents per 100,000 people (0, 10, 20, 30, 40, 50)

Patents vs Talent

7.   Local/Regional Governance Reform and Economic Development: The Australian Dimension

The next two chapters outline in detail the effort being put into governance reform in Western Europe and the United States and its link with improving the effectiveness of regional economic development. It is clear from the analysis within the next two chapters that the core driver of the reform program is realised or feared future widening in regional disparities in terms of socio-economic status which is beginning to emerge within nation states. This has heightened governance practitioners and policy developers' awareness of regional issues, particularly within Western Europe and America.

In part, the evolution of such disparities can be attributed to the forces of globalisation and recognition that competition is not occurring between countries, rather between regions at the sub-national level. The ensuing alteration in the patterns of trade and the decay of national sovereignty as a unit of political and economic organisation connotes that regions are now more suitably defined via social and economic networks, rather than traditional notions of spatially defined governance. That is, the primacy of the "regional networks" as a unit of social and economic organisation is beginning to emerge.

Hence, when the socio-economic landscape is perceived through a regional lens this provides a greater understanding of what is occurring within the context of globalisation. This paradigm shift has introduced a new epoch in governance and policy issues, producing new challenges, which require a different mode of governance and policy solutions.

The common response to these issues from the United States and the European policy apparatus is a process of decentralisation of policy making and empowerment at the regional level.   The regionalisation of governance has resulted in increased use of public and private sector partnerships at the regional level. As a part of this process a great deal of policy making power has been pushed down the policy chain to regional development agencies and other quasi-governmental instrumentalities. Regional governments are assuming increased responsibility for development of employment, environmental, research and development, housing and urban regeneration and transport policy. The ultimate objective is to lessen regional economic inequalities promoting cohesion and supporting innovation and competitive strengths and adjustments, enhancing prosperity for all.

The process is being affected through increased funding at the local level to allow development and implementation of policy founded in regional knowledge. In Europe this is occurring through the disbursement of monies via the EU Structural Funds to disadvantaged regions. The funds are utilised by local authorities to redress regionally specific problems and to strengthen competitive capacities. In the United States policy debate and development occurs via purpose formed regional agencies and partnerships, who leverage public/private sector networks and partnerships to dynamically implement policy.

7.1   Growing regional disparities in Australia

There is growing concern in Europe about inequality and cohesion in an expanding community. Yet as the Figure on the next page shows, the bottom 20 per cent of the population have created a significantly higher proportion of the Western European gross domestic product than Australia. At the 50 per cent population point, the bottom half of the population creates a third of gross product compared to a share of 40 per cent for the Economic Union. For the United States, gross product is created even more equally than the European case, though the result may be distorted by the use of United States' state data. The European Union data is more compatible with the Australian State of the Regions data in that 380 European Union regions are used.

GDP distribution

Sources: Aus data - NIEIR;
USA data - FedStats;
EU data - EUROStat
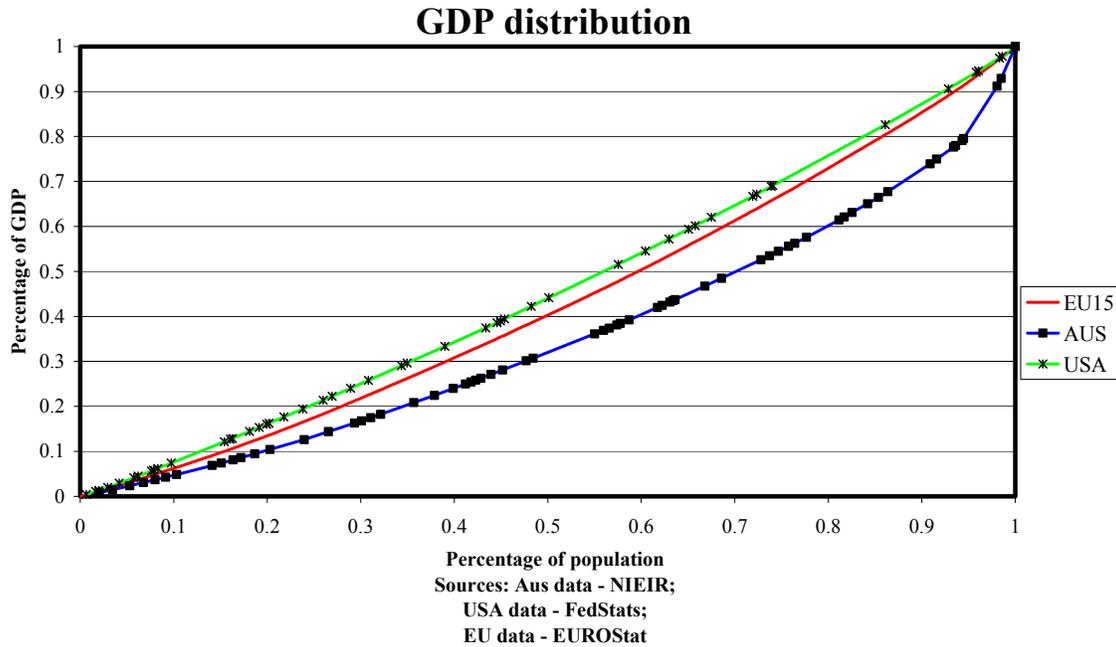
At the upper end of the distribution the top 6 per cent of the population create 20 per cent of the nation's gross product.

More importantly, except for employment issues in Chapters 2 and 3, this report documents wide and further increasing disparities in terms of the quality of employment as measured by the wage and salary rate, income flows into regions, wealth as measured by value of the housing stock and opportunities for young people.

In contrast, there does not seem to be anywhere near the intensity, focus and recognition of the need for regional development and associated regional governance reform in Australia at the political and associated policy level. However, there has been expressions of concern and reaction to regional vulnerability, population loss/concentration. The evidence overwhelmingly supports the contention that the pressure for change and shift in policy focus should be as great in Australia as elsewhere.

Many questions flow from this, not least of which is why is it the case? In Europe it is recognised that at the very least holding current disparities involves the adoption of effective planning and governance improvement. Planning, however, not driven from the top down as in the 1950s and 1960s, but planning driven at the grass roots level (albeit partly resourced from the centre) and facilitated by 'de facto constitutional change' enabling a high level of local democracy, social inclusion and participatory government. It is now widely recognised that efficient local social and economic networks are an essential element for competitiveness that will only work best if there is at least a minimum level of community empowerment established.

7.2   There is no conflict between planning, alliances and the market

The Europeans generally see no conflict between the need for efficient, coordinated planning and the market. This is because they recognise that efficient market mechanisms can only be secured if necessary preconditions are in place. These preconditions can only be created by planning and structured capacity building and adjustment.

The thrusts of the data analysis and conclusions reached elsewhere in this *State of the Regions* report are, in fact, an overwhelming endorsement of this orientation. This report documents growing inequalities. Those with a blind faith in market mechanisms would assume that eventually a point will be reached that will trigger market driven forces for reversal. High quality employment opportunities will spread to other regions as the cost of living in the successful regions increases. That is, there will be a push outwards of talent which will eventually create a situation of convergence of living standards between regions.

This *State of the Regions* report reveals that a more corrosive mechanism could be at work. As the creative index benchmarking exercise reveals Australia has only a small number of regions which rank highly, compared to the United States standard and, therefore, has only a small number of regions which have the "creative capital" for competitive success in the high growth/high income industries of the new global economy. It is not surprising that this report also documents that there are regions which are not only the wealthiest Australian regions in many respects, but are also regions which are attracting an even greater share of the growth in Australian wealth. That is, the wealth disparities are widening.

The 'vision' mechanism comes into play because, as is made clear in the housing chapter, the capacity of Australia's "creative capital" intensive regions to generate high income households could well be growing faster than the cost of living in these regions. The irony is that in some of the metropolitan areas' outer suburbs housing affordability in recent years has declined to a greater extent than the wealthier but higher cost inner regions.

Thus, there is no outward force but a net 'pull inwards' force which will result in further sustained deterioration in equality for Australians. This can go on indefinitely until the point is reached where every relatively less skilled household in the "creative capital" intensive regions is replaced by an available higher skilled household, either from overseas or lagging Australian regions. Even in Australia's most successful regions there is still substantial scope for this to occur given the high percentage of households who currently cannot afford to live in these regions.

Given the 'Lorenz curve distribution' analysis given in Chapter 2, this means that the trends at the margin can be maintained. This, in turn, means that Australia is facing the creation of a regime of inequality which must eventually lead to a large upsurge in tension being generated within the political system. The strain this can impose on political and economic institutions is likely to be severe.

In short, the market mechanisms either do not work, or work ineffectively. The Europeans recognise that planning is required to create the preconditions for market mechanisms to work. Planning is, therefore, required to:

(i)   reallocate resources in terms of physical and human infrastructure capital to give the lagging regions opportunities to move up the competitiveness rankings;

(ii)   ensure that the local and political institutions are in place to empower the community so as to ensure that resources transferred to a lagging region are used to create attractive, diverse, open societies which are so important for success in the innovation focussed global economy; and

(iii)   mobilise and energise local input, coordinate inter-government decision making and resource allocation and integrate institutional involvement.

The ultimate objectives of modern regional planning are to:

(i)   build liveable communities;

(ii)   with diverse lifestyle options;

(iii)   supported by good physical, knowledge and community infrastructure;

(iv) that are attractive to the technological skilled, entrepreneurial and creative households;

(v) which in turn are competitive in attracting business investment;

(vi) which in turn allows the building of clusters of industry excellence, whether it be in agricultural production or advanced microelectronics;

(vii) with the ultimate outcome being convergence in equality in living standards, wealth and reasonably fair access to high income employment.

If planning and support for structured local initiatives is successful then the market mechanism will begin to operate efficiently. By increasing the effective number of regions that skilled/entrepreneurial/creative households can go to enables the 'push factor' to operate. Successful regions by their nature involve increases in the cost of living, pressure on infrastructure and the cost of doing business. If there are lagging regions but which have pulled themselves up in terms of attractiveness, then talent and business capital will tend to be attracted to them.

That is, good planning and governance is needed to ensure that market mechanisms/market forces operate as the text books prescribe. There is nothing to indicate that the current largely lassaire faire approach in Australia will do anything other than lead to further increases in inequality.

7.3   Weak representative democracy, regional governance and regional development

The inability of Australia to embrace strong regional development policies and associated regional governance reform is largely due to Australia's weak representative democracy.

Australia has a strong institutional democracy. Election contests are bitterly fought. But often the role of parliament in endorsing the new government, and the role of parliamentary representatives in designing, drafting and amending policy is very limited. Australia's strong two party system with strong discipline on members has in fact forced members to limit their involvement in effective representative democracy. This has developed effective governance in Australia with little parliamentary accountability. Government in turn has effectively reduced day to day governance to a small number of senior ministers, selected bureaucrats and the representatives of favoured special interests. This sort of governance structure delivers a large share of effective power to the economically powerful which in turn delivers a large slice of power to the regions that are the most successful economically.

As a result, national policy tends to be framed with undue weight being given to the perceived short term interests of the advantaged regions, with ad hoc amelioration efforts on adjustment. Those advantaged regions have little interest in encouraging the growth of competing regions, especially if such a policy would require redistribution of income via taxes to elsewhere in Australia in order to be successful. Besides, such a policy may well limit the wealth created from relative movements in house prices.

In Western Europe with proportional voting for the lower houses of parliament, governments in the main have to form coalitions with centre parties or regional based parties. If a region lags behind the nation it can exercise effective power by voting for regional based parties which, in turn, can form coalitions with similar parties from other regions. Eventually as disparities widen, these parties gain a veto over government formation with the price of stable government being the acceptance of a strong regional policy agenda with associated resource redistribution.

Established parties in Europe know that if they allow too great a degree of regional disparity to develop, this will be the mechanism for correction. Therefore, they have an interest in preventing such a mechanism from coming into operation.

Although a two party system operates in the United States, party discipline is weak and individual representatives are free to form coalitions on the floor of parliament to further argue on the basis of regional interests. That is, the United States has a strong representative democracy at least in terms of regional interests. This works as the State distribution of GRP seems to indicate.

In this context it is relatively easy to see why there is nowhere near the interest in Australian regional governance and regional development as there is in the Western European and United States jurisdictions.

7.4   In the knowledge based economy the regional network and political dimension is of critical importance

It is commonly stated that the local/regional dimension is critical in determining competitiveness of a nation in the knowledge/innovation based economy. The precise reasons for this statement are rarely explained. The following section spells out the mechanisms of why this is the case.

7.4.1   The knowledge economy and the global content

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

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

7.4.2   The modern 'learning economy': the local/regional dimension

The Western Europeans and North Americans were faster than Australia to recognise how the challenges and opportunities presented by the onset of globalisation increased the strategic value of a learning economy, and how the strategic value of a learning economy could best be applied by taking a regional perspective.

The concept of a learning economy was once restricted to one of educational activity and attainment. It now embraces the quantity and quality of the totality of learning that takes place between and within firms, research institutions and all other institutions that collectively contribute to regional economic development, including large parts of its 'social capital'.

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

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

❑ is generally specific to a local physical attribute, especially skill set, or the unique experience of individuals;

❑ cannot be easily codified; and therefore

❑ is most effectively converted to wealth creation when the wealth creation occurs in the region.

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

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

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

7.4.3   Tacit knowledge and 'micro-communities'

It is an understanding of the way tacit knowledge works that makes the regional dimension so important.

Enabling knowledge creation requires mobilising (and intensifying) tacit knowledge. It requires:

(i)   having skilled workers who can access and use efficiently global codified knowledge; and

(ii)   forming relationships (that is, increasing the degree of socialisation) between persons with individual tacit knowledge.

Breakthroughs in knowledge creation occur when individuals come together and share tacit knowledge and insights into interpretations of codified knowledge. By themselves, the individuals could not achieve breakthroughs. These individuals form teams or micro-communities with an optimal size of between five and seven persons.

These micro-communities are characterised by:

❑ face to face interactions;

❑ an increasing degree of socialisation between members; and

❑ common fields of interest and personal agendas.

A high degree of proximity is required for knowledge creation/innovation micro-communities to be formed, both at work and in terms of out of work socialisation and they may be characterised as learning communities. This has been endorsed by the ALGA Executive. Some States are beginning to share that recognition.

7.4.4 Pathways to economic success: the fusion of different types of micro-communities

For knowledge creation and innovation to occur, micro-community membership must contain a level of diversity of skills that create the conditions sufficient for success. Once breakthroughs have occurred, successful commercialisation will only occur if the successful micro-community can be linked to, or fused with, micro-communities or existing organisations where members have the additional entrepreneurial, project management, financial and general business skills required for successful commercialisation.

In the new economy it is the creation of the so-called "flexible entrepreneurial networks" that drive wealth creation. These networks replace the 1920s' to 1980s' companies which formally controlled most aspects of an industry's supply chain by slow complex bureaucratic structures. Informal networks allow all the resources for success to be quickly enabled and coordinated. Successful coordination does, however, require sophisticated supply chain management (that is, commercialisation) skills. The SOR 2000 report mapped out potential regional value chains. Flexible entrepreneurial networks are created out of the fusion of micro-communities amongst themselves and the fusion of micro-communities within organisations (such as multi-national companies) which can provide the finance access and market access for successful commercialisation. The creation of entrepreneurial networks comes from the creation of strategic alliances between organisations (and a basis of vigorous trust, yet competitive environment).

It should be noted that these micro communities are not only important in global cities with higher technology indicators, but are equally important in rural regions attempting to increase productivity by innovations in grain types and usage, animal diversity or crop rotations, natural resource management and remediation. They are critical in traditional 'production zones' where innovation in materials and process technology and linking them to service dimensions, are going to be essential in determining whether the so-called rust belt industries can transform themselves to achieve long term viability.

The looming environmental problems in salinity control, water management and greenhouse gas abatement affect, land degradation and landscape custodianship, in one way or another, nearly all regions. Those regions which minimise the cost of these threats will be the regions which best use their tacit knowledge by forming the most appropriate micro communities.

7.5 The role of local/regional governance

Good governance is crucial because the appropriate micro communities often require input from governance institutions for successful innovation. This can take a variety of forms which, inter alia, include:

(i) networking assistance to ensure the appropriate micro community composition;

(ii) assistance in connecting the appropriate micro communities in other jurisdictions including foreign jurisdictions;

(iii) resource assistance and coordination of activities;

(iv) removal of infrastructure bottlenecks; and

(v) institutional coordination (universities, research organisations, training, marketing bodies and infrastructure managers).

To be effective governance structures must be:

(i)   local; and

(ii)   empowered.

They must be local because just as physical proximity and social interaction are important for innovation in micro communities, they are also important for governance structures to:

(i)   perceive the benefit of assisting micro communities and their enterprise networks; and

(ii)   design effective assistance and coordination efforts.

To do this local/regional government must be empowered. That is, they must be:

(i)   recognised partners with all levels of State and national government and well integrated into their decision making structures; and

(ii)   have access to resources to make a difference

Local/regional governance systems that are not empowered will be ignored and their critical role in the innovation economy will be still-born.

7.5.1   The appropriate regional governance dimension

In theory the design of appropriate local/regional governance structures for the innovation and knowledge economy should be based on principles of efficiency in face-to-face networking and social interaction. This endows a dominant role to Australia's local government structures which are designed on such principles for other purposes, namely local democracy.

In Australia, however, with a large area and small population, trade-offs are going to have to be made between regional governance structures which are based on principles of maximising social interaction and scale of population, industry clusters and institutional diversity for effective governance.

7.5.2   Other reasons for the importance of strengthening local/regional governance structures

The raft of requirements of the knowledge/innovation economy is only one among a number of reasons for strengthening local/regional governance structures.

Access to physical and community infrastructure is critical in creating the necessary conditions for regional convergence in living standards. In order to level the playing field for access to resources to create these assets for lagging regions, vis-à-vis wealthy regions, local democracy has to be strengthened so that political pressure can be applied through all levels of government. This will only happen if local/regional governance structures are given a direct role in influencing resource allocation outcomes.

The other reasons why national governments in other jurisdictions are keen to delegate decision making down the chain to local/regional governance structures is because of the increasing constraints on national government from international treaties (e.g. world trade and environmental treaties). By devolving power to local structures the decision making process becomes less transparent and increases the flexibility a nation can exert in meeting treaty conditions. It is the hidden governance structures of Japan and China which makes these countries so effective in meeting economic

objectives that otherwise would be impossible by decision making structures of a transparent national government.

Finally, in the Australian context, empowering local/regional governance structures would go some way in improving the poor quality of Australian representative democracy.

7.6   Towards reform of Australian local/regional governance structures

The first steps in reform of Australian local/regional governance structures should be anchored in the concept of flexibility. Just as flexibility is the hallmark of the innovation/knowledge economy, so it should be in the complementary approach to the development of governance structures. As the next chapter makes clear, this is the approach of the Western Europeans.

There is one proviso. Namely that whatever structures are built the democratic local government bodies should, in the majority of circumstances, form the basic building block. How these building blocks are structured would be determined on a case by case basis. For example, issues of industry development would require groupings of LGAs that form an effective integrated set of industry clusters. Issues in relation to transport policy would involve LGA structures that form an efficient regional grouping for covering all the core connectivity patterns between residents and their place of work and trade and between residents and community/commercial infrastructure.

Local governance in a variety of institutional integration and coordination could well be devolved down to the individual LGA level, e.g. in a range of education and community services.

In this context LGAs would be empowered by State and Commonwealth Governments creating pathways in legislation for individual LGAs, or combinations of LGAs, to participate in decision making structures and play a leadership role in resource mobilisation and application. Each different socio-economic policy segment could have a different pathway for local/regional government involvement. However, they might often be coincident between numbers of sectors.

For effective results LGAs have to be appropriately resourced. Different pathways would trigger the allocation of resources if an LGA decided to participate and carry the burden of the associated responsibilities and obligations. This needs to recognise the significant structural change already being demanded of local councils as key local actors.

However, those local councils that decided to expand their responsibilities should also be entitled to increase general purpose funding to enable them to upgrade their skill base, data bases and governance processes to enable effective participation and planning associated with increased responsibilities.

Over time these initial steps would lead to an established pattern of more effective local governance. As this became more widely accepted, it would be appropriate to decide if the constitutional role of local/regional government should be codified. (There are already challenges to be faced on the more formal integration of local authorities in regional governance in natural resource catchment management.)

Practical administrative steps which could immediately be taken to upgrade the role of local/regional governance in Australia would involve local authorities in association with State and Federal Governments or their regional groupings to:

(i)   prepare a set of regional economic accounts;

(ii)   prepare projections of regional developments over a five year time frame;

(iii)   prepare infrastructure, educational, industry development strategies which would significantly enhance regional performance;

(iv)   cost the strategies under (iii) and develop implementation strategies involving all necessary State and Federal Government institutions and agencies and all relevant private/public sector partnerships' and

(v)   provide channels and institutions whereby the outcomes of (iv) can impact on policy outcomes.

Steps (i) to (v) are the necessary first steps for the commencement of regional socio-economic planning and further governance capacity in Australia. It also would enable regions to be held to account for whatever responsibilities they accept for policy implementation

Additional practical steps could include:

❑   Firstly states, and then Commonwealth and states, should *commit to the promotion of sustainable regional development, in partnership with regional communities*, both rural and urban through the co-operative recognition of regions' goals for sustainable development, the promotion of internationally competitive strengths and the facilitation of balanced state and national development.

❑   Local government should be *recognised by both State and Federal Governments as a vital facilitator* of such efforts and be parties to evolving partnership agreements with them in a national effort to promote the cohesion of our economy and community.

    Local governments will need to recognise that this commitment entails major efforts to build their capacity as modern facilitators of sustainable regional economic development, recognising that they need to partners with community and business interests as well as State and Federal Governments. This will include new public – private partnerships in infrastructure and community service provision and the building of learning and knowledge based communities. It requires them to move well beyond their traditional roles of physical and community infrastructure provision and finance.

❑   These approaches should include efforts to understand and support community and business efforts to improve productivity, develop active targets to promote full regional employment and export of regions' services and products, to embrace natural resource sustainability, to promote "triple bottom line" accountability and participation by firms, government agencies and civic groups, as well as councils, and counter social exclusion..

    Some of this needs to be included the development of a *core of regional budgets* (referred to above) identified by all levels of government and co-ordinated with a vigorous set of regional indicators and economic, social and environmental ' balance sheets" and public reporting on progress. This can run along side other efforts to foster local level enterprise initiative and lend strategic support to it but needs to develop firm analysis of core regional strengths, capacities, strategies and alliances.

❑   While commonly recognised sets of regions are emerging , these trends should be greatly accelerated over a period of 5 to 10 years. Further consideration must also be given to foster cohesion of effort where economic regions *cross state borders* across the Tweed and Murray rivers, between the ACT and Southern NSW, and perhaps between Northern areas of WA and NT. (Maybe we can also apply some of the EU Interegia Program experience of fostering projects for cross border integration)

❑   There is a steady emergence of efforts to *promote regions as locations for direct investment* by domestic and foreign sources by local and regional communities, by state and some national agencies. This could be intensified if there were efforts to make clearer the geographic impacts and choices of the decision making of institutional investors and deposit taking bodies.

    Efforts should be made to explore the relevance of such instruments as the *US Community Reinvestment Act*. Under this, without heavy coercion the Federal Reserve Bank examines and regularly publishes reports on the investment policies of financial institutions so that local communities can see the pattern of returns or reinvestment through those sources.

❑ Local government should seek to improve regional cooperation by promoting a review of ways it can be rewarded by the criteria used to allocate general revenue assistance grants via state Grants Commissions

The following identifies a number of broadly sectoral initiatives worthy of consideration.

❑ The role of local government in natural resource management should be recognised and be strengthened. The use of Heritage Trust Funds should be used as a lever to achieve this objective.

❑ Links between social and community development and economic and NRM forums.

❑ Integrate the Area Consultative Committees into regional forums or development systems anchored on a firm LGA foundation.

❑ Regional socio-economic information system implementation as outlined above, can promote regional benchmarks.

❑ Examination of the enterprise zone system proposals for stressed regions.

❑ Local government be better resourced to discharge their current and future responsibilities by a formula allocation of GST revenues.

❑ Explore the European developments of regional devolution, and of linked up services provision as outlined in the next chapter.

❑ Experiment with the levels of 'block funds' linking a range of regionally relevant State and Federal Government programs with greater levels of local discretion in application, within the framework outlined above.

❑ Apply the EU experience of Structural Funds and their programs, especially in SMEs, R & D promotion and diffusion, education incentives and regional targeting, learning communities and cross border co-operation, again as explored in the next chapter.

❑ Explore multi-region relations to national infrastructure programs.

❑ VET and university funding relations need further improvement in the shifting environment of tertiary education and research to strengthen regional alliances and protocols and their relations with compulsory and community education networks and reforms.

❑ Strengthen inter-governmental cooperation to achieve enhanced regional economic outcomes, possibly by examining the experience of the European Union's Council of Regions to elevate the participation of regional communities in national policy and to promote more vigorous sharing of regional experience and multi-region cooperation.

8. Governance in Europe

8.1 Introduction

The following sections focus on developments in the field of governance and regionalisation of policy formation. This discussion is conducted through policy developments that have been occurring the European Union (EU) and California - presented in the following chapter. It is predominately based on extracts from reports produced by the European Commission and Californian Speakers Commission on Regionalism, pertaining to the evolution of regional governance, new issues in context of regional governance, and the policy formation structures and measures being introduced to address regionalism within the broader movement of globalization. The discussion is concluded with a brief comparison of the types of governance and policy formation structures evolving and being adopted in Europe and the USA.

The debate concerning the definition of governance is ongoing. It is not the purpose of this discussion to arrive at a definitive conceptualization of what Governance is. The governance as it is used in the following discussion revolves around the political infrastructure and instruments used by government or political institutions in the process of policy formation.

8.2 Current focus for regional governance and development policy in Western Europe

This section provides a brief description of the political backdrop in the EU, that is the reorganization of EU politically, economically and socially, and the governance issues being created.

The creation of the European Union via the advent of the Euro currency and Single European Market program has irrevocably changed the economic and political landscape in Europe. A trend toward homoginsation of the political and economic infrastructure has naturally affected governance in the regions. The ensuing alteration in patterns of trade and flow of value has introduced new governance challenges.

The decay of nationally Sovereignty as a unit of political and economic organization connotes regions are now more suitably defined via social and economic networks rather than traditional notions of spatially defined governance. That is the primacy of the "regional networks" as a unit of social and economic organization is beginning to emerge.

Governance in Europe at present is in a state of flux, characterized by shift in powers. There has been upwards shift in powers from the national to the supra national, also downwards from national levels to regional and local levels. That is, the nation state is being reorganized on three levels.[1] Firstly, a process of de-nationalization, a "hollowing out" of national powers to the supra national and sub national levels. Secondly, de-statisation of the political system, where governance is moved from the state to civil society. Thirdly, internationalization of policy regimes.

---

[1] Jessop, B (1997) "Capitalism and its Future: Remarks on Regulation, Government and Governance." Review of international Political Economy 4,: 561-81

8.2.1 The need for a new approach to governance

The Prodi Commission, responsible for promoting new forms of governance in Europe released the seminal study *European Governance, A White Paper* in March 2002. The need for a system of integrated policy initiatives to provide cohesive governance that increases the connection between European citizens and its democratic institutions is the central focus. In order to attain this goal increased levels of transparency, involvement and accountability are required in the formation of policy.

The paper is seen as the first step in igniting debate on policy issues and the necessary institutional framework. The paper proposes a number of catalytic actions to further the governance agenda.

The need for reformation stems from a sense of alienation felt by Europeans as to what the EU aspires to become, its boundaries, objectives and how powers are shared with member states. There is growing distrust with the complex system of treaties. Reforming governance addresses the question of how the EU use the powers bestowed upon it by its constituency.

To tackle the growing disenchantment the 'Community method' is recommended in the white paper. The method is intended to guarantee diversity and effectiveness in the Union by arbitration of different interest using a two filter system. The first filter is at the level of the commission, which makes legislation and policy proposals and acts as guardian of the treaty. The second filter consists of the Council of Ministers and the European Parliament, responsible for the delivery and execution of policy.

8.2.2 Principles of EU good governance

The Prodi commission articulated five principles that should underpin a system of good governance:[2]

1. Openness – communication regarding what the union does

2. Participation – ensuring wide participation through out the policy chain, dependant on member governments following an inclusive approach

3. Accountability – clarification of responsibility of member states and those parties involved in developing policy

4. Effectiveness – timely deliverance of action on the basis of clear objectives and prospective future impact. Dependant on implementation in a proportionate manner at the appropriate levels.

5. Coherence – ensuring a consistent approach to a system of policy increasing in complexity and diversity.

The principles are to operate in a context of *proportionality and subsidiarity* vis, the choice and level of policy action and the selection of instruments used must be proportionate with the objective pursued. This can only be achieved via a "…virtuous circle based on feedback, networks and involvement from policy creation to implementation…"[3]

---

[2] Commission of the European Communities, "European Governance, A White Paper", Brussels, March 2000

[3] ibid.

8.2.3   Actions proposed to improve regional governance in the EU

Proposals for change are forwarded on four fronts: increased involvement; enforcement; stronger links between European governance and the role of the Union internationally; and, the role of institutions.

Increased public debate and involvement of citizenry at the regional level, by communicating more effectively on European issues is considered essential. This objective is to be activated through EUR-LEX[4], an interactive website where people can follow policy development and engage in debate. This will serve as a conduit through which policy makers are able to stay in touch with public opinion. Also other avenues, utilizing different communication technologies are to be used.

❑   At present there is inadequate opportunity for multi-level partnership (inclusive of national, regional and city levels), where sub-state entities are assuming an increased role in implementation without being engaged in policy decisions. Therefore, adequate mechanisms need to be put in place for wider consultation on EU policy decisions and implementation with a territorial element. That is a response at the EU level is required to build better partnerships across various levels to encourage ownership of policy at the sub-national levels. To increase the involvement of regions in the policy process and ensure regional differences are accounted for, the following actions are suggested:

❑   **Involvement in policy shaping**, which ensures regional/local knowledge and conditions are taken into account.

❑   **Greater flexibility** with respect to implementing legislation with a strong territorial impact, whilst maintaining a level playing field for the internal market. A target based tripartite approach will be tested, where the EU would establish contracts with member states, regions and localities. The contracts would provide sub-national designated authorities in Member States to undertake and implement identified actions to realize particular objectives defined in primary legislation.

❑   **Overall Policy Coherence**. Territorial impacts of policies need to be addressed, particularly in areas such as transport, energy and environment. Decisions taken at the regional level need to be consistent with the overall policy framework. Enhanced dialogue between the commission and regions is required to develop indicators that identify where coherence is required.

The above governance propositions/objectives will be activated by a number of actions:

❑   Establish systematic dialogue between the commission and national associations of regional and local government at early stages of policy shaping

❑   Commission to pilot "target-based contracts" as a more flexible technique to ensure EU policy adoption

❑   The committee of Regions to organize an exchange of best practice pertaining to how local and regional authorities are involved in preparatory phase of EU decision making at the national level

❑   Review regional impact of policy directives

❑   Member states should examine how to increase the involvement of local and regional actors in EU policy-making

❑   Member states promote the use of contractual arrangements with regions and localities.

---

4   http://www.europa.eu.int/eur-lex/en/index.html

Increased use of consultancies and networks to improve regional policy

To achieve the necessary regional input to policy continued use of consultancies is essential, however this must occur with a greater extent of control over the process than is presently occurring. Currently the Commission is running approximately 700 ad hoc consultancy bodies in a wide range of policy areas. The commission believes this process needs to be rationalized to make the process more accountable. The first step in the rationalization process is to publish a review of the existing sectoral consultative flora. Follow up actions will consist of developing a code of conduct that sets minimum standards focusing on what to consult on, when, whom and how to consult. The code is intended to reduce the risk of policy makers being exposed to biased views or particular groups attaining privileged access on the basis of sectoral interest or nationality. The influence of particular economic interests and lobbying groups on policy formation is also sited as a major concern in the USA.

European integration has resulted in the proliferation of technological, cultural and social networks, linking business, communities, research centres, and regional and local authorities. At present many of networks are disconnected from the EU policy-making. The commission by structuring more open relations with these networks could encourage more effective contribution to EU networks. This would represent a valuable asset to the policy process given these networks present trans-national and cross border cooperation and understanding. A framework for supporting trans-national cooperation of regional or local actors at the EU level is currently under examination, with proposals due at the end of 2003.

The complexity of legislation being produced by the European Parliament delineates a need to expedite the pace of policy production whilst increasing its effectiveness and simplicity. The union must be able to react rapidly to changing market conditions associated with the adoption and implementation of community rules. The diffusion of policy could be accelerated through leveraging networks.

8.2.4 Improving regional economic performance through effective governance

Increasingly regional economic performance is being studied using a value chain approach to explore the comparative performance of different regional economies, particularly certain sectors located in different parts of Europe. In addition to using conventional location theories that examine issues such as regional economies of scale, vertical integration, market size and the role of externalities the role of governance is being studied. It is anticipated that improved upstream consultation may improve time to implementation and the quality of policy.

Improvements are to be pursued upon the basis of seven factors.

1.   Upon the basis of an effective analysis it needs to be determined whether it is appropriate to intervene at the EU level or whether regulatory intervention is required at all. If regulation is required the potential economic, social and environmental impacts of objectives must be identified at the regional level and whether the approach is suitable.

2.   Greater thought should be given to the selection of policy instruments. Should legislation be coupled with other non-binding tools such as recommendations, or self-regulation for example.

3.   The use of regulation should be used in cases with a need for uniform application and legal certainty across the union, avoiding transportation of directives into national legislation. Framework directives should be used more often. They are generally less heavy handed and more flexible, and agreement is reached by the council and the parliament more quickly on such objectives. Irrespective of the legislative form selected more use should be made of primary legislation. Primary legislation pertains to basic conditions to implement them, and the executive in the form of secondary rules can fill in the technical detail.

4.   Under a framework of co-regulation, legislation and regulatory action is taken by the participants affected.   This promotes ownership of policy circumventing implementation barriers, whilst drawing on a large body of regional experience.

5.   An open method of co-ordination should be applied on a case-by-case basis. It is an approach to encourage co-operation and the exchange of best practice and agreeing on common targets and guidelines for member states. It essentially facilitates shared learning.

6.   A strong culture of evaluation and feedback is required in order to learn from successes and mistakes. Intended to mitigate future case of potential over-regulation and ensure decisions are made and implemented at the appropriate level

7.   The Commission has committed itself to a process of withdrawal where inter-institutional bargaining undermines the Treaty principles of subsidiarity and proportionality. That is, the council and parliament should limit involvement to primary legislation and avoid overloading and over-complicating proposals, thereby complementing community involvement

The EU intendeds to create more autonomous regulatory agencies to improve the application and enforcement of rules in clearly defined areas. They would be granted powers to take individual decisions in the application of regulation. They would operate independently within a framework established by the legislature, limiting their powers, responsibilities and requirements for openness. Such agencies have an ability to draw on highly technical and sectoral knowledge bases. Hence they will be utilized primarily in areas where a high level of sectoral or technical know-how is required.

8.2.5   Developing a culture of inclusive governance[5]

In order to back up the actions outlined above it is necessary to enact a coordinated effort. That is, it is necessary to decompartmentalise the developmental cycle of legislative acts. To achieve this the commission intends to take the following action. A legislative network needs to be created on two levels; between community institutions, and between the community institutions (represented by the commission) and members states.

The Commission, Parliament and the Council will set up a mechanism based on present interinstitutional cooperation to implement the mandate of the network. Steps should be taken to break down the divisions between the community and national levels by facilitating the coordination and exchange of information between the different levels of authority. This will be enacted by the appointment of transposition and application correspondents to improve surveillance of transposition of community law. Thereby improving ongoing feedback on how directives and regulations have been applied in practice via the exchange of practice, impact assessments and consultation standards.

8.3   EU programs and policies

The following section looks at the programs and policies being implemented within the context of regional governance. It canvasses the regional disparities between member states and types of policy measures and structured funds being implemented to redress the imbalances, and the objectives for regional policy in the medium term. The following material consists predominantly of extracts from EU reports on social economic cohesion. It is presented for comparative purposes, and is not original NIEIR material.

---

[5]   Commission of European Communities, "Simplifying and improving the regulatory environment", Brussels, June 2002

8.3.1   Servicing the regions - action is being taken.[6]

The European Union's regional policy is based on financial solidarity inasmuch as part of Member States' -contributions- to the Community budget goes to the less prosperous regions and social groups. For the 2000-2006 period, these transfers will account for one third of the Community budget, or €213 billion:

❑   €195 billion will be spent by the four Structural Funds (the European Regional Development Fund, the European Social Fund, the Financial Instrument for Fisheries Guidance and the Guidance Section of the European Agricultural Guidance and Guarantee Fund);

❑   €18 billion will be spent by the Cohesion Fund.

The Structural Funds concentrate on clearly defined priorities:

❑   70% of the funding goes to regions whose development is lagging behind. They are home to 22% of the population of the Union (Objective 1);

❑   11.5% of the funding assists economic and social conversion in areas experiencing structural difficulties. 18% of the population of the Union lives in such areas (Objective 2);

❑   12.3% of the funding promotes the modernisation of training systems and the creation of employment (Objective 3) outside the Objective 1 regions where such measures form part of the strategies for catching up.

There are also four Community Initiatives seeking common solutions to specific problems. They spend 5.35% of the funding for the Structural Funds on:

❑   cross-border, transnational and interregional cooperation (Interreg III);

❑   sustainable development of cities and declining urban areas (Urban II);

❑   rural development through local initiatives (Leader +);

❑   combating inequalities and discrimination in access to the labour market (Equal).

There is a special allocation of funds for the adjustment of fisheries structures outside the Objective 1 regions (0.5%).   There are also provisions for innovative actions to promote and experiment with new ideas on development (0.51%).

The Structural Funds finance multi-annual programmes which constitute development strategies drawn up in a partnership associating the regions, the Member States and the European Commission taking into account guidelines laid down by the Commission which apply throughout the Union. They act on economic and social structures to:

❑   develop infrastructure, such as transport and energy;

❑   extend telecommunications services;

❑   help firms and provide training workers;

❑   disseminate the tools and know-how of the information society.

Development initiatives financed by the Structural Funds must meet the specific needs identified on the ground by regions or Member States. They form part of an approach to development which respects the environment and promotes equal opportunities. Implementation is decentralised, which means that it is mainly the responsibility of the national and regional authorities.

---

6   Extracts from www.europa.eu.int/comm/regional_policy/intro/regions2_en.htm, servicing the regions report.

One particular fund, the Cohesion Fund, provides direct finance for specific projects relating to environmental and transport infrastructure in Spain, Greece, Ireland and Portugal, as these are still inadequate. The Instrument for Structural Policies for pre-Accession (ISPA) provides assistance along the same lines to the ten central and eastern European countries which have applied for Union membership.

Irrespective of the type of assistance, these instruments complement but do not replace national efforts.

8.3.2   Why are regional policies and structured funds necessary

The European Union is one of the most prosperous economic areas in the world but the disparities between its Member States are striking, even more so if we look at the EU's various 250 regions.

To assess these disparities, we must first of all measure and compare the levels of wealth generated by each country, as determined by their gross domestic product (GDP). For instance, in Greece, Portugal and Spain, average per capita GDP is only 80% of the Community average. Luxembourg exceeds this average by over 60 percentage points. The ten most dynamic regions in the Union have a GDP almost three times higher than the ten least developed regions.

In other words, not all Europeans have the same advantages and chances of success when faced with the challenges of globalisation. All depends on whether they live in a prosperous or a poorer region, in an area which is dynamic or in decline, in a city or in the country, on the Union's periphery or in one of its economic heartlands.

Access to employment, the competitiveness of firms and investments in e-economy technologies are the responsibility of economic operators and national and regional authorities. But not theirs alone.

Regional disparities in per capita GDP between the Member States, 1997
(purchasing power standards)

The regions indicated (NUTS 2) are those where per capita GDP is respectively the lowest and the highest in each country.

- Above average
- Below average
- Average
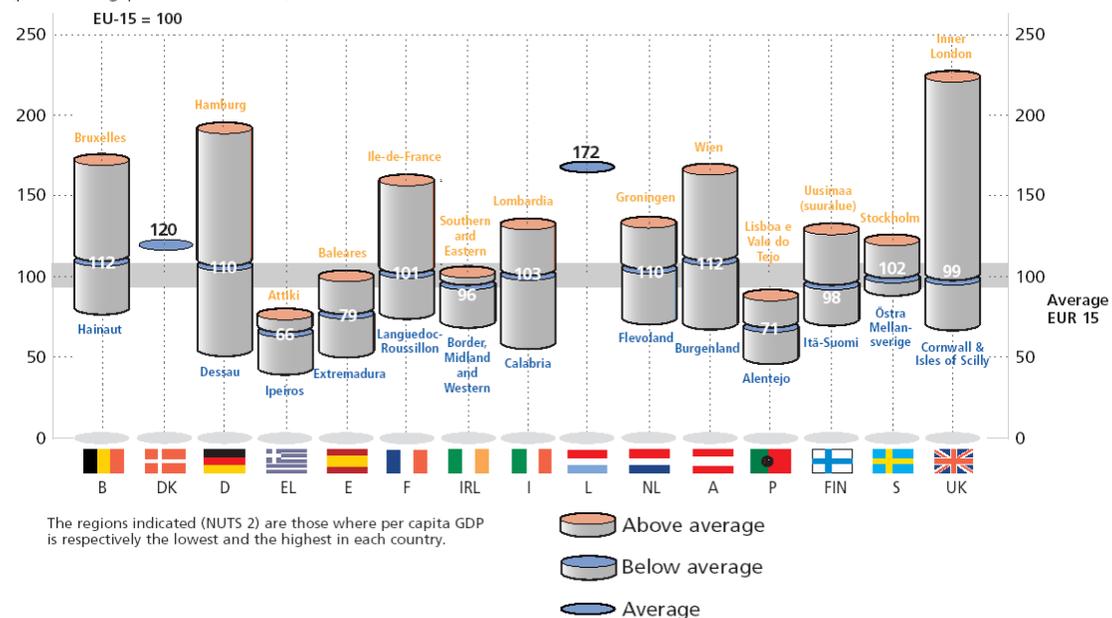
Solidarity among the peoples of the European Union, economic and social progress and reinforced cohesion were all written into the preamble to the Treaty of Amsterdam. Moreover, article 158 of the amended Treaty establishing the European Community reads: "... the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions or islands, including rural areas". That is why the Member States are implementing a European regional policy financed by the European Funds (the Structural Funds and the Cohesion Fund) which reflects this solidarity between the citizens of the Union.

The role of the European Union is not merely limited to financial contributions. Through its regional policy, the Community takes its own view on development work planned at local level. Where necessary, it complements the internal market and economic and monetary union

At the dawn of the third millennium, the Union's regional policy is facing three major new challenges.

1. The Union is preparing to take in new countries where the economic and social conditions are often worse than in the least developed regions of the 15 existing Member States. That is why pre-accession aid is needed.

2. Competition among firms has grown greatly in the wake of world trade liberalisation. Firms establish themselves wherever they find the best conditions to increase their competitiveness (high-quality infrastructure and services, skilled workers). The least prepared regions must be helped to secure infrastructure and modern and efficient services which can make them more attractive.

3. The technological revolution and the information society require businesses and citizens in the Union to very rapidly adapt to a constantly changing situation. If they are to do so, the inhabitants of all the regions must be able to access the most advanced know-how through telecommunications networks, innovation and high-quality training.

In 1999, the Member States provided the European Union with fresh financial resources to deepen and expand its work from 2000 to 2006. Alongside these Community financial perspectives, known as Agenda 2000, a number of reforms affecting the Union's main policies were adopted.

The guiding principle of regional policy reform is to concentrate further on assistance to regions whose development is lagging behind, that is those with the most serious problems in terms of infrastructure, creation of economic activity and training. Implementation of this policy has been simplified by reducing the range of assistance measures. Substantial changes have also been made to the way in which Union funds are managed.

It was essential for Member States and regions to recognise that it was in their interest to take their future into their own hands and manage themselves the funds provided by the Union. Now the main responsibility for the management and supervision of expenditure will be theirs; the Commission will intervene only to check that effective audit systems are in place.

The countries applying for Union membership have not been forgotten, as they will receive supplementary pre-accession aid to improve environmental protection and their transport systems. As soon as they join, they will receive further structural assistance already conceived for this purpose.

Europe's regional policy is a genuine shared policy based on financial solidarity. It permits the transfer of over 35% of the Union's budget, which comes mainly from the richest Member States, to the least favoured regions. This approach not only helps the beneficiary countries but also those which are net contributors to the Community budget, as their enterprises profit in return from major investment opportunities and of economic and technological know-how transfers, particularly in regions where various types of economic activity have not yet really taken off. Regional policy enables all regions to help make the Union more competitive.

8.3.3   Structured funds and community initiatives

European solidarity is expressed primarily through the four Structural Funds. In all the Member States they exercise a multiplier effect on the economic and social factors likely to stimulate a region's economy. The Funds' contributions have grown from €8 billion per year in 1989 to €32 billion per year in 1999. They will remain at about €28 billion per year from 2000 to 2006, or €195 billion over seven years (at 1999 prices).

In all, 213 billion will be available from 2000 to 2006 to improve the economic situation of the least favoured regions, areas with specific handicaps and at-risk groups in society. In addition, many specific projects will acquire a European dimension thanks to the Commission's guidelines and exchanges of know-how among the various regions.

Structural assistance 2000 – 2006	213 billion
Structural Funds	**195 billion**
Priority Objectives	182.45 billion
Objective 1	135.90 billion
Objective 2	22.50 billion
Objective 3	24.05 billion
Community Initiatives	10.44 billion
Fisheries	1.11 billion
Innovative actions	1.00 billion
Cohesion Fund	**18 billion** Amounts in euro (at 1999 prices)

The four Structural Funds do not constitute a single source of finance within the Union budget. Each has its own specific thematic area although all work hand in hand.

❑   The European Regional Development Fund (ERDF) finances infrastructure, job-creating investments, local development projects and aid for small firms.

❑   The European Social Fund (ESF) promotes the return of the unemployed and disadvantaged groups to the work force, mainly by financing training measures and systems of recruitment aid.

❑   The Financial Instrument for Fisheries Guidance (FIFG) helps adapt and modernise the fishing industry.

❑   The "Guidance" Section of the European Agricultural Guidance and Guarantee Fund (EAGGF - Guidance) finances rural development measures and aid for farmers, mainly in regions lagging in development The "Guarantee" Section of this Fund also supports rural development under the Common Agricultural Policy in all other areas of the Union.

In addition to the four structure funds Four Community initiatives are being implemented to find common solutions to problems affecting the whole Union.

These four programmes absorb 5.35% of the budget of the Structural Funds. Each Initiative is financed by only one Fund.

Interreg III

Promotes cross-border, transnational and interregional cooperation, i.e. the creation of partnerships across borders to encourage the balanced development of multi-regional areas (financed by the ERDF). The primary aim is the harmonious spatial integration of large areas within the framework of economic and social cohesion.

For example:

❑   Improving transport and telecommunications infrastructure

❑   Joint management in the fields of energy, environment and water

❑   The preparation of transnational strategies and plans for coordinated spatial development.

Such aims are intended to facilitate the exchange of best practice innovative ideas to support the economic cooperation and the transfer of technological know-how.

Urban II

Concentrates its support on innovative strategies to regenerate cities and declining urban areas (financed by the ERDF).

Leader

Aims to bring together those active in rural societies and economies to look at new local strategies for sustainable development (financed by the EAGGF Guidance Section). It is a transnational network with a view to stimulating co-operation, complementary action, exchanging information and drawing lessons concerning territorial rural development

Equal

Is a transnational approach, which seeks to eliminate the factors leading to inequalities and discrimination in the labour market (financed by the ESF). It underpins the development of employment and social inclusion policies through the Lisbon process. It intends to diffuse the best practice of all member states through European thematic groups.

8.3.4   An assessment of economic and social cohesion in the EU

The Eurpean commission in January 2001 released the second cohesion report. It brings together the statistical data for the regions and the member states to provide a snapshot of the of the state of economic and social development within the EU.

Member country overview[7]

A narrowing of income disparities in the EU15

In the EU today, disparities in income (GDP) per head between Member States and, more particularly, between regions, remain considerable. The average income per head of the 10% of population living in the most prosperous regions is, for example, 2.6 times greater than the bottom 10%.

---

[7]   Extract from European Commission, Second Cohesions Report, Situation and Trends, Jan 200

The disparities, however, have narrowed over time. In the three least prosperous Member States (Greece, Spain and Portugal), average income per head has risen from 68% of the EU average in 1988 to 79% in 1999, a reduction of a third in the initial gap. Disparities between regions have narrowed by less, partly because the gaps have widened between regions within certain Member States.

Lower income per head at regional level is associated with lower output per person employed, lower levels of education and training - despite significant progress achieved in recent years - less research and development activity and innovation, as well as a slower pace of introduction of the new information and communication technologies. On the other hand, there has been a marked improvement in relative infrastructure endowment in less prosperous regions, a key factor in their longer-term development prospects.

A step change with enlargement

With the enlargement of the Union, the economic landscape is set to change significantly. An analysis of the situation as it stands today points to a doubling of the income gaps between countries and regions, a doubling in the sense that if a Union of 27 existed tomorrow:

❑   at national level, over one-third of the population would live in countries with an income per head less than 90 % of the Union average - the current threshold for eligibility for aid under the Cohesion Fund - compared to one-sixth in the present EU15.

❑   at regional level, the average income per head for the bottom 10% of population, living in the least prosperous regions in EU27, would be only 31% of the EU27 average. In the EU15 today, the income per head of the bottom 10% of population equates to 61% of the average.

At national level, in a Union of 27 the countries separate into three main groups. The most prosperous group comprises 12 of the current Member States of the Union - all except Greece, Spain and Portugal - where income is above average. This is followed by an intermediate group of Greece, Spain and Portugal, together with Cyprus, Malta, Slovenia and the Czech Republic, where income per head is around 80% of the EU27 average, with 13% of the total EU27 population. The real change compared to the Union of today, however, would be the existence of a third group comprising the 8 remaining candidate countries where income per head is around 40% of the EU27 average. This is a significant group accounting for around 16% of the population of the EU27.

As an example, infrastructure in the candidate countries is inadequate in quantity and often of poor quality, while evidence suggests that labour force skills and the kind of education and training provided do not match the needs of a modern market economy. As regards transport, the Transport Infrastructure Needs Assessment estimates the total cost of constructing trans-European networks in these 12 countries at € 90 billion, while several studies put the cost of complying with Community environmental standards at € 50-100 billion, giving an overall amount of € 15-20 billion a year, for the next 10 years, for the two sectors.

In sum, the evidence demonstrates that considerable progress has been achieved in the present EU15 in reducing income gaps between regions, though on past trends it is likely to take another generation before regional disparities are eliminated. Enlargement widens the disparities markedly. Given existing levels of income per head in the candidate countries, convergence between regions in the enlarged Union would take at least two generations if it occurred at the same pace.

Employment: some signs of progress

Employment in the EU15 rose by over 2 million during the 1990s, but this was not sufficient to significantly increase the employment rate - the proportion of the population of working age in employment - which remained at just over 60%, well below the ambitious objective of 70% fixed for 2010 by the Lisbon European Council. The average figure, however, conceals substantial differences across the Union. Only 4 Member States had an employment rate in 1999 above 70%, while in Greece,

it was only around 55% and in Spain and Italy, even lower. 10% of the Union's population lived in regions where well below half of those of working age were in employment (44%).

Despite strong growth of employment of women, mostly in part-time jobs (one woman in three in the Union works part-time), their employment rate was 19 percentage points below that of men in 1999. All of the employment growth in the Union over the 1990s was in services, the largest increases occurring in the most prosperous regions and in high-skilled jobs. At the same time, because of skill mismatches, labour shortages are beginning to emerge in many regions, especially in new sectors of activity and particularly in information technology.

The persistence of wide gaps in unemployment in the EU15

Disparities in unemployment remain wide in the Union. In 1999, Greece, Spain, France, Italy and Finland had unemployment rates of more than 10%, at least twice the rate in Luxembourg, Netherlands, Austria and Portugal where the figure in each case was below 5%. Regional disparities are much more pronounced: the 10% of population in the worst-affected regions - mostly regions where development was lagging, but some of which were undergoing restructuring - had an unemployment rate in 1999 of 23%, nearly 8 times the average for those in the least-affected regions (3%).

Labour markets in the candidate countries: an incomplete transition

While there are superficial similarities between labour markets in the candidate countries and the EU15 - in 1999, unemployment averaged 10.2% in the former 9.3% in the latter, while the average employment rate was much the same in the two - there are major underlying differences, which are a legacy of the ongoing process of transition. Five key features are worth highlighting:

❑   women in the candidate countries are continuing to withdraw from the labour market, though participation rates are still higher than those in most parts of the Union;

❑   employment in traditional industries remains high even after the loss of 25-50% of jobs over the 1990s;

❑   agricultural employment, at 22% of the total, is 5 times the average for the Fifteen (4.5%), though its importance varies markedly between the countries;

❑   labour productivity remains lower than in the EU15 ;

❑   employment in services has grown significantly, but at a much higher rate in the capital cities than in other parts of the countries.

In sum, the return of stronger economic growth in the second half of the 1990s has generally had favourable consequences for employment and unemployment in the EU15 but the effect in terms of reducing regional disparities in income and employment has been more limited. In the candidate countries, the transition process remains incomplete, with the risk that unemployment could rise in many regions in the period ahead. But the outlook for labour markets in an enlarged Union will be heavily influenced by demographic trends. In the EU15, these will lead to an ageing of the labour force and could result in it declining in number after 2010. In the candidate countries the pattern is broadly similar, but an important feature here is the expected growth in the number of young people aged 20-35. In an enlarged Union, this would be an important balancing factor in an otherwise ageing population and labour force.

Social cohesion and the incidence of poverty: a persistent problem

In 1996, 18% of the population in the Union, or one in six, had income below the poverty level. The countries where the proportion was lowest, Denmark and the Netherlands (11-12%), are also those with income per head above the EU average. At the other extreme, 20-25% of the population in Portugal and Greece had income below the poverty line. The contrast is even sharper in respect of

long-term, or persistent, poverty which affects only 3% of people in Denmark and the Netherlands but 12% in Portugal and 10% in Greece.

There are many root causes of poverty and particular groups are especially at risk, including people with low education, old-age pensioners, the unemployed and others not in work, lone-parent families and families with large numbers of children. Many poor families have more than one of these characteristics.

While comparable data for the candidate countries are not yet available, the evidence suggests that rural areas are most affected by poverty.

The territorial dimension: persistent imbalances

The most important territorial imbalance in the Union today is that between the less developed regions and the rest. At the same time, spatial disparities in the Union reflect a more complex reality than indicated by differences in income and employment between regions. This reality has to do with the potential for development and the need to promote a harmonious development of the Union as a whole.

For the Commission, and for the Member States, this was the rationale behind the European Spatial Development Perspective (ESDP), which was the first coherent effort to clarify the nature of the major territorial imbalances across the Union as a whole. These imbalances and the need to address them assume an added dimension with enlargement, if only because the land area of the Union will have doubled in relation to the early 1990s once the candidate countries have entered.

Urban areas: growth centres for achieving polycentric development

The concentration of population in central areas is reflected in a high degree of urbanisation and a disproportionately large share of the highly skilled functions associated with the knowledge economy being located there: business headquarters, research installations and the most highly qualified workers. The net result is a level of productivity some 2.4 times higher than in peripheral areas. The counterpart of this concentration is that the Union lacks the kind of polycentric pattern of activity which is undoubtedly a factor in the territorial cohesion of the US, in its less pronounced regional disparities in income and employment and, perhaps, in its competitiveness.

Contribution of Community policies to economic and social cohesion

Economic and Monetary Union

(a)   Macroeconomic stability helps to achieve economic convergence

For high rates of economic growth to be sustained in lagging regions of the Union, it is important that structural policies are allied to macroeconomic policies which ensure financial stability. The establishment of a single currency makes the maintenance of such stability easier to achieve.

Over the 1990s, in the run-up to monetary unification, inflation was reduced considerably in the cohesion countries, especially in Greece and Portugal, from well above the EU average to around 2.5%. At the same time, growth of GDP was above average in all four cohesion countries in the second half of the 1990s. Nominal convergence was, therefore, accompanied by real convergence.

This tendency was particularly marked in Ireland, while convergence has occurred more slowly in Spain and Portugal and more recently in Greece.

(b)   The introduction of the Euro makes differences more transparent and capital more mobile

The introduction of the Euro should lead to increased competition and, therefore, to greater market efficiency. By reducing transaction costs and interest rate differentials, it should lower the price of capital and increase its availability in lagging regions. Capital is likely to flow more easily to areas where the returns are highest, implying that the specific features of different regions will assume more weight in the competition for finance. The least competitive regions will therefore be particularly exposed.

At the same time, regional variations in labour costs will become more transparent, which should help to focus attention on underlying differences in productivity, a major cause of differences in regional competitiveness.

The internal market

The decisions taken in 1988 and 1992 to strengthen the Union's support to regions with structural difficulties were motivated by a recognition that closer economic integration would not necessarily permit the reduction of regional disparities and could, initially at least, lead to them widening. Cohesion policy therefore sought to help less developed regions benefit from the advantage of European integration and to enable the Union as a whole to fully exploit its growth potential, both at the EU level and through regional empowerment.

The progress achieved towards a more integrated economy, now extending to the applicant countries as well as the present Member States, is reflected, in particular, in convergence of prices across the Union, expansion of trade and growth of direct investment between countries.

As economic integration proceeds, costs of transactions between markets tend to decline so narrowing price differences. In the Union, the evidence suggests that prices across the Union are indeed becoming more similar (as shown by a recent study based on a Eurostat price survey of 270 product groups). This is particularly so for manufactured goods, which are generally subject to trade, though in some cases - motor vehicles, for example - prices still differ markedly between Member States. Price differences continue to exist, however, for most services, including housing, and non-traded goods, reflecting the variation in local market conditions.

Evidence also suggests that prices of industrial goods, especially machinery and equipment, in some of the more advanced Central European countries have already become similar to those in the EU, which is perhaps to be expected given that a large part of the market is supplied by imports from the Union.

Conditions in financial markets in the EU, which were already becoming integrated during the 1990s, have become increasingly similar since the introduction of the Euro. This is particularly evident as regards nominal long-term interest rates, which reflect both expectations of future inflation rates and conditions on capital markets, which have converged too much the same level.

The extent of price convergence differs between sectors

In contrast to the prices of manufactures, which have tended to converge across the Union, differences persist for most services, which underlines the local nature of markets in a number of sectors. Convergence towards EU prices also seems to be occurring in the more advanced candidate countries, at least for traded industrial goods.

Significant growth of trade

Trade flows between the Union and the candidate countries have increased markedly during the 1990s, reflecting the progressive move towards a free trade area planned for 2002. The Union already accounts for 60% of total exports of the candidate countries while these account for 10% of Union

exports. The composition of trade between the two suggests that they do not compete in the same type of product.

The effects of economic Integration can also be seen in the changing pattern of trade, which tends to become more similar between countries as they become more interdependent. The evidence on trade flows indicates that the extent of intra-industry trade (which measures the similarity of the composition of exports and imports) is high for all EU Member States. This index, calculated for the EU12 (ie the euro-zone) countries' intra-EU trade from 1988 to 1998, shows that Greece, Ireland and Portugal still have a considerably lower degree of intra-industry trade than all other countries, which is suggestive of the existence of a 'development gap' regarding their productive structure. In Portugal, however, intra-industry trade has increased significantly even though the index is still lower than for all other countries except Greece. For most other countries, the index has increased, with the biggest increase having taken place for Spain, which has now a higher level than many other Member States

Tendencies to concentration or dispersion?

A key question concerns the extent to which economic integration is likely to lead to some sectors of activity concentrating in a few regions to exploit economies of scale. In practice, there seems to be a general trend towards concentration in manufacturing, but the extent varies between industries and is occurring at a very slow pace because of the scale of the investment required to change the locational distribution of activities significantly (Ireland and Finland, for different reasons, are exceptions). The risk exists that such a concentration would increase the vulnerability of some regions to external shocks which affect particular sectors concentrated there.

There is an ongoing debate as to whether closer economic integration, and in particular, the introduction of a single currency into a Single Market, is likely to increase or reduce the degree of regional specialisation, which is important for assessing whether or not regions are likely to become more or less vulnerable to sector-specific shocks. The evidence of the US, at least so far as manufacturing is concerned, points to specialisation increasing, but it cannot necessarily be assumed that US experience will be replicated in Europe. This uncertainty is reinforced by the fact that studies so far have tended to focus on manufacturing industry, where the factors giving rise to increased concentration and agglomeration - in the form of economies of scale in production and proximity to suppliers and other producers in the same industry - are most evident. In practice, however, manufacturing is becoming less important in the Union in terms of both GDP and employment, accounting for only around a quarter of the latter, and the future location of economic activity in the EU will depend critically on the location pattern of a number of key services (the 'new economy'), which will not necessarily follow that of manufacturing.

Studies confirm that manufacturing activity in the Member States is slowly becoming more concentrated. The trend is not uniform, however. A number of industries that were initially spatially dispersed have become more concentrated, mainly unskilled labour-intensive ones with declining output or slow rates of growth (textiles, clothing and footwear, in particular), which have become more concentrated in southern Europe. For the regions dependent on these sectors today, there is an increased vulnerability to economic shocks similar to that which has provoked economic restructuring in the northern regions over recent decades. At the same time, around half of medium and high tech industries that were initially spatially concentrated remained so (aircraft, motor vehicles, electrical engineering, for example), while others with a highly skilled labour force and with relatively high rates of growth (office machinery, radio, TV and communications, precision instruments, for example) became more dispersed. The latter have typically spread from the central part of the Union to Ireland, Finland and southern Member States.

Analysis of the forces underlying the changes indicates that resource endowments and market potential (proximity to main markets) are of key importance. Within the former, endowment of capital, the driving force behind the location of capital intensive industries in the 1970s, seems to have lost importance in relation to the availability of an educated labour force, which has become key to determining the location of skill-intensive industries in the 1980s and 1990s. As educational

attainment levels are likely to become more similar across the Union, this should be a factor working against increased spatial concentration. At the same time, market potential has become increasingly important for the location of industries with strong forward and backward linkages, central locations attracting industries higher up the value-added chain. On the other hand, the importance of market potential for industries with large potential economies of scale has declined markedly over the period

The effects of integration and the need for accompanying policies

The increased competition generated by closer integration and the diminished possibility of protecting local industries are likely to put a premium on technical know-how and to reduce the demand for low skilled workers even further. The response to this should be to raise the levels of education and training of the work force and to orient training towards the skills required in growing sectors. Education policy and active policies for employment and social development therefore have an important role to play in accompanying economic integration, particularly those tailored to regional ends.

While increased specialisation will tend to favour those employed in the sectors for which demand is expanding in the different economies - highly-skilled workers in the more advanced economies, low-skilled workers in the less advanced ones, where production is concentrated in low-wage, labour-intensive activities - in reality, the outcome is unlikely to be this simple. Most trade in the EU is of an intra-industry kind, where similar goods are exchanged, and this is likely to become increasingly the case in future years.

In practice, the decline in demand for low-skilled workers, and the consequent social problems caused by their unemployment, tends to result from technological advance, which favours the more highly skilled, and highly educated, more than from trade. This implies that the problem for policy is not to seek to slow down the process of integration, but to increase the education and skill levels of workers, as well as to increase the relevance of what they are taught for the jobs for which demand is expanding in the respective regions.

At the same time, the candidate countries will need to comply with the requirements of the 'acquis' (the body of Community law, including directives, regulations as so on) which is likely to add to production costs and affect the ability of their businesses to compete with those in the present Member States.

However according to the studies which have been carried out, enlargement of the single market to include the candidate countries should have generally beneficial effects for all parts of the Union, especially for those on the two sides of the border between the old and new Member States. The process of economic integration tends to favour a general trend towards a narrowing of disparities. Nevertheless, economic theory suggests that this is conditional on integration being complete whereas partial integration may well have adverse effects. European policies to establish economic and monetary union and the breaking down of barriers appear to have contributed positively to convergence, not least, by promoting greater macroeconomic stability, increased internal trade through lowering transaction costs in their widest sense and more competition, all of which are favourable to economic growth.

At the same time, the impact at the level of individual regions is unpredictable, given that faster growth is inevitably accompanied by economic restructuring and given the multiplicity of factors - social and political as well as economic - that contribute to economic development. In these circumstances, it seems essential to adopt a wide-ranging approach with a number of different measures aimed at tackling the factors which determine competitiveness at the regional level. This will naturally entail a greater input from instrumentalities at the sub-national level to ensure policy is location specific.

Competition policy

The provision of State aid is one of the instruments at the disposal of national and regional authorities to influence the spatial distribution of economic activity. The results of the Eighth Survey on State aid in the EU1 show that State aid still occupies a central place in the industrial and regional policies of most Member States. Over the period 1996 to 1998, the total amount of State aid granted in the Union averaged EUR 79.8 billion a year, or 2.4% of total government expenditure (though this was slightly less than over the period 1994 to 1996).

The results of the Survey show that there are significant disparities between Member States in the granting of State aid. In terms of all three indicators presented below, the difference between the lowest and the highest level is three to one.

Table 8.1	Overall national aid in Member States 1994-1996 and 1996-1998							
	% GDP (at 1997 prices)		EUR per person employed		EUR per head		% of Government expenditure	
	1994-96	1996-98	1994-96	1996-98	1994-96	1996-98	1994-96	1996-98
Austria	0.65	0.65	342	353	143	147	1.17	1.23
Belgium	1.26	1.18	698	677	255	249	2.33	2.26
Denmark	0.99	0.94	526	513	257	257	1.6	1.59
Germany	1.97	1.45	1.007	786	430	327	3.96	2.95
Greece	1.36	1.24	352	334	131	125	2.38	2.25
Spain	1.14	0.98	367	318	132	120	2.47	2.22
Finland	0.5	0.47	249	248	96	97	0.85	0.85
France	1.11	1.13	588	618	225	237	2.02	2.08
Ireland	0.88	0.99	389	497	137	188	2.12	2.66
Italy	1.83	1.57	809	712	314	276	3.38	3.04
Luxembourg	0.99	0.53	624	343	324	188	2.24	1.27
Netherlands	0.65	0.62	362	349	127	126	1.23	1.24
Portugal	1.37	1.63	260	323	117	148	2.98	3.44
Sweden	0.99	0.78	476	388	220	178	1.49	1.24
UK	0.54	0.52	227	223	99	100	1.17	1.2
EU15	1.32	1.12	591	526	235	214	2.54	2.35
Excluding agriculture and Structural Funds expenditure								

The following features are apparent:

❑ expenditure on State aid per person employed and per head of population in the four cohesion countries in terms of Euros has remained well below the EU average, and well below that in many of the more prosperous Member States, such as Germany, Italy, France and Belgium, though the gap diminished over the period 1994 to 1998; in the period 1996 to 1998, the cohesion countries accounted for 10.5% of total expenditure on State aid in the EU as against 9.5% in the period 1994 to 1996;

❑ the volume of State aid has declined in recent years, especially in the more prosperous Member States, where expenditure per head and per person employed is above the EU average. The main exception is France, where in recent years, expenditure increased significantly, in both absolute and relative terms.

Given its effect on the regional distribution of economic activity and income, the control of State aid will remain a key instrument of Community cohesion policy. Allowing high levels of State aid in the most prosperous Member States and regions would undermine the effectiveness of both Community and national regional policy efforts in support of the weakest regions. Financial assistance to support

businesses in the latter is vital to correct regional disparities, and it is important that the effectiveness of this is not compromised by the granting of disproportionate State aid elsewhere. Strict control of State aid should, therefore, be regarded as an essential complement of Structural Funds support for the less favoured regions, however a component of regional discretion in the application of funds is necessary.

Regional State aid is by far the largest single category of State aid in the EU. Between 1996 and 1998, Member States granted EUR 18.8 billion in State aid for regional purposes, which represented 57.6% of all State aid granted to industry and services in the Union. In the 1990s, there was a proliferation of regional aid measures throughout the Community, and a gradual extension of the areas qualifying for regional aid, giving rise to a real danger of the effectiveness of regional aid being undermined as a means of furthering economic and social cohesion.

At the end of 1997, the Commission adopted new Guidelines on national regional aid, with the aim of strengthening control over its deployment. These consolidated the criteria used to assess the compatibility of national regional aid measures and clarified the rules for the demarcation of regions qualifying for aid under Article 87(3)(a) and (c) of the Treaty. Member States were invited to bring their existing regional aid systems into line with the new rules by the year 2000.

A key element of the exercise was the review of regional aid maps in each country, with a view to bringing about a sizeable reduction in the coverage of aid. In the course of 1999-2000, new regional aid maps were established for each Member State. The main aims were achieved, in that the new maps were defined on the basis of a transparent and objective method which ensured equal treatment for all Member States. At the same time, the total population in the EU covered by regional aid was reduced from 46.7% to 42.7%. A strict application of the eligibility criteria has resulted in a tighter demarcation of the assisted regions, enabling Member States to focus regional assistance on the regions suffering the most severe economic problems and so increasing its effectiveness.

Employment policy and the development of human resources

The European Employment Strategy (EES) was launched only a few years ago at the end of 1997 and is built on several processes. The Union's role is a coordinating one, the Member States remaining responsible for the design and delivery of employment policy.

A new operational framework, particularly in the Luxembourg process

The Luxembourg process embodies a number of elements which are important for its success:

❑ First, it is founded on commonly defined objectives, which are based on shared values among the Member States and cover issues which are felt to be of common concern for employment policy.

❑ These objectives are transparent and, therefore, open to public scrutiny and criticism.

❑ A number of appropriate ways to measure progress towards the desired outcomes are defined either in terms of quantitative or qualitative indicators.

❑ As the focus is on outcomes at the EU level, the definition of the means and conditions under which programmes and policies are implemented is left to individual Member States, which are responsible for their own employment policy.

❑ Peer pressure through annual examination and comparative review is used to steer the course of policy and enhance the effectiveness of action.

This method establishes a balance between EU Union level coordination in the definition of common objectives and outcomes and Member State responsibilities in deciding the detailed content of policy.

The European Employment Strategy is based on a number of key principles, which distinguishes the 'Luxembourg' open method of coordination from previous attempts to develop a credible European approach to employment policy. These principles are:

❑ Subsidiarity. The definition of the means and conditions under which programmes and policies are implemented is left to individual Member States.

❑ Convergence. Commonly agreed employment objectives are pursued through concerted action, where each Member State contributes to raising the EU average performance. This principle has been made more concrete still by the Lisbon European Council in March 2000, where full employment was adopted as an overriding goal of the Union, together with the objectives of raising the overall employment rate in the EU from 62% to 70% by 2010 and the employment rate of women from 52½% to over 60%.

❑ Management by objectives.

❑ Country monitoring.

❑ An integrated approach. The Luxembourg process does not involve only Ministries of Labour and Employment, but commits national governments as a whole as well as a wide range of other interested parties.

Luxembourg Objectives

The objectives of the Luxembourg process are given operational meaning in the Employment Guidelines' four pillars: employability (enhancing the chances of individuals to remain in, enter or re-enter the labour market, providing early assistance to the unemployed, preparing young people for the world of work, making the tax-benefit and training systems more employment friendly), entrepreneurship (developing a culture of enterprise, making it easier to start and run businesses), adaptability (helping employees and enterprises to be more flexible, modernising the legal and organisational framework of employment), equal opportunities (developing pro-active policies which will enable more women to take up employment, at all levels and in all sectors, better reconcile work and family life and facilitate a return to work after a period of absence).

A learning strategy, reviewing itself

It is noteworthy that the Luxembourg process itself is subject to critical assessment. In 2000, a 'Mid-term Review' was carried out in order to identify the improvements it initiated and the weaker points where further action could be needed. The review identified some important changes and successes (in particular, it brought the employment challenge and the employment objectives to the forefront of European and national debate, linked economic and social policy more closely together, created an integrated framework for structural reform, led to increased involvement of a wide range of actors and to greater transparency of employment policies and increased political accountability), while enabling the Guidelines to be refocused on the main Lisbon objectives. But it also identified a number of continuing challenges.

Despite overall improvement, regional differences in labour market performance remain substantial and have increased further in some Member States.

The regional pattern of employment has changed little since 1980, and there appears to be little evidence of a more balanced distribution of net job creation between regions.

The Employment Guidelines took account of this situation from the outset and drew attention to the role of local and regional authorities in employment policy. As noted in the Joint Employment Report 2000, the importance of action at local and regional level is increasingly recognised by Member States, but more needs to be done to increase cooperation between the different levels of government to develop a comprehensive regional and local employment strategy; regional and local authorities and other local actors need to become more involved in the design and implementation of the relevant

guidelines, so adding a local dimension to the EES. This point is reflected in the proposed Guideline 12.

Labour market bottlenecks are emerging in a number of Member States. These call for targeted action to improve employability, both in general and of people at risk of social exclusion, in particular. Education systems and continuing training are of crucial importance.

Despite improvements in education systems (often supported in Objective 1 regions by the Structural Funds), a number of young people still leave education too early with too few qualifications. This can lead to difficulties adapting to technological change and to social exclusion. The cohesion countries face the greatest difficulties in this respect. Measures to combat early school leaving feature in all of the National Action Plans (NAPs) produced for 2000, except that of Spain. Most Member States have broadened support for young people with learning difficulties. Many have introduced specific measures aimed at target groups (people with disabilities, ethnic minorities, disadvantaged young people) and at areas where drop-out rates are high. For example, France, the Netherlands, Portugal, Sweden, and the UK have established special educational action zones designed to keep young people in education and training, to increase rates of achievement and tackle social exclusion.

The clear benefits from the Information Society represent a threat for those excluded from the IT revolution. The Lisbon Summit highlighted the major efforts needed to ensure that all share in these benefits. There are a number of examples of efforts in Member States (Greece, Portugal) to provide education and training for people with learning difficulties through ICT and to develop special support to improve ICT skills for unskilled workers and for those in specific sectors. This should promote social inclusion in the Member States concerned. Action, however, is uneven across the Union and more needs to be done.

All the NAPs put employment policies for people with disabilities firmly on the policy agenda. In many Member States, there has been a shift in emphasis away from programmes targeted at those with disabilities towards a more mainstream approach which encourages them to participate in general active labour market policies. However, there are specific measures in a number of Member States. Three of the cohesion countries (Portugal, Greece and Spain) have set targets for the participation of people with disabilities in training and other employability measures.

There is also some evidence from the NAPs for 2000 to suggest that Member States are taking greater account of the needs of ethnic minorities in the development of employment policy. Nevertheless, there are differences between Member States both in the interpretation of what is meant by ethnic minorities and in the policy-mix between promoting direct integration in the labour market and measures to fight discrimination. Most tend to focus on integration. However, a few Member States adopt a mix of the two (Denmark, Sweden, UK). In some Member States (France and Portugal), there has been a public debate on discrimination at work, reflecting consultation undertaken at the EU level by the Commission on the implementation of Article 13 of the Treaty.

The horizontal objective of gender mainstreaming has been only partly implemented and policies still tend to be presented as gender-neutral.

Over the five years to 1999, almost two-thirds of the 6.8 million net additional jobs in the EU were taken by women. However, over 70% of these jobs were part-time. Other labour market indicators suggest that there is still some way to go to achieve greater equality of opportunity in the labour market.

The NAPs confirm that Member States have improved their implementation of gender mainstreaming. However, although there has been some progress in improving the gender-impact analysis of policy initiatives (particularly in Finland and Ireland), many countries appear to lack plans or measures in this regard.

It has not been easy in all cases to coordinate the Luxembourg process with the budget process, which translates the objectives, commitments and measures envisaged into (possibly multi-annual) budgetary allocations.

Similarly, there remains the challenge of integrating, at the national level, the contribution of other instruments, such as the European Structural Funds (and in particular, the European Social Fund), into the implementation of the NAPs.

The translation of the objectives within the adaptability pillar into action is lagging behind. Much of the action under this pillar is the responsibility of the social partners, who have a major stake in contributing to more and better jobs and whose cooperation is needed for implementing measures in the workplace. Not all Member States make it easy for the social partners to be involved, and many NAPs, through inadequate reporting, fail to reflect activity and initiatives actually taking place. Nonetheless, the onus is on the social partners to become more active, and more transparently so, in this regard. In order to encourage progress, the Employment Guidelines 2001 invite the social partners to create 'a process within the process', ie to be responsible for the development of, and reporting on, actions within their remit which are consistent with the overall objectives in the Employment Guidelines.

The force of Recommendations

The instrument of Recommendations - first used for 2000 - has demonstrated its value in focusing Member State efforts on key challenges. Most Member States have taken action to respond to the Recommendations addressed to them. The 52 Recommendations adopted for 2000 referred to youth unemployment, long-term unemployment, disincentives to employment embodied in the tax or benefit systems, the employment potential of the service sector, social partnership, gender gaps and statistical systems. Most of the Recommendations have been kept (entirely or in amended form), because their implementation exceeds the timeframe of a single year; 8 Recommendations were dropped because sufficient progress had been made - as regards services (Belgium, Germany, Ireland, Italy), the administrative burden on companies (Spain), statistical systems (Germany, UK) and social partnership (France). New Recommendations were included, putting additional emphasis on two new priority issues, which deserve increasing policy attention: achieving a more balanced policy-mix across the four pillars through a more comprehensive approach and lifelong learning. For 2001, the Commission proposes to address the Recommendations to Member States.

The Commission proposal for the Employment Guidelines 2001 has also been influenced by the Lisbon Summit conclusions. Overriding strategic priorities have been included in an introductory section. The new emphasis put on full employment, the role of the social partners, lifelong learning, educational attainment and social inclusion have also been taken into account. Some of the Guidelines have been rationalised (eg lifelong learning is now addressed in one instead of several Guidelines) or clarified (eg the potential role of local and regional authorities in employment policy) and more concrete targets have been included. New issues, such as labour market bottlenecks and undeclared work, have been addressed.

Outlook for the Luxembourg Process

The Luxembourg process is treaty based (Article 128) and as such there is no time limit defined. In 2002, the overall results of the strategy and its objectives will be reviewed and an overall impact - evaluation will be carried out to enable policy makers to consider strategic options for a revision of the Guidelines. This evaluation process will start soon (at Member State and EU level) and should provide the necessary information for the political decisions needed in 2002. Two separate strands need to be distinguished in the exercise:

❑   policy evaluation, focusing on those areas where the Employment Guidelines can be expected to have influenced policy choices at national level as well as the effect of those choices;

❑ macro-evaluation, assessing the progress made towards achieving the key objectives of the EES - combating unemployment, increasing employment rates, improving the adaptability of the labour force and the responsiveness of labour markets, reducing gender gaps and developing lifelong learning

Environmental policy

The pursuit of economic and social cohesion and the protection of the environment are complementary objectives. Even though environmental protection may initially increase the costs of production or, more accurately, make them more visible, the effect should not be overestimated. The cost of implementing all the directives on water and waste treatment as well as the measures resulting from the Kyoto conference should amount to only around 0.5% of Union GDP.

Environmental protection should not be regarded solely as imposing costs on the economy, but equally as a means of improving the quality of life, especially in problem urban areas.

Costs and advantages for less prosperous regions

In the case of policies on water and waste, which are critical for environmental protection, there needs to be considerable investment to tackle problems in the cohesion countries and the least prosperous regions. The Structural and Cohesion Funds will help cover the cost of this in lagging regions and bring standards up to those elsewhere.

The cost of environmental protection, as in the case of implementing the framework directive on water, will sometimes fall on the weakest members of society, because of the transfer of some of the costs involved on to users, notably on to households and farmers, under the 'polluter pays' principle.

The measures involved, however, also contribute to social cohesion, in respect of public health and in terms of the jobs created. Although the likely effect on employment seems modest at the Union level, several tens of thousands of jobs could, nevertheless, be created over the next few years as a result of the directives on water and waste treatment.

The candidate countries face the same problems as the cohesion countries but to a greater extent, particularly in respect of waste treatment. The Union is already helping to finance the investment required through ISPA and after accession, this will be one of the priorities for the Cohesion Fund.

European Waste Policy

The Fifth Environmental Action Programme 'Towards sustainability', reiterates the priorities for waste management in the following order of preference:

1. Where possible, the generation of waste should be prevented

2. If this is not possible, it should be reused

3. Otherwise, it should be recycled

4. If not, waste should be sent for energy recovery

5. Only if none of the above are possible, should landfill be used as the last resort

European water policies

Improvements in water quality are likely to require a large part of the EUR 260 billion estimated to be needed over a 20-year period for the EU15 to comply with the 10 directives on environment. There is, therefore, the potential for a significant effect on cohesion.

One feature of water management conditions this effect; the role of public authorities in this means, among other things, that historically polluters have often not paid for the damage they cause. As the 'polluter-pays principle' is applied more systematically, there is likely to be a marked redistribution of costs between both social groups and regions.

According to a study for the Commission, there are, in particular, four elements of EU water legislation which could have effects on cohesion:

❑ the Water Framework Directive

❑ the Drinking Water Directive

❑ the Urban Waste Water Treatment Directive

❑ the Nitrate Directive

In sum, environmental legislation is on balance more likely to have positive than negative effects on regional cohesion. The same, however, may not be the case for social cohesion, which might, therefore, justify accompanying measures being taken:

❑ at the national level, the cohesion countries are likely to share significantly in the benefits of environmental improvements (including the quality of life which might attract business investment) and, though the costs of implementing legislation might in a number of cases be higher than elsewhere, these will be met to a large extent by the Cohesion Fund;

❑ at the regional level, some less prosperous areas benefit most from environmental improvements, for example those in inner cities from wastewater treatment, and often have the cost of these paid by central government or the Cohesion Fund;

❑ at sectoral level, there will be cost increases for some sectors, though in most cases limited in relation to production costs. In a few cases, these will fall disproportionately on the less prosperous regions, rural areas being a notable example. These will bear the cost of the Nitrate directive, reflecting the true cost of the activities carried out there. The main effects, however, will be on agricultural areas in the more prosperous Member States and rural areas in Spain and Portugal are actually likely to benefit. A move towards full recovery of costs of water supply is likely to fall heavily on agricultural users and on households in remote communities, although again because they will start to pay the true cost of their activities;

❑ at the social level, costs in a number of cases may, initially at least, fall disproportionately on poorer people and those living in remote areas, the shift from taxpayers to households in respect of the Water Framework Directive being a notable instance.

Environmental protection measures, however, tend to benefit employment. The gains are significant, even if they are modest in relation to the overall need for jobs in the EU. For example:

❑ implementing EU waste legislation is likely to boost employment in the cohesion countries by up to 35,000 in the next five years and by 50,000 in applicant countries when they fully implement the acquis;

❑ the Urban and Waste Water Treatment Directive may create up to 200,000 jobs in construction and some in manufacturing, though to the extent that more prosperous regions tend to have bigger eco-industries, they are likely to gain most.

The above conclusions are somewhat tentative because of the limited data available at present. The intention is to rectify this in time for the next Cohesion Report.

Research and development

The Community research and technological development policy (RTD) is focused on the pursuit of excellence in order to strengthen the Union's position in relation to its international competitors. In terms of territorial balance, the establishment of a European Research Area opens up further prospects for integrating research and regional development.

According to the Commission, to establish a European Research Area, Member States need to consider policies on finance, human resources, the relationship between the public and private sectors, the creation of a common reference framework and values, and regional aspects. On the last issue, the Commission pointed to the importance of studying and putting in place the conditions for a 'real territorialisation' of research policies or adapting these 'to the geographical socio-economic context.' It has, therefore, invited policy-makers at all levels to consider both the challenge posed to regions by the European Research Area and how they can contribute to its achievement

Regionalisation of Research and Development policy

Regional and local authorities already support research, technological development and innovation. It is estimated that the finance they provide amounts annually to almost 1½ times the total appropriation of the EU Framework Programme (EUR 4.5 billion compared with EUR 3 billion), over 90% of which is allocated on a regional basis.

The authorities concerned are best placed to form the links with companies necessary for innovation and, therefore, the generation of economic wealth and employment. Creating networks of knowledge, clusters of companies, linking the scientific system to the needs of industry and services are all easier to organise at local and regional level.

Regional authorities are also well-placed to review best practice and to identify other regions with which they can fruitfully cooperate, which may be relatively distant ones, such as those which form the network of the 'four regional engines for growth', Baden Württemberg, the Rhone-Alps, Lombardia and Cataluña, or neighbouring areas, such as Brussels, Flanders, Kent, Wallonia and Nord-Pas-de-Calais. Such cooperation can help strengthen regional capacity for research and innovation by facilitating specialisation and complementary action and encouraging the rapid dissemination of knowledge.

By pursuing their own interests, therefore, regional authorities can increase the momentum towards the establishment of a European Research Area as well as ensuring its effectiveness and consistency.

The establishment of a European Research Area, however, is not confined to the most central and competitive regions. The instruments available - the Framework Programme, the Structural Funds and action at national and regional level - should be used together in a more coherent way, each according to its objectives, in order to enable all regions to participate fully in the area.

Networking and encouraging regional specialisation

The Commission Communication on Guidelines for EU Research Activities (2002-2006), adopted in October 2000, indicates how regions are intended to be involved in the European Research Area and sets out a number of Community objectives in five major areas: research activities, innovation and SMEs, infrastructure, human resources and the relationship between science, society and citizens. It indicates three horizontal aspects which need to be taken into account in this regard: the overall coherence of European cooperation over science and technology, the international dimension of projects and the regional aspect. It also emphasises the importance of carrying out measures which encourage the full use of regional potential, through networking and exploiting geographical features or areas of economic specialisation.

Member States indicated their perception of the regional dimension of European Research Policy in the resolution of the Research Council in November:

> *'The Council of the European Union:... emphasises the importance of promoting the scientific and technological performance of all the regions of the Member States and participating countries, including the cross-border dimension, both within the European Research Area, in future framework programmes and in other relevant community initiatives.'*

In this regard, the following aspects, which are considered in turn below, are of some importance:

❑ the learning effects of being part of European RTD consortia and networks;

❑ the mobility of researchers as a mechanism for the tacit exchange of knowledge;

❑ the policy learning effect of RTD activities.

Shared-Cost RTD projects in the Fourth Framework Programme

The most important mechanism for EU funding of RTD is the 'shared-cost actions' in the Framework Programmes, which are project-based contracts between the Commission and the participants. Since the latter generally consist of organisations from a number of Member States, this enables knowledge and ideas to be shared and new know-how and technology to be developed jointly. The participation of representatives from cohesion countries and Objective 1 regions, therefore, is a way of improving the knowledge flow into these areas.

A detailed analysis of the regional impact of RTD policy has not been possible because data on the geographical distribution of expenditure from the Fourth Framework Programme (FP4) are not published. Some national data exist, but not for all countries and regions, and they are not based on official European statistics but on national surveys. The following analysis concentrates on numbers participating and other available indicators.

Relating participation figures to indicators of national RTD capability, such as the number of RTD personnel in a country, indicates that the cohesion countries are performing well, with Greece, Ireland and Portugal in leading positions. Closer examination, however, shows participation being heavily concentrated in the capital city areas. On the other hand, this concentration seems to be diminishing, with other regions in these countries accounting for a growing share of participation.

Participation and the number of projects from Objective 1 regions and cohesion countries increased over the second half of the 1990s. The number of projects with at least one partner from an Objective 1 region rose from 27% in 1994 to 41% in 1998. The total number of participations (ie the number of occurrences of participation in projects) from Objective 1 regions in FP4 has gone up from 1,705 in 1995 to 4,067 in 1998, although in relation to the overall number of participations, it declined slightly from 16% in 1995 to just over 15% in 1998. Examination of the evidence shows that there is a positive relationship between the extent to which organisations from a particular region participated in the Framework Programme and RTD capability indicators, such as R&D expenditure and number of R&D personnel.

Encouragement of SMEs to participate in the Framework Programme was successful in increasing their share of total participation in FP4. However, a lack of official statistics on the type of participants at NUTS2I regional level means that it is not possible to verify whether this had a positive impact on Objective 1 regions. Nevertheless, the user survey, carried out as part of the Five-Year Assessment of European RTD programmes (1995-1999), suggests that in Ireland and Spain, representation of SMEs was higher than the EU average.

Since 1994, the Central European Countries (CECs), Russia and the Newly Independent States have been covered by the INCO-COPERNICUS programme. (INCO's contribution to the CECs countries in FP4 amounted to a total of ECU 78.3 million.) The need to strengthen links with the established RTD

sector in the candidate countries is important for safeguarding and strengthening their scientific and technological potential and INCO has provided a sound foundation, support and guidance for them, though industry participation was low.

Participation in FP4 was important in increasing cooperation between EU Member States. In the 8 years, 1987 to 1995, there were 150,000 instances of cooperation between large companies, SMEs, universities and public or private research centres as a result of EU RTD activities. After 1995, under FP4, the number of instances of cooperation increased significantly, to 113,990 in 1996 and 78,300 in 1998, the variation reflecting the implementation cycle.

Such collaboration in RTD is one of the most direct ways in which knowledge, both tacit and codified, is transferred between organisations in different European countries. Accordingly, any increase in instances of cooperation involving organisations in the cohesion countries helps to reduce disparities across the EU in access to know-how. Over the course of the Fourth Framework Programme, cooperation links have varied from one year to the next without showing any distinct trend. Overall, links between the four cohesion countries and the other 11 Member States accounted on average for 22.2% of the total created annually, which is a good indication of the stimulative effect of the Framework Programme on disadvantaged regions

At the same time, it appears that organisations from cohesion countries participating in projects tend, in general, to gain more from this than those from elsewhere. The user survey of participants in FP4 indicates that participants from Greece, Spain and Portugal were more positive than average, or about the same as the average, as regards the impact on their scientific and technological standing, competitive position, productivity and employment. On the other hand, participants from Ireland were, in general, less satisfied than average with the impact on them, including in relation to their scientific and technological standing.

Recent shifts in RTD policy

The Fifth Framework Programme (FP5), represents the continuation of a shift in focus from a policy oriented exclusively towards technology to one that includes innovation as a key concept. In essence, previous Framework Programmes prioritised areas of science and technology where Europe needed to strengthen its capability, whereas FP5 started from a statement of the most pressing societal problems which science and technology could help solve. Nevertheless, the Five-Year Assessment Panel that evaluated the first phase of FP5 concluded that more attention could be paid to social and economic aspects.

In principle, the way that the goals of FP5 are formulated allows more consideration to be given to the distribution of knowledge, to building 'absorption capacity' and not just to knowledge creation.

A horizontal programme for 'Promotion of Innovation and Encouragement of SME participation' has widened the target group to include not only high-tech performers, but also companies for which initial entry into the Framework Programme is difficult. The aim is to reduce obstacles to innovation for companies in less favoured regions and in more traditional sectors. At the same time, the provision of information to potential applicants, through Innovation Relay Centres, National Contact Points, more transparent Info Packs and so on, has been improved to reach a larger audience. While excellence in science and technology is still the main criterion for participation in FP5, there are parts of the program which enable participants to achieve such a level over time.

The candidate countries in Central Europe have been granted full access to FP5, which should enable them to continue their links with the science and technology community in the EU and which should help overcome the technology gap that exists between them and the leading European countries.

Policy learning effects from EU RTD initiatives

The EU has played a major role in disseminating good practice in RTD policy by helping to create a 'European Research, Technology, Development and Innovation Community,' where decision-makers, researchers, and other interested parties can communicate and work together, in both formal and informal ways, in official advisory committees, specific RTD programmes and policy exchange initiatives. By assisting in this, and through its influence on policy formulation and implementation, EU policy has indirectly contributed to closing the RTD and innovation gap between Member States and regions, and, by changing the culture, it has, in some respects, improved the policy planning process.

Moreover, initiatives such as, in particular, the Regional Technology Plans (RTP), the Regional Innovation Strategies (RIS), the Regional Innovation and Technology Transfer Strategies and Infrastructures (RITTS) and Trans-Regional Innovation Projects, jointly set up by DG Regional Policy and DG Enterprise, have helped put innovation high on the policy agenda in over 100 regions. These projects have stimulated the establishment of ongoing and long-lasting processes in these regions and have, therefore, prepared the ground for further decentralisation of RTD policies to the regional level. Fine-tuning of the planning of RTD policy and the deployment of the Structural Funds for this purpose has been integral to the success.

Transport policy in the context of regional development

The Common Transport Policy has made a positive contribution to the success of the Union in the past decade. The provision of high quality transport services and infrastructure is an essential pre-requisite for ensuring that all regions share in the prosperity that the Single Market is creating. The opening up of markets has reduced prices and made distances shrink to the benefit of peripheral areas. It has also, however, led to a greater volume of traffic, which is now recognised as having negative consequences for congestion, dependency on oil and the environment.

Traffic growth has been greater in the cohesion countries than in the rest of the Union, due mainly to road passenger transport increasing at twice the rate elsewhere as car use catches up. The Community has invested substantially in infrastructure, where 'transport funds' (the Trans-European Network-TEN - transport budget line) have been used in conjunction with the Structural Funds, to give a major boost to the provision of infrastructure in the regions. The revision of the Common Transport Policy now underway seeks to improve the quality of transport as much as the services provided.

The Common Transport Policy through the 1990s

There were many achievements between 1992 and 2000. The supply of transport services, notably by road and air, increased significantly as prices fell in real terms. In road transport, outmoded restrictions were removed completely in 1998. The opening up of air transport markets increased the number of flights and lowered their cost. The main areas in which progress was made were:

❑   the interconnection of national networks, particularly through the development of the trans-European transport network, which has substantially improved links within the cohesion countries and between these and the Union. The completion of the high-speed rail network will improve links between many regions. In addition, the new ISPA fund has been set up to finance infrastructure projects in the candidate countries;

❑   the removal of bureaucratic controls and the technical harmonisation of transport equipment, which has reduced costs through economies of scale and removed technical barriers to international operations;

❑   'interoperability' of rail networks, developed first for high-speed trains in 1996, which is about to be extended generally.

However, there have also been negative aspects. In particular, congestion in urban areas and along main international routes has increased dramatically over the past decade as road traffic has grown.

Sustainable transport

During the 1990s, the issue of sustainability has gained importance. Under Article 6 of the Treaty, environmental considerations have to be integrated into the definition and implementation of Community policies and activities to ensure development is sustainable. The concept of sustainability includes not only environmental concerns but also economic and social considerations. While environmental issues are important they have to be balanced against competitiveness and social welfare.

Progress has been made in environmental protection, notably in air quality. Community directives will reduce air pollution by 70% by 2010 thanks to technical improvements in fuels and vehicles, though some emissions remain a problem. Technical measures at European level are not a complete answer and local measures need to be taken to reduce urban emissions. New infrastructure can also help, as in the case of the Athens metro, which is expected to reduce car use substantially. Transport accounted for 28% of CO_2 emissions in 1998. The EU Kyoto objective of reducing greenhouse gas emissions by 8% by 2008-2012 is far from being met and requires, among other changes, a shift from road to other modes of transport.

The trans-European transport network

There were major efforts in the 1990s to upgrade transport systems in the assisted regions and cohesion countries to levels more similar to those elsewhere in the EU. Since the mid-1990s, investment has increased and projects started in the early 1990s, such as the Madrid-Seville high-speed train or large sections of the Pathe motorway, have been completed.

In sea transport, the dominance of the northern ports has been challenged by large growth in container traffic in the Mediterranean, as a result of the new port of Gioia Tauro and investment in Algeciras and elsewhere.

Public private partnerships have brought stricter control of the risks taken and of the work carried out. Sparta airport in Greece and the Vasco da Gama bridge in Portugal are good examples. The creation of special project authorities in the public sector has also served to improve accountability and efficiency.

Energy Policy

Access to reasonably priced energy essential for cohesion

In addition to liberalisation of markets, the major aspect of EU policy is support for improvements in the distribution network, to increase the availability of supply in peripheral regions, in particular. EU finance has, therefore, contributed to the construction of high-tension electricity lines and of gas pipelines as part of the trans-European Networks, to increase the possibility of trade in energy between Member States and to provide access to natural gas to regions where this energy source does not exist. Accordingly, assistance has been provided under the REGEN and INTERREG II programmes to help improve infrastructure in Greece, Spain, Portugal and southern Italy in order to increase the chances of consumers there benefiting from a single market.

These measures are aimed at reducing regional disparities in access to energy and prices. The establishment of a single market in energy should further help in this respect, by stimulating more trade and competition, especially in peripheral regions where monopoly suppliers tend to be more prevalent, and so pushing down prices.

The reduction in prices brought about could benefit the cohesion countries disproportionately, since their energy use in relation to GDP, though it has fallen in recent years, remains above that in the rest of the Union. This is specifically the case for Greece and Portugal, where consumption relative to GDP is some 40% above the EU average, reflecting the composition of economic activity, though to a major extent inefficiencies in the use of energy. Nevertheless, the economic development of these

countries in particular, involving, as it is likely to, increased industrialisation, will almost certainly necessitate increased energy consumption and, therefore, stands to be assisted by lower prices. At the same time, it is important for environmental reasons, in particular, that any reductions in price which occur do not lessen efforts to improve energy efficiency.

Increasing security of supply

The EU's dependence on imports of energy is set to increase in future years as North Sea reserves begin to run down. Dependence on imports varies greatly between Member States, as do the measures adopted (mainly regulatory ones) to minimise the risks involved in this. Such dependence does not have any direct implications for cohesion as such, so long as supplies are maintained and prices are relatively stable. However, the differential vulnerability to external shocks, such as an increase in world oil prices or the suspension of supply, is a potentially important source of disadvantage and, therefore, a possible factor in the decisions of businesses of where to locate, especially during periods of global instability.

In general, each Member State is responsible for safeguarding its own supplies (a common feature is that all member countries of the International Energy Agency continue to respect the norm of maintaining emergency stocks at a level equivalent to 90 days of net imports of petroleum). This may mean, to some extent, trading off lower prices for increased security and, therefore, overriding the market or imposing a fiscal and regulatory framework, which explicitly incorporates security considerations as well as those relating to the long-term availability of supply, within which the market can operate. Accordingly, the main long-term guarantee of security is to have access to multiple sources of supply, which can be achieved by diversifying both the sources of energy used and their origin.

Enterprise policy

The starting-point for this new policy was set by the Lisbon Economic Council in March, 2000, which fixed the goal for the EU 'to become the most competitive and dynamic knowledge-driven economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion' and identified enterprise and entrepreneurship as key to achieving this.

Enterprise policy in the Union is founded on three main aims, each of which gives rise to a set of specific measures as described below:

❑ **encouraging entrepreneurial activity** - the measures under this head, which are especially important for lagging regions, are aimed, in particular, at improving the access of SMEs to finance, in cooperation with the European Investment Bank and the European Investment Fund. They also focus on developing a range of business support services, creating a regulatory and administrative environment favourable to enterprise development, offering entrepreneurial advice and encouraging the development of skills and motivation, which accordingly increase the attractiveness of regions to investors. These elements have been developed under the Multiannual Programme for Enterprise and Entrepreneurship (2001-2005);

❑ **creating an environment which is supportive to innovation and change** measures under this head seek, in particular, to encourage the exchange of good practice between countries, regions and enterprises across the Union. They also help to remove obstacles to innovation and growth, provide support to innovation projects and promote the development of the service sector. They are being implemented through the recently adopted Communication 'Innovation in a knowledge-based economy' and the First Action Plan for Innovation in Europe;

❑ **to ensure that businesses have access to markets**: measures under this head are being pursued through continued efforts to consolidate the Internal Market, ensuring access to global markets, the dissemination of voluntary standards and the promotion of e-commerce and new distribution networks. The reduction in the problems created by distance will, of course, be of particular importance to firms in peripheral regions.

The new enterprise policy has no specific spatial dimension but, nevertheless, addresses some of the most relevant obstacles to cohesion and regional development. Many of the new enterprises policy priorities have parallels in the regional policies implemented through the Structural Funds. In this respect, it can work in parallel with regional policy to create synergy to advance economic and social cohesion. In particular, it is aimed at removing the whole range of barriers to market entry, which are often particularly prevalent in lagging regions. In the short-term, at least, it is expected that their removal will release latent enterprise potential and so help to reduce regional disparities. In addition, the establishment of an enterprise and innovation 'scoreboard' will accelerate the diffusion of business best practice between both Member States and regions. While the precise impact of the new enterprise policy on economic and social cohesion (and, in particular, its effect on the development of the lagging regions) is difficult to quantify, it can potentially play a significant role in reducing regional disparities.

In addition, the wide range of measures which are planned can have a positive effect on the ability of firms in lagging regions to compete in the global market place:

❑   measures such as benchmarking, peer reviews and joint action with Member States will enable policy makers and businesses across the EU to identify best practices and, in turn, to implement them. Programmes for encouraging the dissemination of innovation and best practice are likely to benefit lagging regions, in particular, and together with the development of business centres and technology parks, help them to exploit the opportunities offered in the new economy;

❑   policies designed specifically for SMEs, which are important for employment creation and regional development, to help them compete on a more equal footing with larger firms; the establishment of information and advice centres, such as the EuroInfo Centres (EICs) and the European Business and Innovation Centres, to offer support to enterprises across the EU. The EICs, by virtue of their close association with local businesses, their understanding of the local institutional environment and their links throughout the Union, play an important role in building relationships between firms in different regions and help them solve practical problems. In addition, the Europartenariat programme encourages SMEs in lagging regions to form business links with companies elsewhere, so enabling them to import technological and business know-how.

Many of the new enterprise policies have parallels in the regional policies implemented through the Structural Funds, and a core chapter of the Guidelines for Structural Funds programs was devoted to establishing priorities for enterprise support similar to the new enterprise policy.

SMEs

Enterprise policy is particularly focused on SMEs, which are an important part of the European economy. SMEs are the predominant type of firm in the EU and they are particularly important in lagging regions, where the small family business is prevalent, particularly in traditional sectors. The first multiannual programme for SMEs was therefore aimed at the development of SMEs in assisted regions.

In 1998, SMEs accounted for 99.8% of the 19.4 million non-primary sector private enterprises in the EU. Their average turnover was around EUR 500,000. In the two years, 1996 to 1998, the total number of SMEs in the EU is estimated to have increased by 4% and the number of people employed by 2% (from 73.2 million to 74.6 million), the same as in the economy as a whole.

Access to finance

Initiatives have also been undertaken to improve the availability of finance to SMEs through risk capital funds, the SME guarantee facility and small business loans for ICT projects. Most of these are implemented through the European Investment Funds. Since 1998, Spain, for example, has received 15% of the total amount allocated under the SME guarantee facility, which has gone to 672 firms. Other programmes, like the Joint European Venture (JEV), have also helped create new businesses in

lagging regions, particularly in areas of new technology, almost 20% of the projects financed under the programme being implemented in Spain, Portugal and Greece.

Policy on tourism

Europe is the main tourist destination in the world. In a number of regions, particularly assisted ones in the south and in mountainous areas, tourism is a major source of employment and has a substantial effect on economic development. It is also an activity dominated by SMEs, some 6.5% of the total turnover of firms of this size being generated in this sector.

In the EU as a whole, it accounts for 5.5% of GDP and 6% of jobs. In many parts of the EU, the figures are much higher. In Spain, for example, tourism accounts for 10.5% of GDP and 9.5% of employment.

Tourism is likely to be a major source of job creation over the coming years, particularly in lagging and peripheral regions, and measures to support the sector could have an important effect on the development of these. According to the report of a High Level Group on Tourism and Employment set up by the Commission, there is an opportunity for creating around 3 million new jobs in tourism in the EU over the next decade, but certain conditions have to be met to realise this.

8.3.5   Overall impact of structural policy

Increased financial and geographical concentration

Following the decisions taken by the Berlin Council in the perspective of the first stages of enlargement, the amount of finance allocated to cohesion policy in the present 15 Member States will be reduced by 2006 back to the level in 1992 - 0.31% of GDP of the present EU15. The concentration of finance in lagging regions will, nevertheless, enable the average amount of aid per head to be maintained for the period 2000 to 2006 at the same level as in 1999. Overall, 60% of the total of the Structural and Cohesion Funds will be allocated to Member States, which, together, account for no more than 20% of EU GDP and 70% will be concentrated in lagging regions.

The geographical concentration of Structural Fund intervention on the regions most in difficulty has never before been as high, only 41% of the EU15 population living in regions eligible under Objective 1 (lagging regions) and Objective 2 (regions undergoing restructuring) in 2006. Nevertheless, concentration is limited, on the one hand, by the high degree of fragmentation of areas eligible under the new Objective 2 and, on the other, by the lack of coherence with the map of State regional aids.

The impact of structural policies: positive but uneven effects

Between 1988 and 1998, the difference in income per head between Objective 1 regions and the EU average narrowed by one-sixth, GDP per head in PPS in the former increasing from 63% of the average to 70%. Within this general trend, a number of regions, in particular those in Ireland, the new German Länder and Lisbon, have performed better than the average. Nevertheless, rates of employment and unemployment at the regional level have shown little sign of converging.

In the case of Objective 2 and 5b regions, available data seem to indicate that employment and unemployment tend to have changed in a more favourable way than in the rest of the Union. In particular, the average unemployment rate in Objective 2 areas declined by 2.2 percentage points over the period as compared with 1.3 points in the Union as a whole.

Over the period 1989 to 1999, structural intervention had a significant effect in Greece and Portugal, GDP at the end of the period being an estimated 9.9% higher in the former and 8.5% higher in the latter as result of intervention. The effect was less in Ireland (3.7%) and Spain (3.1%), the Structural

---

and Cohesion Funds forming a smaller proportion of GDP there. This significant contribution to growth was accompanied by more limited effects on the level of unemployment especially in Ireland and Spain.

Strengthening factors underlying competitiveness

The Structural and Cohesion Funds do not only stimulate demand by increasing income in the regions assisted. By supporting investment in infrastructure and human capital, they also increase their competitiveness and productivity and so help to expand income over the long-term. Structural intervention, therefore, tackles the root causes of regional imbalance and is aimed at strengthening the factors which provide the basis for sustained growth. Improving systems of transport, supporting SMEs, RDT and innovative capacity, strengthening education systems and improving the environment have, therefore, been the main focus of intervention.

Transport infrastructure has expanded significantly, investment co-financed by the Structural and Cohesion Funds achieving time savings of, for example, 20% in Spain, through an improvement in the motorway network, and 70% in Portugal in the case of rail freight.

Around a sixth of firms located in Objective 1 regions were recipients of support to SMEs, creating over 300,000 new jobs. In the case of Objective 3, the rate of placement of people who had followed a training programme varied between 25% and 50% according to the country and the groups targeted.

Improving employability in the Union

While the human resource measures taken under Objective 1 have contributed to the development of the regions concerned, those taken under Objective 3 have helped young people, the long-term unemployed and those threatened by exclusion to find employment. However, the modest scale of Community funding in relation to national expenditure has often weakened the specific targeting of measures in a context in which national employment priorities tend to take precedence. Although co-financed measures tend to be more effective the more they are concentrated on those who have the greatest difficulty finding employment, targeting on the most vulnerable groups has remained limited. Nevertheless, over the period 1994 to 1999, the placement rate of recipients who participated in training measures increased, the rate varying between 30% and 80%. As regards Objective 4, which had a slow and difficult start, some of the evaluations undertaken suggest that the benefits were divided between an improvement in the competitiveness of firms and an increase in the skills of some categories of worker.

Community initiatives: their cross-border and transnational nature increases the added value for the community

Community Initiatives have enabled a common approach to recurring problems in the Union to be developed. The development of cross-border and transnational cooperation, under INTERREG, and the strengthening of partnership at local level, which is a feature of LEADER and URBAN, are of most significance in terms of Community added value.

Structural funds procedures: increased efficiency of public intervention

Medium-term strategic programming has had a significant influence on national and regional development policies.

The Structural Funds have also helped spread the use of evaluation of public intervention and of linking the results achieved more clearly to the finance allocated. The advances made in this respect, however, vary between Member States.

Community assistance is an effective means of mobilising private capital as well as loans, especially from the European Investment Bank, as witnessed by major infrastructure projects in Greece.

The principle of partnership has enabled local elected representatives, social and economic organisations, non-government organisations and associations to be more involved in decision-making. However, apart from the formal respect for the obligation, the extent of partnership in practice has differed greatly.

Financial procedures have often proved complex and a source of payment delays.

8.3.6 Prospects for the 2000-2006 Period

A renewed effort to ensure the added-value of Community intervention

With the new regulatory system for the 2000 to 2006 period, the Commission has attempted to increase the added-value of Community intervention and to improve its visibility on the ground. Four elements are worth highlighting:

❑ a better formulation of Union priorities with the adoption by the Commission of guidelines for Structural Funds intervention, even if these guidelines remain 'indicative' at the request of the Member States;

❑ the obligation, as clearly indicated in the legislation, to mobilise partnership at different stages of the programming process ;

❑ the formulation and diffusion of ideas on Community policy, notably through the establishment of the European Spatial Development Perspective (ESDP), published in 1999;

❑ taking into account the employment strategy, to reinforce and to improve job quality.

Prospects for Objective 1 regions

Because of the slight reduction in assistance in relation to the preceding period decided by the Berlin European Council, the effect of structural intervention on economic growth will be smaller than in the past, especially in Spain, Portugal and, above all, in Ireland. The effects on investment, however, will remain significant, especially in Portugal and Greece, giving rise to long-term gains in productivity.

In other Objective 1 areas, especially the new German Länder and the Mezzogiorno, the effect of the Structural Funds on the supply side should be significant, though smaller than in the previous period.

A strategy focused on the factors underlying competitiveness

The Community guidelines have made it possible to adjust the focus of regional development strategies for the 2000 to 2006 period. In general, there is increased emphasis on structural factors underlying competitiveness which determine the long-term growth of Objective 1 regions, in particular, research and innovation, information technology and human capital.

Other modifications involve, for example, an improved balance between means of transport in favour of rail, a reduction in direct payments to firms and greater attention given to environmental considerations and sustainable development in the formulation of policy, to urban areas and to equal opportunities.

8.3.7 Future policy development for economic and social cohesion

Among the priorities which have an important territorial dimension, the following are suggested for illustrative purposes:

❑ The least developed regions. This remains the principal priority of EU cohesion policy and the analysis of the report confirms that there are major gaps in income and opportunity between the least developed regions and the rest of the Union, although a process of gradual convergence is discernible within the EU15. With enlargement, however, the gaps widen once again.

❑ With the reduction of gaps in endowments in certain types of infrastructure in the less developed regions of the EU15, less emphasis will need to be placed on basic investment and more on raising business competitiveness. Basic infrastructure needs remain considerable in the candidate countries.

❑ The challenge for all of these regions in an enlarged Union is one of creating an innovative environment based around a qualified workforce, research and development and the information society.

❑ Even if the human resource gaps are closing, eliminating the weight of the past in terms of the low level of qualification of the adult labour force is a long-term challenge in the EU15. In the candidate countries, the challenge is to adapt rapidly the workforce to a modern market economy

The urban question, which is at the heart of economic, social and territorial change. Cities are a key location for the pursuit of a strategy for cohesion and sustainable development.

❑ Many kinds of disparity are concentrated in cities, where problem areas in which exclusion and deep poverty prevail are in close proximity to areas of high prosperity.

❑ It is in the urban areas where the environmental pressures are the most acute.

❑ Cities are economic centres for the development of the surrounding suburban and rural areas.

❑ Networks of large cities can stimulate a more balanced and polycentric form of development in which medium-sized towns and cities can play a key role.

The diversification of rural areas. These areas continue to experience large-scale changes. Their future depends in large measure on their links with other areas, including towns and cities.

❑ Agriculture is no longer a major source of employment though it continues to be the main user of rural land as well as the key determinant of the quality of the countryside and the environment.

❑ The revitalisation of rural areas and the maintenance of population depend on the development of new activities outside agriculture, notably in services.

❑ Cohesion policy must play the major role in the diversification of the rural economy, complementing rural development policies financed by the CAP which is focused on adapting agriculture to new economic realities as well as on strengthening the competitiveness of rural areas.

Cross-border, transnational and interregional cooperation. This is a priority par excellence for the Union in order to promote integration and reduce the economic and social fragmentation created by national borders. The internal market and cross-border cooperation have enabled border regions to become more integrated with the rest of the Union.

❑ The internal border regions of the EU15 have, with the support of INTERREG, developed new forms of cooperation which the elimination of frontiers alone would not have been sufficient to create. Their social and economic situation has improved significantly over recent years, with closer integration into the internal market.

❑ With enlargement, there will be a renewed need for cross-border measures to promote cooperation between the candidate countries and the Union, as well to assist the regions within the candidate countries that share common frontiers with third countries to the east and to the south, including the Mediterranean rim.

❑ The Union should promote transnational cooperation areas, within a framework adapted to the development of networking between regional and local economies and to new forms of administration.

Areas undergoing industrial restructuring. The return of sustained growth across the European continent has to some extent hidden the often serious territorial and regional effects of industrial restructuring.

❑ Job losses are continuing in many industries such as textiles, cars, coal and steel production, as well as some service sectors. In this regard, the liberalisation of trade in 2005 for textile imports represents a particular challenge.

❑ Where such sectors are concentrated geographically, there can be severe consequences for the local and regional economy, with the need to promote new opportunities and the retraining of workers who lose their jobs.

❑ While encouraging economic diversification, territorial policy should also take account of the distribution of activity across the different parts of the Union.

Areas with severe geographical or natural handicaps. In certain parts of the Union, efforts to achieve full integration with the rest of the European economy run into difficulty because of particular geographical or natural handicaps.

❑ These areas - outermost regions, islands, mountain areas, peripheral areas, areas with very low population density - are often a key component of the Union's environmental and cultural heritage.

❑ There are often acute difficulties in maintaining population.

❑ Additional costs for basic services including transport can impede economic development.

Among the priorities under economic and social cohesion policy relating to employment and social policy, which have both a general and regional dimension, are:

More and better jobs. the rate of job creation in some parts of the Union remains low, while significant skill gaps persist to constrain economic and social convergence between regions.

❑ A more strategic approach to employment policy across the EU could provide a valuable framework for coordinating Community intervention. Negotiations over current ESF programmes have demonstrated the value of a strategic dimension as provided by the European Employment Strategy.

❑ Employment policy needs to adopt a proactive approach to anticipate the effects of industrial change.

❑   There needs to be more targeting on the specific requirements of both individuals and particular regions, given that a major factor underlying disparities in prosperity across the Union is the difference in the qualifications and skills of the labour force

Supporting the New Economy and the Knowledge Society. The impact of the new economy is far-reaching in terms of both the pace of change and its consequences for policy. The dangers of an emerging digital divide highlight the need to tackle risks of exclusion from the information society.

❑   Life-long learning is an essential response to economic change. It is important, however, that access to this is not confined to those already in the most highly qualified jobs.

❑   There must be a more affordable access to the tools of the information society accompanied by ICT literacy.

❑   Over the past three decades, the level of educational attainment in the Union has increased markedly, especially in the least developed regions. But there remains scope for improvement in their education and training systems to reduce the emerging digital divide. This applies also to the candidate countries where vocational training systems in particular are often poorly adapted to the needs of new sectors

Promoting social inclusion: The level of poverty and social exclusion remains unacceptably high in the European Union. Many of the causes can be traced directly to the labour market and to the failure of policy to address the needs of those without the skills necessary to compete for jobs.

❑   Better access to the labour market, creation of new employment opportunities and skill development are of major importance in the fight against social exclusion.

❑   In order to address the deep-seated problem of pockets of social exclusion, labour market policies are becoming increasingly localised, involving broader local partnerships and responding to specific local needs. Local employment development, the 'third element' in the European Employment Strategy, could be strengthened in future Community policy.

❑   The concept of policy additionality (extending or deepening national policy) must be applied to social inclusion policies and could be supplemented with the concept of 'policy territoriality' aimed at increasing the spatial concentration of scarce resources to achieve a greater impact

Equality of opportunity. Discrimination in all its forms is a waste of talent and resources in a situation where the evidence points to the growing need to make the best use of a work force set to decline in the coming years. Equal access to the labour market is both a fundamental right and a sound economic policy.

❑   A strong policy commitment to the creation of a labour market open to all is essential to cohesion.

❑   Policies to promote and support the participation of women in the labour market are a key part of the employment rate targets set at Lisbon.

❑   The most significant progress will come about reducing narrowing the employment gap between men and women.

While the above target areas are not entirely new in themselves, they represent a difference of approach compared to that which has been characteristic of the priority 'Objectives' up to now. It is an approach inspired to some extent by the experience of certain Community Initiatives such as URBAN or LEADER which have shown how efforts focused on a clearly defined European priority can, if deployed at the right level, attract a great deal of interest, generate new thinking and activities. An aspect not to be ignored is that these actions, where they have been operated successfully, have probably done most to create a positive image of Union cohesion policy among its citizens.

The priority areas should not be seen as a simple substitutes for the existing Objectives. Given the rapid pace of economic change, and the challenges that it poses, the formulation of future policy - and perhaps the territorial dimension in particular - needs to take account not only existing problems but, more importantly, to anticipate future ones. Accordingly, there is a basic need for a cohesion policy which has a more global and longer-term vision and which seeks to follow a proactive approach.

This would also mean that future policy would focus not just on problems but also on opportunities for economic and social cohesion and the reduction of territorial imbalances.

This was the kind of approach that characterised the work undertaken by the Member States and the Commission on the European Spatial Development Perspective (adopted in Potsdam in 1999) which had as an objective the promotion of more balanced territorial development in Europe. Inspired by this work, the Commission could at a later stage propose a strategy for territorial development to the other institutions of the Union as a basis for future policy in this field.

In sum, future cohesion policy should be targeted on the factors that promote convergence and on a limited number of priorities of Community interest, in order to achieve concentration of scarce resources.

8.4   Revitalizing the English Regions

The recently released White Paper on regionalism in England centres on the empowerment of regional areas by the formation of regional assemblies to form tailored solutions to locally unique issues. The measures are to build on the progress already made via decentralization to Regional Development Agencies. The underlying aim in this process is to remove layers of bureaucracy which stymie regional development, that is develop a greater degree of regional policy reflexivity and democratic subjectivity in the process of governance.

8.4.1   The value of regional policy

The devolution of policy making allows decisions to be more reflective of regional uniqueness and ensures decisions are being made and implemented at the appropriate level within the political hierarchy. This will enable the more effective utilization and deployment of human and economic capital to overcome socio-economic deprivation with in particular regions. It is vital to give genuine economic power to the regions to improve long-term prosperity.

Devolution enables the identification of subjective regional strengths which can be developed with a higher degree of connectivity with the people whom will be effected. By bringing the process of governance closer to the constituency a resurgence of activity, cooperation and partnership between key stakeholders has been facilitated. This type of cooperation has lead to regional solutions across a broad section of policy areas, emanating form regional knowledge. The resultant growth in regional economic strength and the opportunity for a greater degree of political self-determination has led to a renaissance in enthusiasm driving better outcomes.

Through continued decentralization via quasi-governmental agencies there is greater accountability and coordination, enhancing decision making.

8.4.2   Main aims of regional assemblies

Compared to other countries in the EU England is the only one where there is not some form of institutionalized regional government. The formation of regional assemblies seek to redress this absence. The main aims of the assemblies are:

❑   Decentralizing power frrom central government and bringing decision-making closer to the people.

❑   Giving regions the freedom and flexibility to make their own priorities within a national framework.

❑   Making government in the regions more accountable to people in the regions.

❑   Providing democratic representation in the regions and a new political voice.

❑   Improving delivery by ensuring better coordinated government at the regional level.

❑   Giving regional stakeholders a clearer decision-making framework to engage with.

❑   Promoting sustainable development and improving quality of life.

8.4.3   The role of the assemblies

The assembly's functions will be devolved from central government with aim of reducing socio-economic inequality between the regions, similar to the formation of like regional bodies in other parts of the EU. Their mandate will essentially consist of improving the quality of life for those in regional England, via investment in regeneration, improving housing and public transport, and developing tourism.

The key responsibilities pertain to the following roles:

❑   **Sustainable development** – pursue policies that encompass economic, social and environmental objectives and achieve stable and sustainable growth. Also, how regional activities will contribute to the achievement of sustainable development in the UK from the local level.

❑   **Economic development** – how to attract inward investment; improve productivity and the conditions for enterprise whilst ensuring all parts of a region will benefit from economic growth.

❑   **Skills and employment** – improving the skills of the workforce and ensuring everyone has access to jobs opportunities.

❑   **Spatial planning** – address and integrate the demand for land use, and provide specific regional policies to provide a strategic platform for future decisions.

❑   **Transport** – develop strategies to address congestion, improve public transport links and access to road links, within the constraints of ecological and economic sustainability.

❑   **Waste** – develop targets and policies for waste management at the regional level, to promote recycling and waste minimization.

❑   **Housing** – develop strategies to improve private and public housing and all other aspects of local housing markets.

❑   **Health improvement** – develop sustainable public health strategies in conjunction with the Regional Directors of Public Health.

❑   **Culture** – improving access to cultural and sporting facilities, and develop the tourist industry.

❑   **Biodiversity** – provide a strategic framework between for conserving regional biodiversity, and sustainable use of biological resources.

9. Current focus for regional governance and development policy in California

The California Constitution authorizes a county to make and enforce local ordinances that do not conflict with general laws. Several other powers may be conferred upon the county by the state legislature. Where there is no specific law prescribing a method for accomplishing particular tasks, the county may select an appropriate means for achieving specific ends. Hence a great deal of discretionary power exists in the lower echelons of the USA political infrastructure. A Board of Supervisors controls County Government, which is effectively analogous to the role of a board of directors in the context of a private corporation. The Board of Supervisors is both the legislative and executive authority of the county; in addition it has quasi-judicial authority.

More specifically the Board of Supervisors executive role consists of overseeing:

❑   the official conduct of county officers and employees in the discharge of their duties;

❑   programs implemented and associated budgetary requirements;

❑   control of county property; and,

❑   the appropriation of funds and applied spending to meet constituents needs, however there power to obtain funding is quite limited.

The Board of Supervisors legislative role consists of resolutions, by board orders, or ordinances. The type of directives issue is dependant on the type of situation which is being addressed. Resolution generally indicates the policy direction the board is intending to take, in response to particular findings. Board orders consist of directives to subordinate directives. Ordinances are local laws adopted with the formality of statute. The flexibility afforded by different policy formats for county government allows significant latitude in which policies can be implemented. This has the potential to increase the speed and diversity of local government responses to different regional problems.

The County and its instrumentalities are accountable to the Civil Grand Jury, through its two pronged role in "weighing allegations of misconduct against public officials" and by acting as a "public watchdog investigating and reporting upon the affairs of local government".[1] Under this authority, investigations of all facets of local government activity and that of its officers can be made to ensure honesty and integrity. This includes investigations into all operational and financial aspects of activity.

The board also has the authority to form joint powers agreements or agencies. Joint powers agreements are enacted between two or more counties enter into a cooperative relationship whereby they combine service provision to improve the effectiveness and cost efficiency of their service delivery. Joint powers agencies occur where counties, cities, special districts and other public agencies are allowed to enter into agreements forming new authorities. Particular administrative arrangements must be formalized, such as board constitution, capital, operational procedure, objectives, jurisdiction and so on. Both arrangements facilitate knowledge sharing between government instruments which a have been traditionally segregated by jurisdictional differences.

The Board of Supervisors is also responsible for mandating government functions to be carried out by other entities. For example, the Los Angeles County Local Agency Formation Commission (LAFCO). LAFCO's mission statement is "To encourage the orderly development and reorganization of Local Government Agencies, essential to the social, fiscal and economic well being of the state". One of their primary functions is to review and identify ways in which to reorganize, simplify and

---

[1]   California State Association of Counties, "Counties Close up",2002

streamline governmental structures. Another central function for LAFCO is developing "spheres of influence" for particular districts within the county. Spheres are planning "tools used to provide guidance for individual proposals involving jurisdictional changes" with intention of facilitating the efficient provision and organization of community services and prevent duplication of delivery service. This enables policy apparatus to maintain a high degree of flexibility in terms of rapid policy responses in a dynamic community context.

9.1 California and regionalisation of policy

The following section is primarily based on extracts from papers emanating from a series of papers produced in relation to the Speakers Commission on Regionalism

It has become increasingly clear in California as it has in other areas that required policy changes must be regional in scope. Within the context of globalization, competition is taking place region to region as opposed to, country to country. In response a Commission on regionalism has been formed to identify regional issues and regional policy responses. Some of the key issues outlined include, regional:

❑ Economic competitiveness

❑ Persistent poverty and underemployment

❑ Traffic congestion

❑ Unaffordable housing

❑ Loss of open space

❑ Pollution

The Speakers Commission on Regionalism has formed a policy framework and specific recommendations to tackle these issues. The fulcrum of the plan is the adoption of a fundamentally different mode of governance - *regional stewardship.*[2] Essentially the concept of stewardship in this instance entails collaboration among local and state governments and the private sector. The primary aim of this new regionalism is to re-empower and re-engage state and local government is successful problem solving by:[3]

❑ Increased collaboration between different sectors, in new collaborative and entrepreneurial ways,

❑ Bottom up self-organizing, self definition, using functional issues to define the scope and scale of regional problem solving, such as commute patterns to define the job housing imbalance.

❑ Optimize regional self-sufficiency and organize effective extra-regional working relationships.

❑ Draw all citizens into a broad and informed regional dialogue about the future of their communities and implementation strategies.

❑ Assure that all solutions are measured against social and economic equity standards.

❑ Support the allocation of local and state revenues in a manner that reflects the true costs of providing local and regional infrastructure and services.

❑ Promote resource efficiency: energy, land, and materials.

❑ Advance the idea of better government as opposed to additional layers of government.

---

[2] California Institute for Regional Government, *The new California dream: regional solutions for the 21st century,* Feb 2002

[3] ibid

- ❑ Hold all sectors accountable for results - public, private and civic – measure progress – and learn for improvement.

- ❑ Acknowledging the need for sub-regional, inter-regional strategies to address specific issues that are linked within smaller or larger geographic areas that cross-regions that have more definable boundaries.

9.2 Key state policy and program strategies for successful regional economies[4]

The key strategies for successful regional economies fall under five categories:

1. Economic leadership: Carry out the meaning of stature created by the Economic Strategy Panel. That is, obtain timely information on emerging issues and requirements of regional economies and the labor force to facilitate and support data driven public policy and investments decisions.

2. State inter-agency Coordination. Provide assistance and oversight to all state agencies to align state resources with state and regional economic strategies, and to drive resources closest to the "customers" in the regions, using and enhancing existing service delivery networks.

3. Assist regions. Provide data and assistance to regions to enable them to develop and implement economic strategies for industry clusters. Support partnerships between state government and regions via negotiation of regional compacts and other cooperative approaches.

4. Special Regional Needs. Establish a permanent state entity, modeled after the Appalachian Commissions to assist particular regions, which are characterized by structural unemployment and under investment, to compete in the global economy.

5. A sustainable economy. Identify economic development opportunities through environmental leadership. For example, energy conservation, renewable and self-sufficiency strategies, investments in "green" infrastructure, and by promoting environmentally sustainable business practice.

9.3 Specific objectives and supporting strategies

9.3.1 The Economy – good jobs and careers for all[5]

For the provision of successful careers and a high standard of living, economic and jobs growth must be matched with projected population growth. There must be the creation or expansion of business where value added jobs which are competitive in the global economy are provided. In order for this to occur improvements in the public education system, investment in training for the workforce in growth sectors is required. This is to ensure workers have opportunities to engage in satisfying careers, which provide adequate levels of income and assets to support a high quality standard of living. These objectives are intended to ensure there are sufficient economic opportunities at the lower end of the labor market to close income gaps, expand the middle class, and avoid the formation of a permanent underclass, vis-à-vis greater social and economic equity. The specific policy/program strategies to achieve these ends are as follows:

---

[4]   Ibid 6 -8

[5]   ibid 8-9

- **A world-class Education System**. Continued improvement in the education system, via public school reform and public charter school innovations.

- **Workforce Investment**: **A cabinet agency**. Elevate the importance of workforce investment policy as a fundamental economic development strategy. All workforces related agencies should be coordinated under a Cabinet level workforce agency.

- **State Policy**. The Californian Workforce Investment Board, a public-private advisory body to the governor, should develop a regionally oriented and integrated Workforce Investment policy for the entire state workforce development system. The policy must call for an integrated, customer-driven workforce development system for all Californians, with a strong emphasis on lifelong learning and career development.

- **Data as the Driver**. The state must provide in-depth data and analytical tools, which are continually update and readily accessible. These tools should focus on dynamic identification regional economies, emerging skills requirements, mismatches and unmet needs, which should drive new education and training strategies.

9.3.2   The Economy – Towards Social and Economic Equality

Structural Changes in the Californian economy and associated social forces have produced growing social cleavage in terms of family incomes and assets. The shrinking of the middle class and the growing income disparity has resulted in the decay of social equity, which potentially could undermine the states long-term sustainability, security and success if left unchecked. Hence a programmatic approach to addressing to reducing poverty and increasing social and economic opportunity is required. Actions taken must be measured in the contest of progress towards such goals. The key to addressing this imbalance is the adoption of regionally based approaches to addressing the problems of racial discrimination and economic injustice. The specific policy/program strategies to achieve these ends are as follows:

For Individuals and Families

- **Regional Equity**. For those that are unable to support themselves, the state government should ensure the provisions of income, services and necessary supports, regardless of the local jurisdiction in which they reside.

- **Regional Opportunity**. The path to a middle class standard of living is good employment opportunities. Given good employment opportunities are distributed across the regions, the state should encourage regional education and employment strategies, transportation and child care strategies that enable genuine access to opportunities.

- **Cost of living strategies**. Due to the high cost of living in California, the state must adopt innovative cost reduction approaches to redress regional income and asset disparity. For example, the Healthy Families Program, which provides lower cost health insurance for moderate-income working families, and the down payment incentive for first-time homebuyers. Inclusionary zoning and cross-subsidized multifamily housing provides affordable housing without and overly onerous burden on public subsidies. Also some communities should have income sensitive transit and transportation policy.

For Neighborhoods and Communities

- **Regional redevelopment.** The state needs to examine redevelopment strategies and law to encourage innovative regional redevelopment and tax incentive measures.

- **Urban reinvestment.** The state must encourage reinvestment in order to revitalize older communities, thereby reducing growth pressure at the urban fringe. For example, the state treasures proposal to create an "emerging markets' fund, to leverage private and philanthropic capital investments in California's underprivileged communities. The state should ensure that it directs public facilities, direct infrastructure investments, provides incentives for local planning

decisions to increase investment in older and poorer communities, in a such a way that benefits those communities without displacing current residents and businesses.

❑   **Public Participation.** Mechanisms need to be established to ensure adequate representation of low-income and other under-represented segments of the community are able to participate in the regional planning process. That is the socio-economically disenfranchised should be able to contribute to the processes that influence the future of their communities. With particular emphasis on economic development, land use, housing, transportation and parks and opens space planning.

9.4   Regional Empowerment through fiscal reform[6]

The above strategic objectives and policies sited to implement them must occur in the context of fiscal reform which empowers the regions to perform there duties in the contest of effective governance. At present the system of state and local financing is misaligned with regional objectives. As a result of Proposition 13, adopted in 1978 local government finances are at the mercy of the state. In order to offset the loss of control of property taxes, localities have been forced to compete for sales tax revenue, resulting in unsound land use decisions. Such as, building more retail and less housing than required, and often in the wrong places. In some instance local governments have resorted to levying fees on housing to obtain revenue, resulting in diminished housing affordability. More importantly there is little fiscal incentive at present for local government to repair infrastructure, it consequently relies on new infrastructure development to generate revenue. Due to Counties status as agent of state government they have few locally controlled taxes to be used for local government services.

> "The cost of services is borne disproportionately across regions, but here is no incentive for local governments to come to agreement on a regional distribution of some local revenues to address disproportionate shares, nor to create new regional funds, form which compensation might be made. The state government itself, in its expenditures for state operations, or capital expenditure for infrastructure, does not align expenditures with regional plans."[7]

Taking the above into account it is apparent that the state government is not necessarily the best funding partner for local government. In order to redress the current inadequacy of the current fiscal situation, the Speakers Commission suggests several fiscal amendments:[8]

1.   Protect local revenues to increase the power of local governments to finance local services and sound development policies:

    (a)   Amend the state constitution to protect locally levied taxes from being re-allocated for state purposes. A portion of property taxes allocated for local government services should be considered locally levied.

    (b)   Reduce the ERAF property tax shift by $1billion over ten years. This reduction should be conditioned on the adoption and implementation of regional and local "sustainable development" policies.

2.   Encourage Regional tax sharing to revise the local finance system to neutralize the effects of fiscal considerations on urban growth policy. This could occur through on a combination of the following fiscal systems:

---

[6]   ibid 10-12

[7]   California Institute for Regional Government, *The new California dream: regional solutions for the 21st century,* Feb 2002, p.10

[8]   ibid, p.12

(a) Swap with the state a portion of the locally levied sales tax for a larger share of the property tax.

(b) Transfer a portion of the 1 per cent locally levied sales tax to the counties.

(c) Form a split property tax allocation by use category by increasing the amount of property tax that a city receives for specific land uses

3. Incentivize voluntary, "regional home rule".

(a) Establish a Sustainable Development Regional Resource Allocation Fund within each region. This is intended to facilitate local tax sharing by ensuring that local governments within a region have the power to enter into tax sharing agreements. It could be used for projects or infrastructure of regional significance; regionally important amenities such as open space or housing; to reward localities carrying a disproportionate share of unwanted land uses; or to offset the negative consequences of the move from situs to non-situs sales tax receipts.

(b) Via constitutional amendment authorized the development and adoption of a regional compact that specifies the governance and fiscal choices of the region. A comprehensive regional plan should be developed on a collaborative basis involving all of the regions communities

9.5   Collaborative Regional Initiatives[9]

An example of empowerment at the grass roots level via the formation of agencies to tackle regional issues as part overall effort to change the nature of governance in California is the formation of the California Centre for Regional Leadership. The Board of directors includes representatives form government, the private sector and academia. The objective of the organization is to promote innovative regional solutions for major social economic, social, and environmental challenges to achieve a more sustainable future for the state. This is effected via support to the network of 20 Collaborative Regional Initiatives (CRI). CRIs are regional civic organizations.

Throughout the State, new groups of leaders called "civic entrepreneurs" have come together with a growing awareness of the importance of regional perspective and action. They define their own regional parameters by exploring the mutual issues they face. And they have gone on to develop new mechanisms—councils, partnerships, alliances, forums—to tackle the issues they identified. Although these new mechanisms vary in terms of organizational structure, geographic scope, and focus, they have become known collectively as Collaborative Regional Initiatives.

The CRIs are in the forefront of a movement that has emerged from the bottom up, from communities and regions throughout the State. They represent a strategy for addressing complex and interrelated regional challenges. Led by people from business, government, education, and the community, they are creating a new type of governance for the twenty-first century—regional in scope, collaborative in nature, and based on an understanding of the interdependence between the economy, the environment, and social equity, the "three e's" of sustainable development.

The nature and number of CRIs continues to evolve. Today, there are 20 identifiable CRIs in California—ranging from those in the early stages of development to several that have become

---

[9]   The following section is base on extracts from California Center for Regional Leadership, "The State of California's Regions, USA, 2001.

powerful leaders in their regions and pacesetters for the rest of the State. Geographically, they encompass most of California's population and geography.

Throughout California, creative new civic leaders are now "meeting at the region," where they have the best chance of developing and executing innovative ideas and strategies. Although these new leaders come from all walks of life, they share a sense of entrepreneurism that is the result of shedding traditional intellectual and institutional approaches.

The regions they have defined are as diverse as the state itself. In the Sierra Nevada, for example, future economic, environmental, and social challenges are dominated by the need to protect and enhance the mountain range. Historically, however, the Sierra Nevada's political alignments were organized primarily for economic purposes, largely logging, mining, and other resource extraction activities. Today, leaders across the 12 counties of the Sierra Nevada recognize the range as a region, and they are working together on solutions to future challenges that will not only be specific to communities within the region, but applicable up and down the entire range.

In southern California, leaders of the 27 "gateway cities" clustered around the ports of Long Beach and Los Angeles recognize that the dominance of trade and transportation in the local economy, and the organization of the physical infrastructure to support that economy, require them to work together—as a region—in new ways.

And in Northern California, the emergence of the Silicon Valley in the 1990s as a global economic powerhouse caused new pressures across a far broader geographic area. The need for affordable housing, the alleviation of traffic congestion, and better workforce preparedness are witnessed throughout the San Francisco Bay Area and even into the Sacramento Valley. As a result, the public, private, and independent sectors have come together in new ways to begin to think "regionally," not only to maintain the Silicon Valley's global competitiveness, but also to enhance the quality of life across their communities.

These regions provide three examples of where and why California's new Collaborative Regional Initiatives have formed. As the CRIs have developed over the past several years, six distinct, but often linked, areas of focus have emerged:

1.   *Vision and Principles*

Most Collaborative Regional Initiatives work to develop a broad consensus around a vision for their region's future. In doing so, they usually address issues such as affordable housing, land use, transportation, education, open space, agricultural viability, poverty reduction, and community reinvestment. Several CRIs are taking these visions and principles to the next level, working on compacts to guide future actions in their regions.

2.   *Civic Engagement and Leadership Development*

Collaborative Regional Initiatives recognize the importance of engaging strong leadership and developing organizations to serve as the platform for regional activities. They also educate their communities and involve stakeholders in regional thinking and action. Examples of activities include creating civic action networks; using websites for interactive communication; sponsoring community forums, dialogues, and newsletters; and organizing conferences or summits.

3. Economic Development

Some Collaborative Regional Initiatives engage in more traditional types of activities, such as business outreach and marketing, while also building "new economy" partnerships to address issues such as workforce preparation, innovation, technology, and community reinvestment.

4. Education and Workforce Development

Collaborative Regional Initiatives are increasingly becoming focused on education reform strategies. They are linking schools to the community as part of the effort to create "livable communities"; developing innovative approaches to training workers for the new economy; and promoting technology-based education and training for students, workers, and teachers.

5. Growth, Development, and Open Space

Almost all Collaborative Regional Initiatives place emphasis on the notion of sustainable communities, and the inter-relationship of economic, social, and environmental issues is embedded in much of their work, either implicitly or explicitly. Many are moving their visions and principles into the next phase by creating regional compacts, developing funding strategies, and introducing ballot measures. Many are also facilitating regional discussion and consensus processes about land use.

6. Information and Indicators

Most Collaborative Regional Initiatives fill information gaps and create a shared knowledge base for community discussions about key challenges. Strategies include community indicator projects that help to identify a region's major issues and establish baselines against which to measure progress. They also include opinion polls, regional discussions about the types of information needed, development of information tools, and research and analysis of policies and plans.

Evident in the discussion above is the emergence of new type of governance in California. This new mode of governance has resulted from change at the community/regional level. By empowering the lower levels of government and the regional instrumentalities in the state the nature of this new governance is far more inclusive; incorporating views, people and capital from the private and public sectors. By strengthening the democratic nexus between the regions and government apparatus the policy being shaped is far more reflexive and dynamically responsive to an environment in a constant state of flux.

9.6　EU and California in contrast

This section provides a brief overview of the major similarities and differences that exist between the governance models in the European Union and California.

The approach to governance in the USA at the county level differs significantly from the approach adopted by the European Union. The approach taken to governance in Los Angeles County is similar to that of a market driven Private Sector Corporation responding to market trends. Policy imperatives are developed from the bottom up. Local government agencies solicit participation at the coalface, guiding policy formation. It appears that the mode of governance being developed in California is more dynamic and inclusive in its approach to dealing with regional issues. Via the formation of various quasi governmental agencies the degree of connectivity between the policy apparatus and the community is vastly increased and with it policy response time and flexibility.

The EU also seeks to improve participation in policy formation, however this occurs via a process of policy diffusion from centralized authorities. That is, the approach to governance and policy formation in LA County is bottom up as opposed to top down, albeit this may be partly a function of its position in the political hierarchy. Despite efforts by the EU to increase participation and regional empowerment through the concepts of proportionality and subsidiarity, the role of regions in terms of self-determination in governance parlance is still constrained by the legislative parameters set by the European Commission and Parliament. That is, research conducted by the quasi governmental agencies in California are used to set the policy agenda, where as in the EU this occurs at the union level, and regional institutions are used to "fill in the blanks".

9.7   Commonalities

Irrespective of the differences outlined the modes of governance being adopted in Europe and California they have a great deal in common. The similarities exist in regard to the policy areas of concern, such as transport, the environment, income disparity and the furtherance of social and economic equality. The similarities extend further than simple areas of policy concern. These similarities exist in terms of the underlying model of governance being pursued. Both are aiming to improve regional representation in the policy process via regional empowerment. Although it could be argued that California has advanced further in terms of decentralization of the policy process, the EU is currently developing structures to achieve the same ends. This process of decentralization/empowerment occurs in both areas in an analogous fashion. Government instrumentalities try to increase democratic involvement of the respective populations via the use of consultancies in the EU and Collaborative Regional Initiatives in California. Involvement also extends to the funding of SME's to assist in implementation of policy.

The increased use of networks and partnerships in both regions is facilitated towards the exchange of policy best practice and knowledge diffusion via shared learning. Network utilization and partnership also supports the objectives of increased participation, regional empowerment and democratization of the policy process.

However the direction of policy flow is in stark contrast to the flow of funding used to finance regional policy. That is regional entities are reliant on funds form the state. The lack of regional control on revenue generation to fund regional policy initiatives is a common problem evident in the studies pertaining to governance in California. To a certain extent this is a similar problem to that faced by regional instrumentalities in the EU, who are also dependent on funding from the Commissions' structured funds. The European commission is responsible for the disbursement of funds to member state, from which point there is a degree of regional discretion in the application of those funds, ultimately funding decisions rest in the upper echelons of the union.

9.8   Peculiarities

Differences exist between the EU and California, not so much in terms of the policy areas and objectives being engaged but more so in respect to the pace and extent of the shift towards regional governance. That is, in Europe the process of decentralization of policy control and regional empowerment has only begun to be enshrined in the mode of governance. This equally applies to the utilization of networks, and private sector involvement in the development of policy programs in the EU.

In California however, the move toward leveraging networks is in full swing. Californian instrumentalities have employed the use of SME's academic and private sector networks for some time, thereby accelerating decentralization towards a genuine model of regional governance. However, the lethargy inherent in the process towards regionalism in the EU is partly justified when compared with the Californian situation. The EU is composed of a complex myriad of treaties and legislation, spanning a broad cross-section of cultures, languages and political systems. Despite the

homogenization of markets and currencies, overcoming cultural differences and devising a common legislative framework that doesn't contravene member states right to political self-determination is a huge task.

Despite the justifiable lag in the EU, the general tenor of the Californian literature seems to embrace the new dynamics of regionalisation, where as the EU literature is very much centered on maintaining stability and controlling progression toward decentralization.

References:

Jessop, B (1997) "Capitalism and its Future: Remarks on Regulation, Government and Governance." Review of international Political Economy 4,: 561-8.

10. Enhanced Local/Regional Governance in Australia: Two Case Studies

10.1 Introduction – identifying the problem with governance

The term governance has a variety of meanings and most often is used in Australia to describe the accountable relationships between the three tiers of Government – Local, State and Federal with the electorate as a whole. This does not deny the work of Joseph Healy (Corporate Governance and Shareholder Value 2002) on corporate governance in the financial sector or Dodson and Gleeson (Regional Planning Governance: A Select Review of Australian and International Experience, Urban Frontiers Program April 2002) regional planning governance. Inevitably though governance in Australian government discussions has focused on the removal of one tier of Government.

In the USA the recent collapse of major corporations such as Enron has fuelled a focus on governance with financial accountability particularly in the corporate sector. Governance in the UK and Europe has been concerned more on the cost-effective allocative distribution of resources to all and even the smallest community, than on record keeping. Surprisingly in the UK this has seen a move toward the addition of a new regional structure of Government and the potential removal of structures below the County level. This is presented in the 2002 White Paper on Revitalising English Regions.

Perfecting the level of governance for equitable, efficient and effective administration has a historical dimension confronting even the Ancient Romans. If governance is seen as the equitable and effective allocation of resources with the necessary controls in place for clear reporting inputs and outcomes, then the real problem facing Australia is not that of removing a tier of government, but optimising service delivery within these structures.

In 2002 it is clear that the mechanisms for achieving optimisation will not be the same for all areas. It is equally clear that the one basic ingredient to assist optimisation in all areas and regions both locally and globally will be communication and information flow. It means not just accumulating information but acting and reacting with it. The net or real-time information transfer provides an ability to directly interact with communities locally and internationally. It is removing borders between populations while providing other network structures. The internet, while not perfect, provides a multi-directional information flow at a level that once could only be seen internally within a small local village.

Governance beyond 2002 is about establishing correct communication and information flows. This can be achieved through either creating new hard structures or soft structures that enhance the existing structures. In Australia and globally this transformation has already commenced.

10.2 Case Studies

10.2.1 The Eastern Metropolitan Regional Council (EMRC) Western Australia

The EMRC was constituted in November 1983 and was incorporated under the WA Local Government Act in 1995. It is a Council in its own right rather than a regional organisation of councils.

It covers an area of 2,100 square kilometres representing about one third of the Perth Metropolitan Region and comprises the Cities of Bayswater, Belmont and Swan, the Town of Bassendean and the Shires of Kalamunda and Mundaring in Western Australia. The combined population of the six local authorities is approximately 300,000.

Established initially to generate economies in waste management and disposal EMRCs constitution was amended in 1987 to provide safety services to member Councils and in 1993 to provide environmental services. Originally founded with 5 member Councils, the Shire of Kalamunda became a member in 1995.

In 2001 with a staff of 70, EMRC's annual turnover was approximately $12 million. EMRCs income is predominantly derived from fees charged for the services it provides. About 60 per cent of income comes from member councils and the remainder from other councils and the State Government. Member Councils pay at cost while other clients are charged a differential rate. The Council does not receive direct funding from the State Government but has been successful in obtaining grant funding for specific projects from the State and Commonwealth Governments.

EMRC is an example of creating efficiency in service delivery by a new hard structure while maintaining existing structures.

The Structure

EMRC is now constituted under an Establishment Agreement that sets down the parameters for operation and enunciates the manner in which Councils work together.

Each of the 6 member councils elects two councillors and one deputy to EMRC. Ideally these will be the Mayor/President of the member Councils. The organisational structure is represented diagrammatically below. Member Councils have a more direct involvement through membership of the Technical Advisory Committee, CEO's Advisory Committee (CEOs of all member councils are on this committee) and the Secondary and Strategic Waste Management Committee.

EMRC Structure
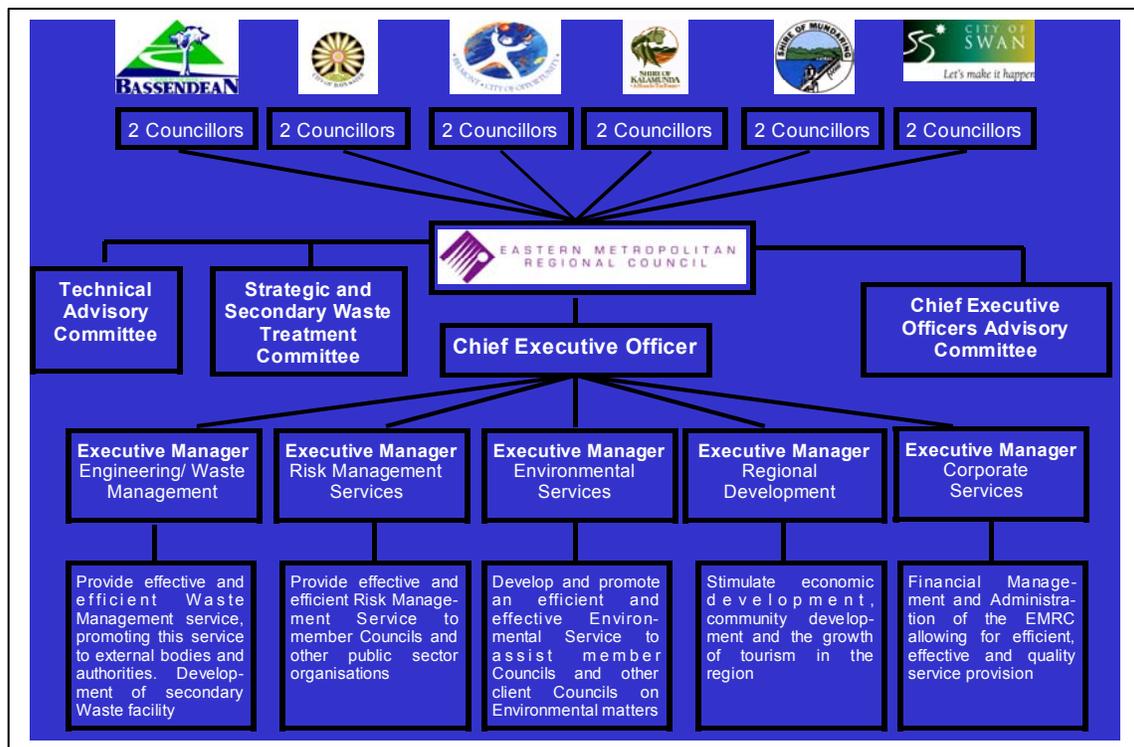
However, EMRC is an autonomous body for operational purposes enlisting members' concurrence with such matters as longer term strategic planning (e.g. sign-off on the 3 year Strategic Plan) or agreement to a major project such as the $50 million enhancement to the waste management facility.

EMRC has 5 functional areas:

❑ Waste Management Services;

❑ Risk Management Services including occupational health and safety;

❑ Environmental Services;

❑ Regional Economic Development including arts and tourism; and

❑ Corporate Services.

Waste Management

Facing pressures to close sensitive landfill sites within the eastern metropolitan region of Perth, the EMRC was established to find a solution. As a result it operates the Red Hill Waste Disposal Facility. Employing leading sanitary landfill design and operation techniques the approved Class III and IV landfill facility meets or exceeds all of the conditions of environmental approval.

The site was originally a 40 hectare gravel pit owned by the City of Bayswater. Since that time some additional 200 hectares have been purchased and added to the facility. Member councils provided loans for the development of the facility and repayments are made from the gate fees received by EMRC. By 2003 Red Hill will have 9 waste management cells.

Risk Management Services

EMRC provides consultancy services to members and other organisations. Its clientele are largely local and state government organisations. Services include the development and maintenance of safety management plans. EMRC collects information on accidents and incidents and legislature changes in this area. This database provides a monitor for client management teams so that they are aware of problems and may implement strategic action to reduce the risk exposure of individuals and their organisations.

The monitor also underpins a benchmarking process called the Inter-Council Comparison Scheme. Developed in 1993 with a view to providing performance feedback to Local Government bodies in the area of injury prevention. Now the Scheme provides information on some 35 per cent of all Local Government employees in Western Australia. In November 1998 it won a WA Municipal Association Benchmarking Award however, it's best achievement has been to help decrease the cost of injuries to member councils by 50 per cent over the last 5 years. Complementing this service EMRC also provides training in safety and risk assessment on a fee for service basis.

Environmental Services

EMRC has a 12 person in-house environmental team that provides advice and project management leadership on areas relevant to member councils including:

❑ Air quality;

❑ Weed control;

❑ Foreshore management;

❑ Landcare management;

- ❑   Waste management issues; and

- ❑   Regional Environmental Strategy management and development.

Regional Development

A regional Tourism Strategy was prepared in 1997 under the auspices of the East Metropolitan Local Authorities Group. The Group is now part of EMRC. Studies underpinning the strategy indicated that while there was benefits in the 6 councils working together for tourism development, broadly speaking the group should not market itself as a region. Cooperation has become stronger and the benefits of linking events and taking a regional perspective are growing in importance. However, local groups still have a strong role in promoting tourism activities in their own areas.

Corporate Services

Ensures that the operations of the EMRC are fully supported.

Achievements

EMRC continued to develop the Red Hill Facility and now operates WA's only urban Class IV landfill facility with a capacity of 400,000 tonnes. This is proof of the organisation's success. In addition some 2,600 homes are powered by electricity generated from methane from earlier developed cells and pumped into the Western Power grid.

The organisation's success was also acknowledged by winning the Premier's Award for Sustainable Development in 2001 for the Eastern Hills Catchment Management Project. The Project saw EMRC coordinate 2,000 volunteers in this ground land improvement project.

2001 also saw EMRC train 920 people in occupational health and safety and develop a large events database of all venues in the region suitable for large events.

Future

EMRC is looking to a strong future and has planning to underpin its position. It has a financial plan in place to provide $10 million for waste management treatment and technologies with the anticipated life of the Red Hill site expected to be 15 years. The Council has also established guiding principles to cover all areas of operation including member interests.

10.2.2   The South West Strategy – Queensland

The South West Region of Queensland is an area of 323,000 square kilometres. Larger than Victoria, it covers the Shires of Bulloo, Murweh, Paroo, Quilpie, and parts of Balonne, Barcoo, Booringa, Tambo and Waroo. The South West Strategy was launched in 1994 attracting support from the community and all levels of government. It continues now in a modified form and provides an interesting case study with lessons for communities working toward local governance.

Achieving economic development or even positive change is difficult in any community or region but South West Queensland has confronted major economic issues over the project's 8 year history. Between 1990 and 2002 the South West Financial Counselling Service estimated that local indebtedness increased by almost 50 per cent, clearly enunciating the problems facing remote rural communities across Australia.

The strategy has attempted to build a unique, holistic approach to the region's problems of economically sustainable production, natural resource management, social issues and regional development. It recognised the need to bring 60 different organisations and groups together to work for the region's future.

Steered by a community-based Committee, the strategy was to be a model for rural recovery Australia-wide and a vehicle to take South West Queensland along the road of sustained recovery into the 21st century.

The Structure

Funding for the initiative has been by a State and Commonwealth partnership with support from local government. At the outset it recognised that if the South West was going to grow then the land, its major resource, had to be optimally utilised. This required property amalgamation, bore reconstruction, economic goals and a vehicle for its achievement. The strategy became both the plan and vehicle for achievement.

In general past funding for the Strategy came from the Commonwealth largely through Natural Heritage Trust/Resource based grants with matching funds through various State administrations including the then Department of Natural Resources, the Queensland Rural Adjustment Authority (QRAA) and the Department of State Development. Through the South West Financial Counselling Service Inc, the Strategy also managed the processing of applications for assistance for enterprise reconstruction, interest subsidies for productivity programs and subsidised debts and skill development.

The success of the Strategy was analysed in the Review of the Rural Partnership Programs by Price Waterhouse Coopers in January 2001. It continues through transitional funding provided by the Queensland State Government.

Reflecting the problems to be faced in the South West Region, the strategy itself comprised four major components

❑   Regional Economic Development;

❑   Enterprise Reconstruction;

❑   Natural Resource Management; and

❑   Information and Technology.

A steering group that reported back to the management committee directed each component. The management committee was made up of representatives of local communities and State and Commonwealth Government administrations. In 1998 the State Government did make a move toward a holistic approach to resourcing the needs of the Strategy.

Regional Economic Development

The achievement of sustained economic growth underpins the objectives of this component of the Strategy that has been resourced by two regionally dispersed staff.

Enterprise Reconstruction

This component sought to improve rural enterprises long-term sustainability. In 1997 the Commonwealth and State Agreement provided $5.4 million for these purposes. The agreement dictated the responsibilities for each government administration.

The State managed the funds through the Department of Natural Resources (DNR) who was responsible for policy and review and QRAA who delivered the programs. Included in this component was regional adjustment, nature conservation, land management planning, interest rate subsidies for productivity improvement and farm build-up, training in farm management, re-establishment grants for those exiting non-viable farms, amalgamation of titles and land trading.

While some of the roles were delegated locally, the State Agencies while working in consultation maintained strict central control over the use of resources.

Natural Resource Management

In reflection of the expertise required, this has been largely a DNR run initiative encompassing appraisal of the safe long-term carrying capacity of properties, bore drain replacement with pipelines, nature conservation planning to reduce degradation and encouragement of sustainable land use and bio-diversity.

Information and technology

In recognition of the importance of communication and information flow to the global marketplace, a range of projects were undertaken. As an instance the GrowZone on-line set itself the task of providing net access at local call cost to regional businesses.

Achievements

Over its history it endorsed some 137 applications for interest rate subsidies representing an allocation of almost $3 million in funding. 23 grant approvals were made for property title amalgamation and 21 for productivity improvement.

In 1999-2000 alone according the bore replacement program saw 7,795 cubic metres per day of water saved (South West Strategy Annual Report 1999-2000). The Natural Resource Monitoring Program was also runner-up for the 1999 Premier's Achievement Awards for Excellence.

GrowZone has seen Charlieville come on-line and access the Internet at local call rates.

The most important achievement of the Strategy was to provide a consolidated approach to facing the problems associated with the changing economy of the region. It demonstrated the ability of three tiers of government to work together for a community's development. However, there were problems with the governance structure.

Most noticeably these included the:

❑ Dependence on a volunteer group of people that were thinly stretched over a broad geographic area. Communication as a result has been fragmented reducing the cohesiveness of the Strategy and the ability to gain wider community input.

❑ Dependence on government funding and no mechanism for developing its own income sources.

❑ Ownership of policy and program administration within Government administrations as dictated by the 1997 Commonwealth and State Agreement. While this provided much needed additional expertise it did not provide the Strategy the ability to direct programs or identify priorities. In fact there appears to have been little in the way of staff reporting structure to the Strategy outside the Strategy Executive Officer.

However, the area of responsibility left to the Strategy in terms of grant application processing generated conflict with the community as transparency of operation and commercial confidentiality conflicted.

Future

Programs within the Strategy such as Natural Resource Management are being continued through operations of the Queensland Department of Mines and Natural Resources. QRAA continues to provide assistance measures through its normal suite of programs. The Strategy has community support and in recognition of this the Queensland Government has funded a manager to help the Strategy to re-establish a role. It is expected that the economic development and communication function will be the most important element of the re-structured South West Strategy.

It is for the future to determine whether technology can allow the Strategy to flourish. The internet provides a communication and information medium unavailable to the original strategy participants. With further improvements in access and charges it can stretch the region to include more remote communities.

11. Macroeconomic environment

11.1 Introduction

This chapter summarises the economic outlook for Australia to 2017. The Figure below shows the outlook for Australian gross domestic product to 2017 by scenario. Section 11.3 of this chapter provides a more detailed outlook for the Australian economy to 2006-07 for the base scenario.

These projections were prepared by NIEIR in September 2002 and reflect information available at that time. That is, the projections were prepared on the basis of the March quarter 2002 Australian Bureau of Statistics' Australian National Accounts (ANA), although some of the key indicators were updated with the June 2002 ANA figures.

Australian GDP growth by scenario to 2017

Base, high and low scenarios
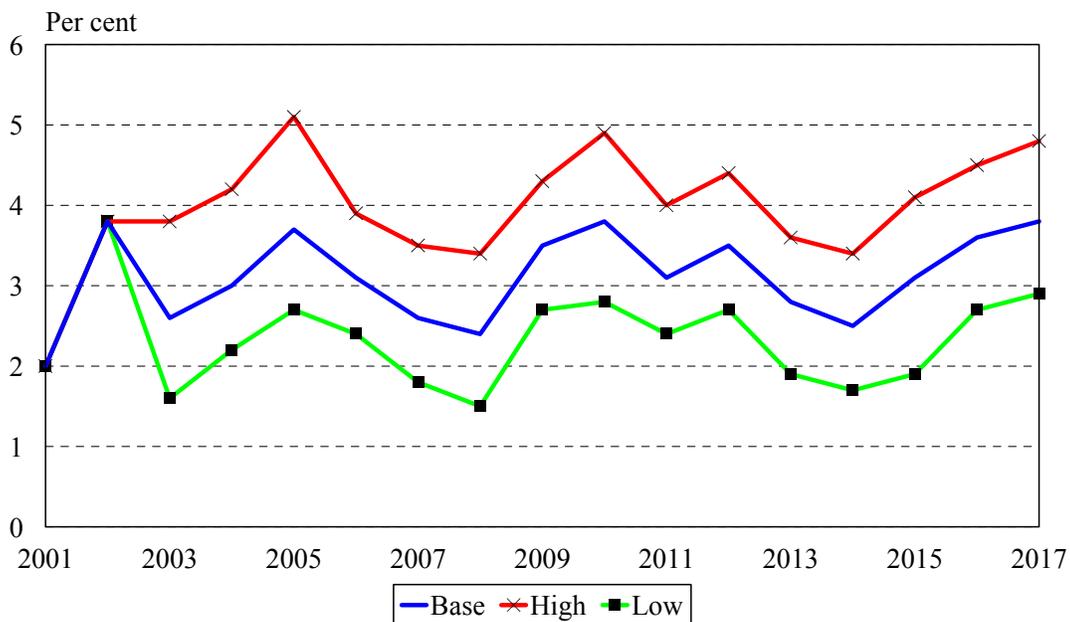
11.2 Revisions to NIEIR's economic outlook

Australian GDP growth for 2001-02 was 3.8 per cent, significantly higher than the forecast of 2.7 per cent in September 2001. The main reasons why the 2001 forecast was exceeded were:

❑ the maintenance of low nominal interest rates in Australia for much longer than expected, following the terrorist attacks in the United States in September 2001; and

❑ the extension of Commonwealth Government assistance for new housing construction for first home owners.

Overall growth in both Australian private consumption expenditure and private dwelling construction over 2001-02 were stronger than forecast.

In terms of the medium term outlook, the overall profile for Australian growth is similar, with the exception of 2003-04, which has been revised downwards by nearly 1.0 per cent. This revision reflects the draw forward effects of stronger actual growth for housing construction and consumption expenditure in 2001-02. The dwelling construction sector, for instance, is not expected to strengthen again (after falling over 2002-03 and 2003-04) until 2004-05.

The high and low growth scenarios

Tables 11.1 and 11.2 summarise the key features of the international and national scenario differentiating between the base, high and low scenarios with measures.

Table 11.1   Key features of national scenarios – base, high and low

Low – major points	Base – major points	High – major points
• Base or high international scenarios lead to rapid recovery in world interest rates. This translates into interest rates in Australia returning to 5-6 per cent by end of 2003. Very high debt service costs lead to very slow growth in private consumption expenditure and big wealth losses from falls in house and equity prices. • Positive economic growth outcomes due to mining and manufacturing expansion. However, benefits from mining expansion limited by low exchange rate, and governments using tax revenues to maintain budget surplus. No large scale infrastructure program to kick-start economy. • Australia falls further behind in competitiveness in the new industries of information technology, biotechnologies and multi-media. Increasing import penetration in traditional industries keeps manufacturing output growth at 1 per cent per annum over 2000 to 2012. • Best home grown skills leave Australia for higher income jobs in US and Europe.	• Slow world economic recovery allows Australia to maintain interest rates at near current levels to end of 2003. • The build up of debt grinds down the rate of growth of private consumption expenditure to the 1.5 to 2.0 per cent range over 2003 to 2006. However, 3 per cent plus growth rates maintained to 2006 by resource expansion and government expenditure expansion. • House prices stabilise at near current levels to 2008 while equity prices also stabilise at current levels to 2006. That is, there is no major negative wealth effects although positive wealth effects do not drive growth again until late in the projection period. • The period 2007 to 2010 is for weak economic demand growth as households reduce debts relative to income and increase savings rates to 6 per cent plus. Supply side, the economy consolidates as high technology industries expand rapidly, albeit from a low base.	• Aggressive public sector policies to expand core physical, skills and knowledge infrastructure. • Exchange rate strengths to encourage the development of new emerging industries. • Domestic savings (via managed funds) does not flow to any large extent offshore as is the case for the low and base scenarios, but is allocated to building domestic infrastructure and as venture capital for the establishment and growth of new emerging industries. • Moderate to high income full time employment growth strong as distinct from the rapid growth in part time and low income full time employment under the low and base scenarios. • Strong constraints on growth in household expenditures as per base and low scenarios. However, strong supply side expansion and investment neutralises this aspect by delivering high overall growth rates.

Table 11.2   Key features of international scenarios – base, high and low

Low – major points	Base – major points	High – major points
• High debt in household and corporate sector hold back US recovery. Growth not back to historical trend levels until 2006 when household savings ratios are restored to at least 6 per cent.	• US recovery relatively rapid, driven by fiscal stimulus, low inflationary growth maintaining low interest rates and rapid recovery of high technology sector. However, debt and savings constraint begin to bite by 2006 forcing low growth (compared to low scenario) over the 2007 to 2010 period.	• Further EU intention stimulates high economic growth in Central and Eastern Europe 2004-2012.
• Japan fails to rapidly correct its banking and other financial sector bad debts. Fails to open up economy. High government deficits remain over the longer term. Little Japanese growth for a decade. Japanese economic implosion beyond 2012.	• Relatively high US growth stimulus, rapid world economic recovery. However, by 2006 Europe takes over from the US to drive reasonable world economic growth rates to 2012.	• High growth in Western Europe 2003 to 2012 as the benefits of past structural reform is translated into higher growth, especially in Germany, France and Italy.
• China captures direct capital inflows and world trade growth opportunities largely at the expense of other East Asian economies.	• Rapid diversification of energy sources and rapid gains in energy efficiency (especially in transport) will neutralise the potential for oil prices to retard economic growth.	• Slow growth in US until 2004 as corporate and household balance sheets are restructured. The potential of the information and biotechnology revolutions drive high US growth post 2004.
• Political instability and tight political control maintains high and increasing real oil prices.	• Japanese restructuring slow but steady. Japan averages 1 per cent per annum to GDP growth to 2010.	• Chinese integration into world economy is seamless with both the rest of the world and China benefiting in terms of higher growth potential.
	• China's growth prospects more limited by diversification of world capital flows to rest of Asia.	• Japan opens up economy and allows unrestricted capital inflows. This eases Japanese restructuring and unlocks 2 per cent plus growth post 2006.

11.3   The base scenario outlook for Australia to 2006-07

The world economy

GDP major trading partners and G7
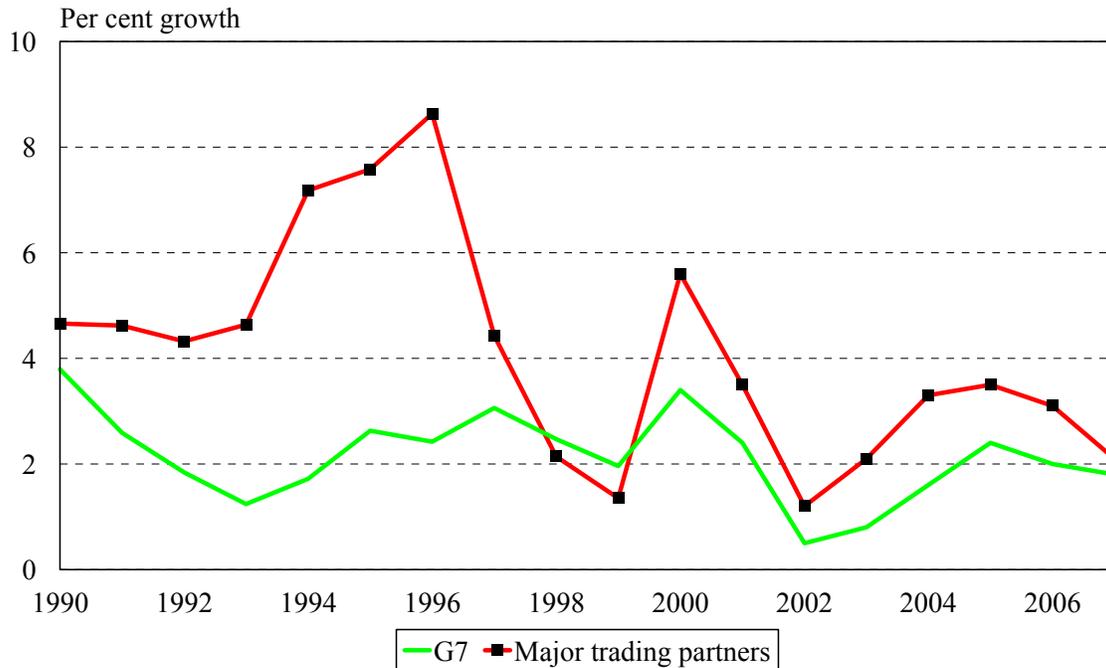
Per cent growth

For Australia's major trading partners, growth is expected to be 2.1 per cent in 2002-03, accelerating to 3.5 per cent by 2004-05. This compares to growth of 1.2 per cent for fiscal year 2001-02.

The sharp world economic downturn in 2001 led to world interest rates being lowered more rapidly and to a greater extent than previously anticipated. Stronger consumer spending in response to lower interest rates allowed some of the major corporate difficulties which emerged over 2001-02 to be offset.

There was a marked deterioration in global financial markets over the middle of 2002 and a considerable increase in uncertainty regarding the prospects for the United States and world economies. There was also growing concern over the quality of corporate governance and accounting in the United States. Expectations of interest rate rises have been pushed back in the United States, Europe and some Asian economies. Commodity prices also retreated through the middle of 2002 as expectations of world growth became more uncertain.

The main reason why world growth is likely to be much more subdued over the next two to three years is that the structural factors which led to the recession have not been corrected. These include:

(i)   low household savings in the United States and high household debt;

(ii)   high and increasing corporate debt levels in the United States; and

(iii)   the failure of Japan to open its economy and to clean up their bank bad debts.

In addition, the current problems of:

(i)   falling but still over-valued equity prices in the United States; and

(ii)   unsustainable expansionary fiscal policy in Japan,

will become medium term negatives for the world economy.

The possibility of a situation where world economic growth averages around 2.0-2.5 per cent per annum over a five year period cannot be ruled out.

In the short term the key question is, to what extent the weakness in global equity markets will dampen economic activity and, in particular, lead to a deterioration in business and consumer confidence? Certainly the curtailment of expenditures by major companies in order to maintain cash flow and dividend payments and, therefore, their equity prices is already flowing through.

Consumer prices

Consumer price index
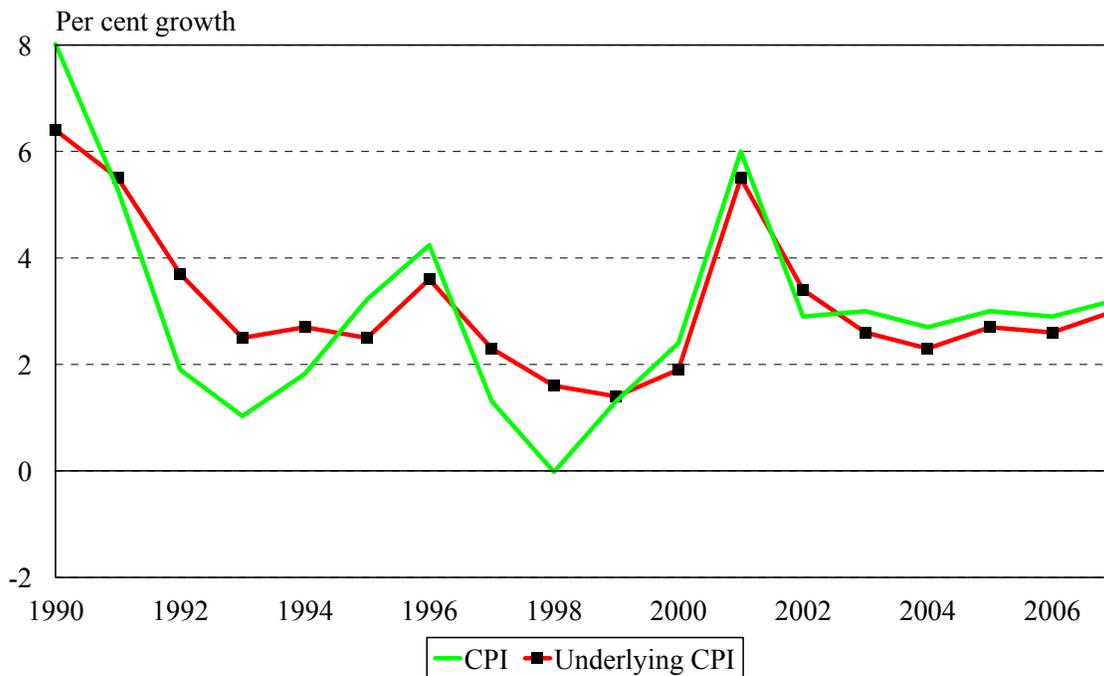
Note: Underlying CPI excludes items from the CPI basket whose prices are highly volatile, exhibit marked seasonal patterns or are largely affected by policy decisions.

The Australian consumer price index is forecast to remain at around the 3.0 per cent level for the forecast period. This reflects a number of factors, including:

❑   relatively low international inflation;

❑   the absence of any excess wages pressures; and

❑   the continued substitution of part time employment for full time employment and outsourcing.

Australia's underlying rate of inflation has effectively remained comparatively low and under control since the early 1990s and this has enabled domestic interest rates to fall progressively over the last decade with each cycle of growth.

Recent upward pressure on inflation in Australia reflects higher world oil prices, increases in health insurance costs, travel expenses and increased costs of house construction.

The main substantive threat to inflation in the short term is the possibility of oil production cuts in the Middle East due to emerging tensions. The impact of a major shock to oil prices would impact world-wide.

Nominal wages and CPI
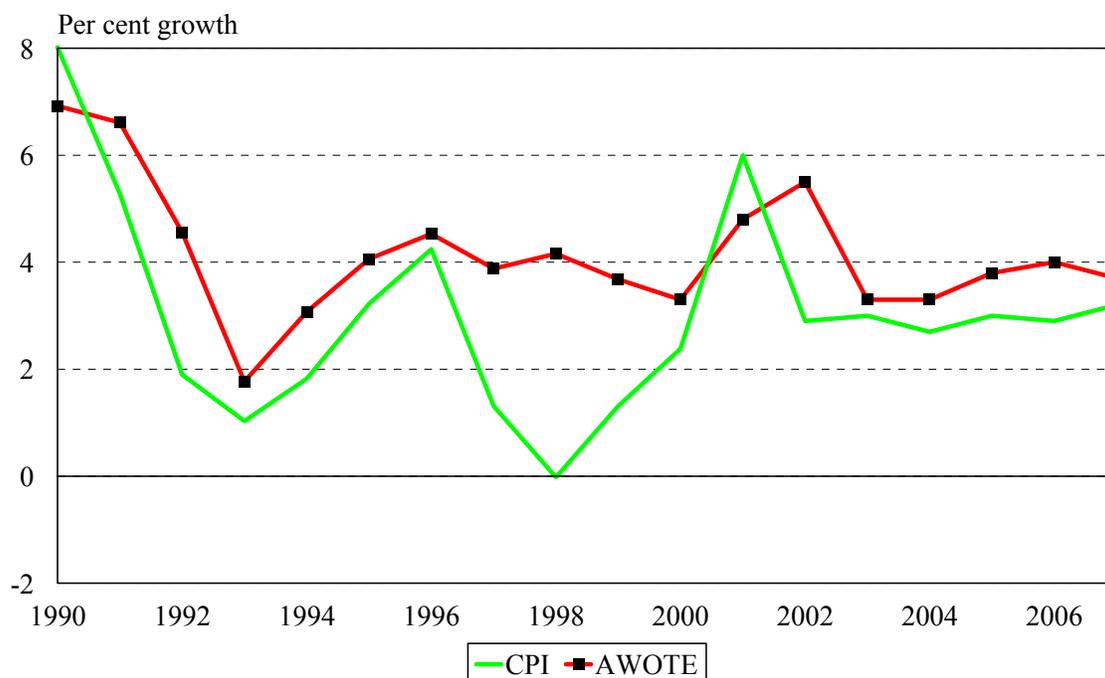
Per cent growth

Wages and CPI

Average weekly earnings rose by around 4.0 per cent per annum over the latter half of the 1990s. The stronger growth in average earnings than consumer prices reflects significant productivity gains over the 1990s and compares markedly with the 1980s decade where earnings growth barely matched the rate of inflation.

For the projection period to 2007, average earnings growth is around 3.0 to 4.0 per cent per annum. Weaker growth is projected over 2003 and 2004 due to poorer labour market conditions.

The sustained growth in real earnings has underpinned the growth in private consumption expenditure along with the tax cuts introduced as part of the GST package.

Domestic interest rates

Per cent
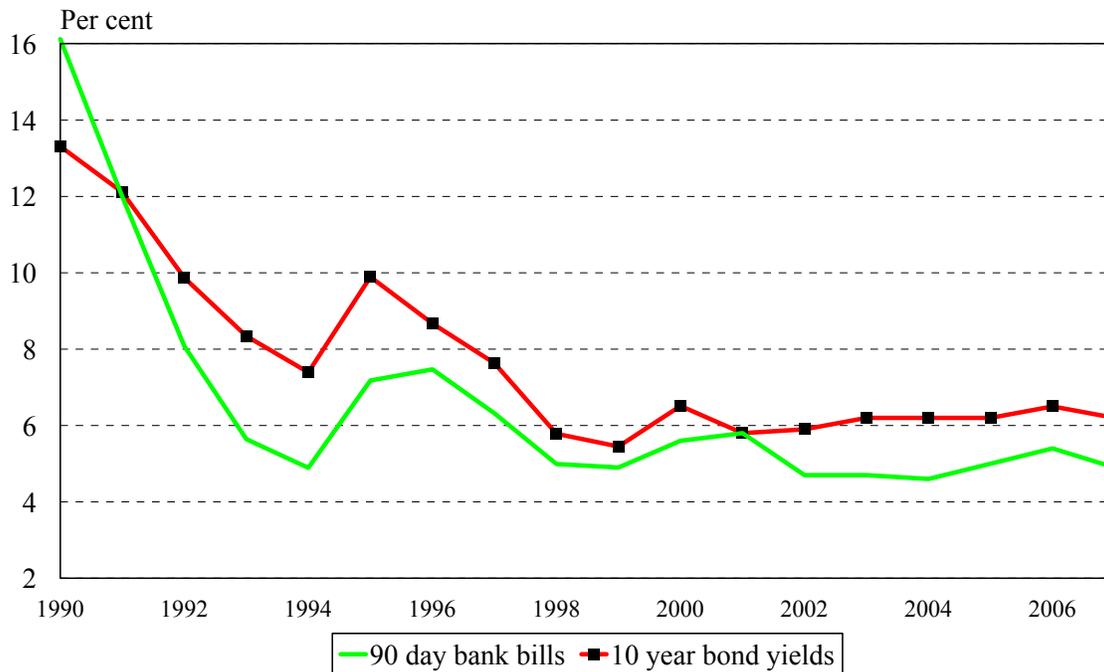
The outlook for interest rates has changed over the course of calendar 2002. In early 2002 strong growth in housing and consumption expenditures led to an increase in the official cash rate and, at that time, further increases were expected.

With the re-emergence of uncertainty over the global economic recovery, the collapse in equity prices, and concerns over the household sector's ability to meet debt servicing costs, the outlook for Australian interest rates now remains more subdued.

Low nominal interest rates over 2001-02 have been a significant factor in leading to a more protracted upturn in new housing construction, higher house prices, as well as supporting higher durables consumption expenditures (household goods and motor vehicles in particular).

The subdued outlook for world and Australian economic growth over the next two years will enable Australian interest rates to stay within the 4.5 to 5.0 per cent range. This outcome is dependent upon Australia's current account deficit remaining relatively stable.

A sharp fall in the exchange rate leading to a balance of payments crisis could see Australian interest rates rise by 1.5 to 2.0 percentage points above that forecast in this document. This would reduce Australian GDP growth over 2003-04 and 2004-05.

Current account deficit

Current account balance
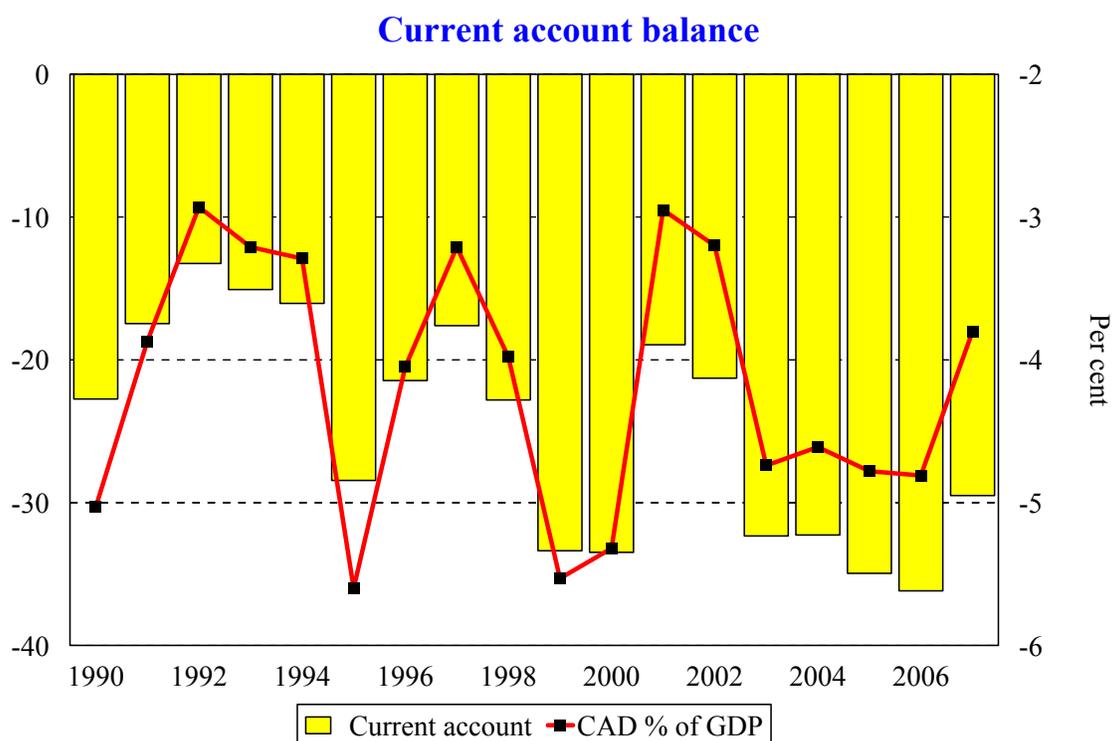
The Australian current account deficit which is now around 3.0 per cent of GDP is expected to deteriorate modestly over the next few years. The increase in the deficit, however, is not expected to reach the record levels of 5.3 per cent of GDP as it did in 1998-99.

In the short term, the deterioration reflects weaker export volumes associated with falls in agricultural production and weaker world growth. In addition, some modest increases in international interest rates and the exchange rate devaluation will add to Australian debt servicing costs. Lower import volumes in the short term are not expected to offset these factors.

The recovery in the economy by 2004-05, and in particular business investment, will lead to a resurgence of imports. The current account deficit is expected to reach 4.8 per cent of Australian GDP in 2004-05. The improvement in Australia's terms of trade and exports is not expected to offset import volumes through this period.

Consumption expenditure

Private consumption

Per cent growth (4 qtrs)
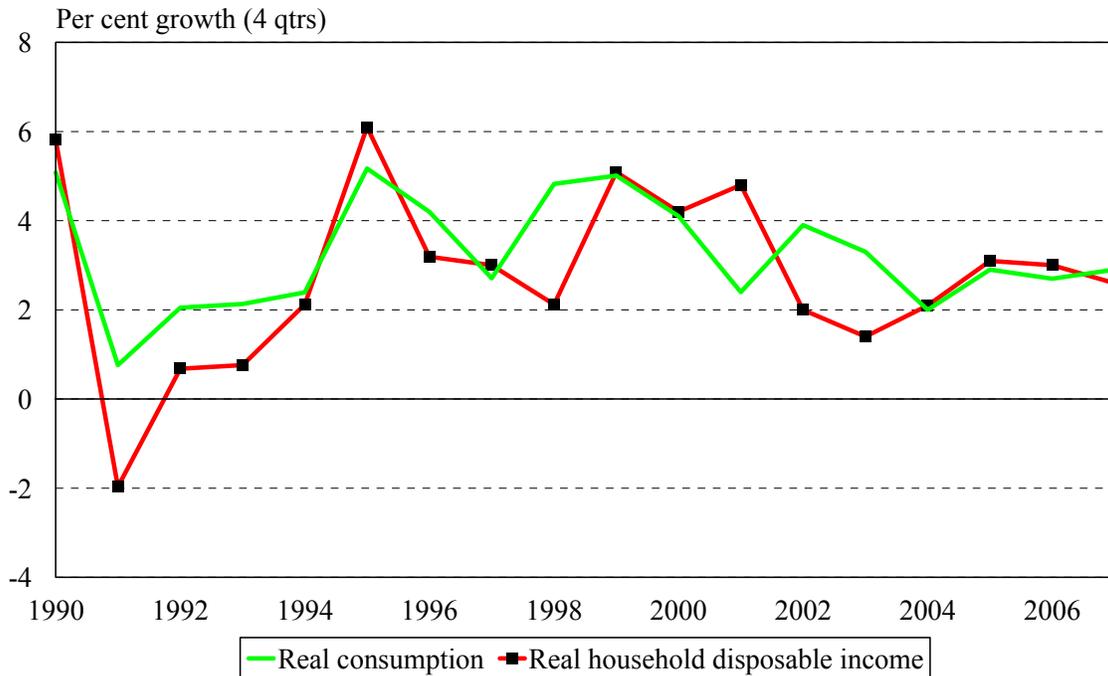
The renewed strength in private consumption expenditure growth over fiscal 2001-02 reflects a number of factors, including:

❑　high durables expenditure growth (household goods and motor vehicles) reflecting the housing boom and low nominal interest rates;

❑　the flow-on of the tax cuts into expenditures; and

❑　the maintenance of low household savings.

The increase in household borrowings for housing and consumption means an increasing proportion of household discretionary income will be required to meet interest and other debt servicing costs. The household net debt service ratio is expected to reach a historically high level of 30 per cent in 2003.

With the strong possibility that falling equity prices, and later house prices, impose a negative wealth effect, the ability of the household sector to borrow will be constrained. In addition, weaker labour market conditions will reduce the growth in real household disposable income.

Private consumption expenditure growth in Australia is forecast to remain under the 3.0 per cent growth level for the next three years. Increases in domestic interest rates by 2004-05 will further constrain expenditure growth.

The adjustment to household spending growth and increased household savings over the projection period implies a much more sustainable outlook for consumption and Australian GDP growth post 2007.

Dwelling investment

Per cent growth
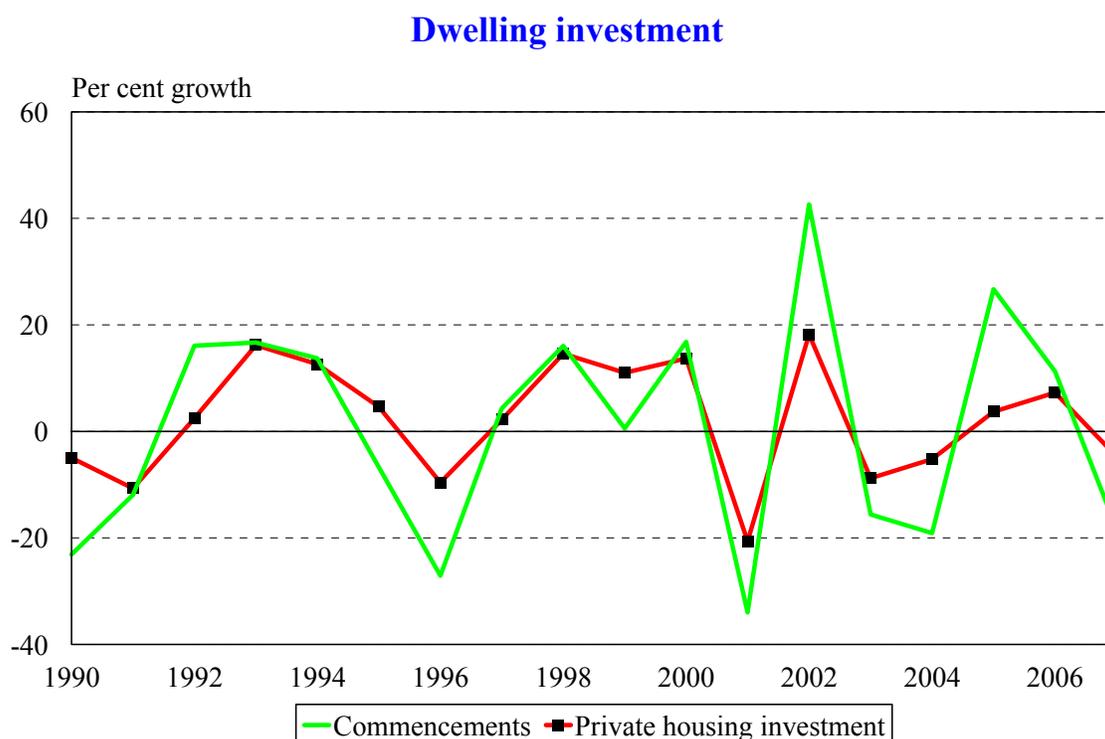
New dwelling construction expenditure rose by 18 per cent in fiscal 2001-02, following a fall of 21 per cent in the previous year.

The maintenance of low nominal interest rates over 2001-02, and the introduction and extension of the Commonwealth Government's First Home Owners Grant supported overall levels of activity within the housing construction sector.

The poor performance of equity markets has also contributed to an increase in investor activity, particularly for medium density housing. There was strong growth in house prices over 2001-02 in all State capital cities.

With the ending of the Commonwealth's additional grant in June 2002, as well as excess supply of housing in some markets, new dwelling construction is expected to fall over 2002-03. Total new private dwelling investment falls by 14 per cent over 2002-03 and 2003-04.

A recovery in housing construction is forecast for 2004-05 and 2005-06 as low nominal interest rates and a strong recovery in real income growth leads to an increase in underlying demand.

Business investment

Per cent growth
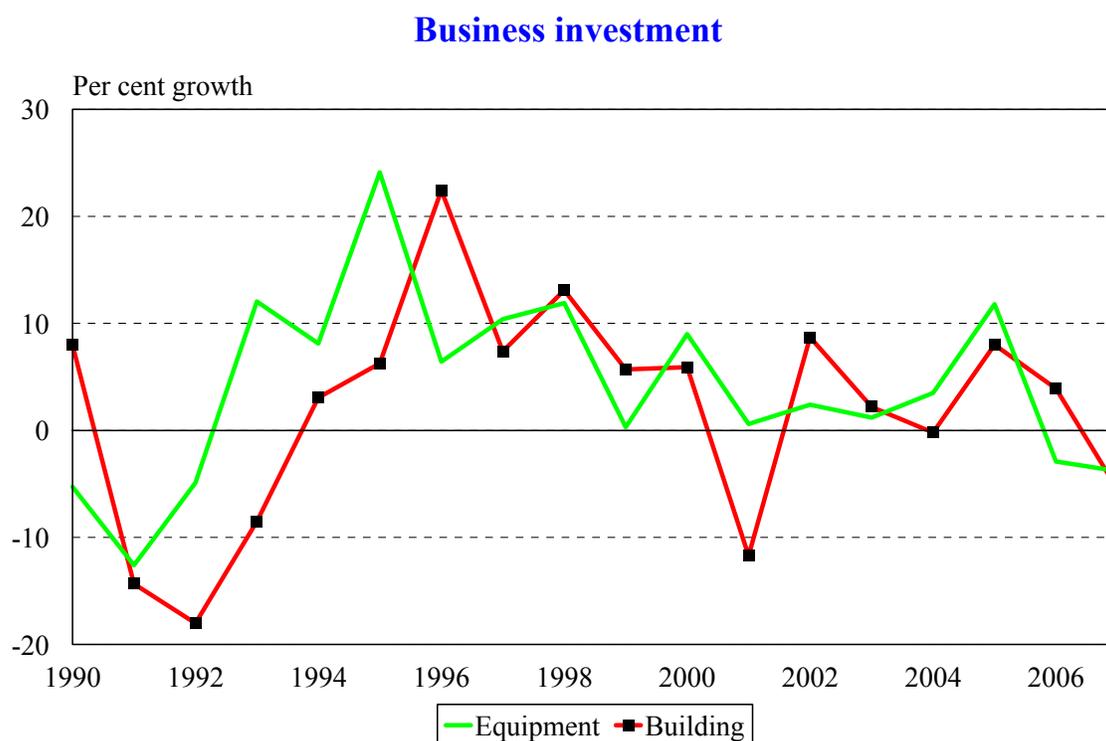
Private business investment rose 8.0 per cent in 2001-02, following a fall of 10 per cent in 2000-01.

Business investment on non-dwelling construction has been falling for the last two years given:

❑   post Olympic factors and the downturn in tourism;

❑   mining investment fell sharply following the fall in commodity prices; and

❑   a number of major infrastructure projects were completed.

Equipment investment is expected to remain relatively flat over the next two years as a sluggish economy dampens growth and additional pressure on companies to maintain cash flows for dividend payments to support equity prices.

Non-dwelling construction investment is forecast to recover strongly by 2004-05, reflecting:

❑   a recovery in mining and minerals processing manufacturing projects (e.g. alumina, magnesium, oil and gas); and

❑   a resurgence in building construction, including offices, hotels and shop construction.

Labour markets
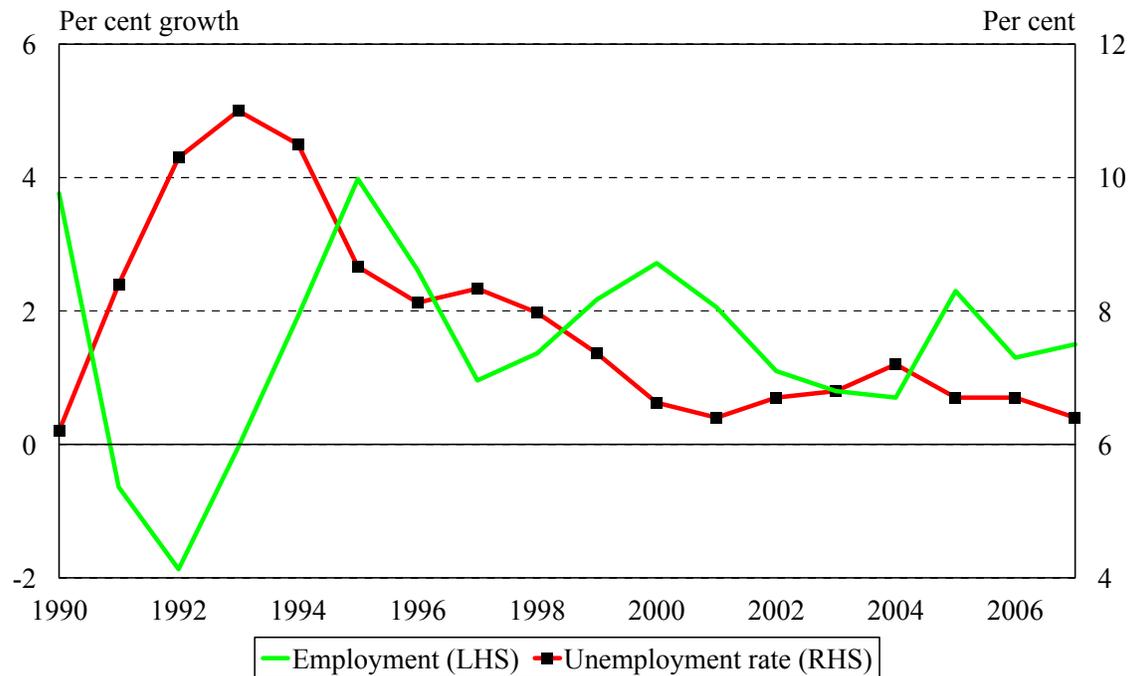
Employment growth in Australia over the next three years is forecast to soften markedly, following relatively strong growth in total employment in Australia to 2000-01. Recent employment growth reflects the pattern of growth in the domestic economy with strong gains in construction and retail and wholesale trade employment.

Projected employment growth outcomes for Australia over the next two years are around 1.0 per cent growth, similar to the actual outcome in 2001-02. Falls in construction employment over 2002-03 and 2003-04 are an important factor in this outcome, as well as weaker employment outcomes generally for the economy.

The Australian unemployment rate rises to 7.2 per cent by 2003-04, from an average 6.7 per cent in 2001-02. The unemployment rate is not an accurate indicator of general labour conditions since changes by the government in the treatment of long term unemployed and other changes to social security benefits payments.

Australian employment growth recovers strongly by 2004-05 with projected employment growth of 2.3 per cent. The unemployment rate falls to below 7.0 per cent, partly reflecting the exit of the first wave of baby boomers from the Australian workforce.

Gross domestic product

GDP and domestic demand
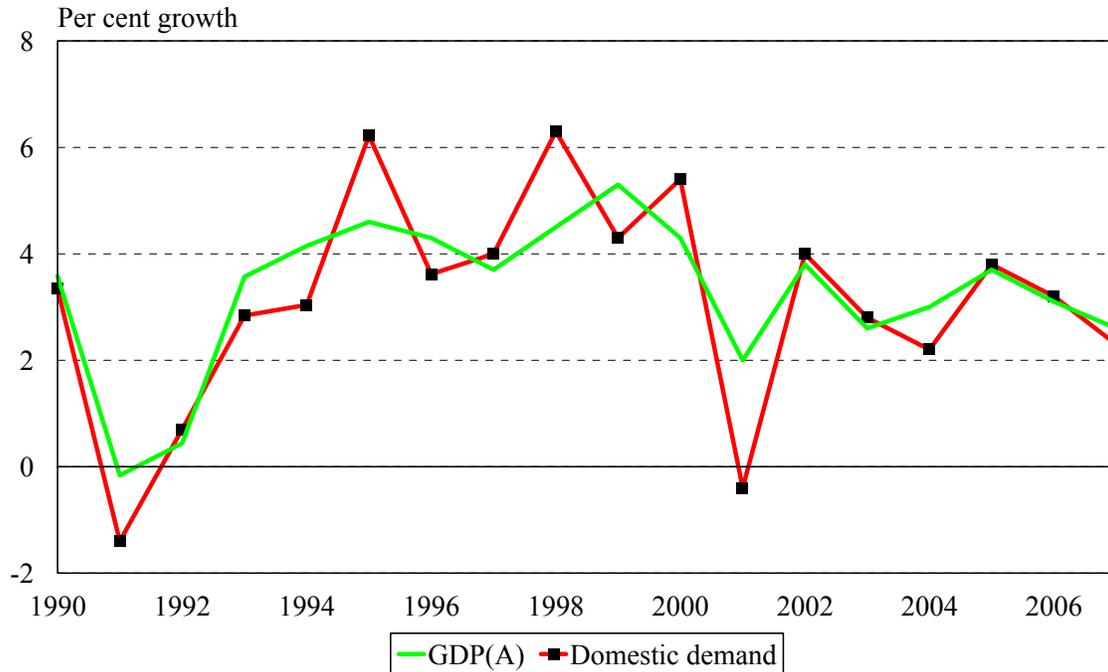
Per cent growth

Australian GDP growth is forecast to soften in the 2002-03 financial year to 2.6 per cent. The main factors contributing to this slowing in growth are:

❑   weaker private consumption expenditure growth;

❑   the impact of the drought on agricultural output, especially grain production;

❑   the expected decline in new private dwelling construction activity; and

❑   slow or falling export volumes.

Australian growth recovers by 2004-05 reaching 3.7 per cent growth. Australian economic growth over the 2003-04 to 2005-06 period is driven by:

❑   a recovery in private business investment expenditures, including both minerals processing project expenditures as well as non-dwelling construction expenditures;

❑   additional expenditures by the public sector on major infrastructure projects in road, rail and other social infrastructure;

❑   an expected recovery in agricultural production in 2003-04; and

❑   a recovery in world economic growth which will assist the Australian trade exposed sectors.

Exchange rates
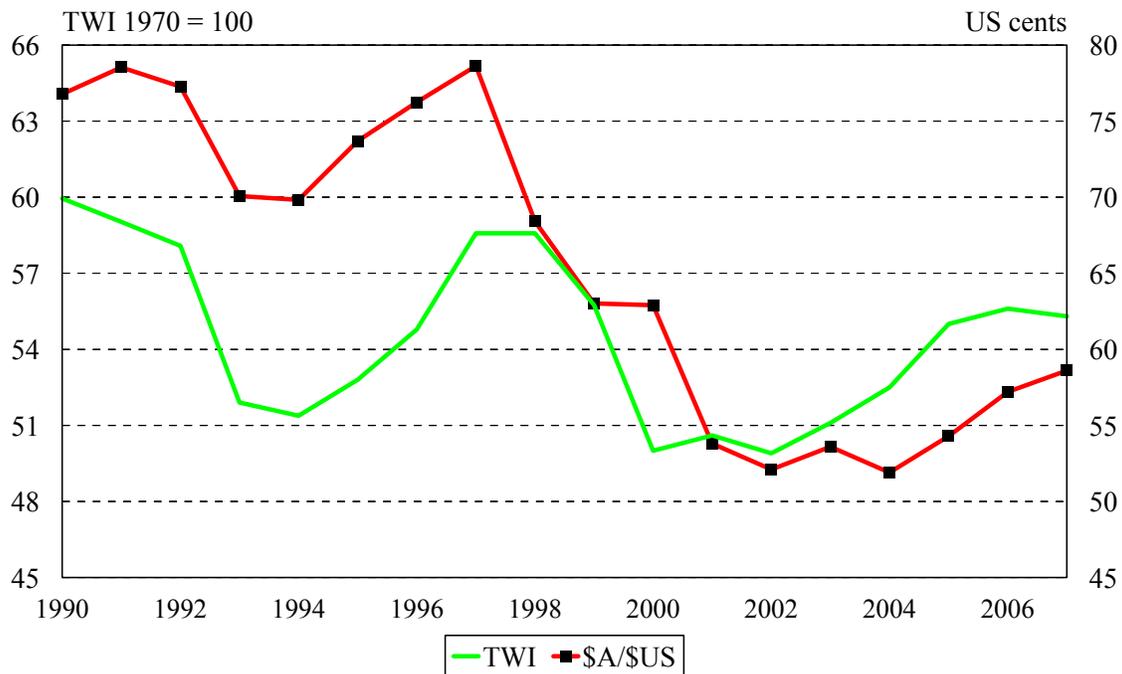
After rising strongly over the second half of 2001-02, the Australian exchange rate has depreciated more recently and is broadly unchanged on a year to year basis. With the real exchange rate only just above the low level recorded in 2000, competitive conditions for Australian export and import competing industries remain favourable.

Slower global and domestic growth, with continued downward pressure on commodity prices, will lead to the exchange rate remaining at around $A/$US 52 cents. The recovery in the world economy and upward movement in commodity prices will lead to a strong recovery in the exchange rate by 2004-05 and 2005-06. The strengthening in the Australian US exchange rate is partly driven by the strengthening of the Euro and the Yen against the US dollar.

12.   Recent Infrastructure Developments of Regional Importance

This section presents the latest developments in investment projects in Australian regions. Throughout Australia there is currently several billion dollars worth of major infrastructure projects in progress, some representing the culmination of many years of research and planning. These major projects will create thousands of employment opportunities both in the major cities and in the remotest locations. The projects discussed below range from modernising and creating new railways, establishing new mines, laying gas pipelines under Bass Straight to establishing aluminium smelters. The breadth of work being undertaken reflects strongly not only on the availability of technical skills, but also on the increasing level of co-operation shown between the various levels of Government.

12.1   Victorian Regional Fast Rail Project

Work will start on the Victorian Government's $550 million regional fast-rail project by November after the awarding of two major construction contracts.

The project, which will boost rail links between Melbourne and the regional centres of Geelong, Ballarat, Bendigo and Traralgon in the Latrobe Valley,

The Regional Fast Rail project will provide faster and better rail links between Melbourne and Geelong, Ballarat, Bendigo and the Latrobe Valley in the biggest upgrade of these main regional lines in 120 years. The projects are due for completion by mid-2005.

As the centrepiece of the State Government's Linking Victoria program, the project will also deliver more frequent and reliable services through modern trains operating at speeds up to 160km/h.

The benefits in commuting times are expected to be large. Travel time between Melbourne and Geelong is estimated to fall to 45-minutes from its current level of over an hour.

The Government has awarded the $200 million works package for the Geelong and Ballarat lines to a consortium comprising Thiess and Alstom, while a joint venture between John Holland and Transfield won the $300 million works package for the Bendigo and Latrobe Valley lines.

The Premier, Steve Bracks said the economic boost to the State would include 800 jobs from the manufacture of new trains at Bombardier's factory at Dandenong in Melbourne's south-east.

The projects are expected to stimulate jobs in the regional communities via two mechanisms. Firstly, increased connectivity with metropolitan Melbourne will open up new employment markets for workers in regional communities. Secondly the construction and operational phases of the project will provide jobs for workers in regional areas.

The project also creates potential activity from increased tourism. The shortened travel time will increase the likelihood for interstate and overseas visitors staying in Melbourne to visit the regions along the proposed network.

12.2   Wodonga inland port boost for region

Wodonga in north-east Victoria is headed for a large boost to the regional economy flowing from three major investment projects. These are the $50m Wodonga Rail Bypass, a new $60m manufacturing plant by Visy paper and a $45m expansion at the Uncle Ben's food manufacturing plant.

The Wodonga rail project will seek to provide efficient, seamless links between regional industries, major ports and the global economy. The bypass will significantly improve the transport efficiency of freight and passenger trains on the most important interstate rail corridor in Australia. It has the potential to result in a large increase in the share of freight being transported by rail instead of by road.

The project involves developing a new state-of-the-art passenger terminal and multi-modal transport logistics hub. This new facility will consolidate six, disparate freight sites into one. This will effectively create an inland port. The idea behind the inland port is to provide a more effective and efficient logistics network by providing hubs for the transfer of goods from trains to trucks and vice versa away from congested areas.

Over the long term the state government estimates that the project will create 2000 ongoing new jobs in the state, including 900 construction jobs per year in the first two years of the project's development, and $35 million in new export opportunities.

Packaging giant Visy Industries is going ahead with plans to build a $60m corrugated cardboard box factory, which will create 200 new jobs for the Wodonga region.

The manufacturing plant will supply clients in northern Victoria and southern New South Wales in the produce, meat, wine and dairy industries. Capacity at the plant is expected to double within five years.

The new factory will also create about 140 permanent new jobs initially, increasing to up to 200 employees within five years. It will complement the VisyPak Wodonga food can facility, which is undergoing a $5m expansion.

Another development in manufacturing is the plan by Uncle Ben's to invest $45 million over three years to expand its Wodonga pet food manufacturing operation. Uncle Ben's is one of Wodonga's largest employers and their commitment to substantially upgrade their operation is a major gain for the region.

The new Wodonga rail line was a major factor in the decision to expand the plant. The new rail project will improve rail access and decrease transport costs and time delays. As a result of the project, rail shipments directly from Uncle Ben's plant will rise from approximately 10 per cent to 45 per cent.

Other developments in Wodonga include attracting Vitasoy and software engineering company, Adacel Technologies and securing major new investments by Goodman Fielder.

These investments show that business has confidence in the outlook for regional Australia. The new projects will help contribute to the continued growth of business in northern Victoria and southern NSW and regional development.

12.3   Olive processing plant in Northern Victoria

A new $40 million olive oil processing plant at Boort, in Northern Victoria will create around 40 new jobs and lead to export opportunities worth tens of millions of dollars a year to Victoria.

The processing plant will be able to process more than 50,000 tonnes of olives a year, including product from other regional growers. Almost 98 percent of the olive oil and preserved olives consumed here are imports, so import substitution will benefit our economy.

Up to 90 people will be employed in the olive groves and up to 40 more direct jobs will be created in the processing plant once it is completed by around March 2003.

Construction of the processing plant is expected to begin later this year at the Boort olive grove, taking the $110 million olive project to its next phase.

The plant will be a major boost for the olive oil industry in Australia, and a major boost for jobs and business opportunities in the Loddon-Murray region of central Victoria. Access Economics says the project will add nearly $50 million annually to Australia's GDP and about $80 million to Australia's trade balance.

A state government grant enabling the upgrade of irrigation water and power infrastructure in the Boort region was a significant factor in influencing the projects development. The Government estimates that improved water and power services will lead to $300 million in new horticultural investment in the region over 12 years, and the creation of more than 700 jobs.

12.4   Tomago Aluminium smelter upgrade

Tomago Aluminium Company will invest $210 million in its Hunter Valley aluminium smelter creating up to 350 jobs for the region. Tomago plans to upgrade all three of its potlines and increase production levels by 70,000 tonnes a year, to 530,000 tonnes a year.

The upgrade means more local jobs and more money being spent in related activity. Tomago Aluminium is one of the world's largest aluminium smelters and the upgrade will make its Hunter operations among the worlds best.

Tomago is one of the Hunter's biggest employers with about 1,000 people. The multi-million-dollar upgrade will support Tomago's continuing export push into the growing Asia Pacific market, with all of the extra aluminium output headed for export.

This project adds to the strong investment in resource-based activity in the Hunter Valley. Other investments include the $330 million extension to the Port Waratah Coal Services coal loader and the $110 million expansion of the Hunter Valley mine by Rio Tinto.

12.5 Energy source developed – Coal seam methene NSW

The untapped resource of coal-based gas in NSW, which rivals the reserves of the North West Shelf, could be developed over the next 5 years, following the commencement of a pilot project by Sydney Gas (SGC). Should SGC succeed in the commercial production of natural gas in large quantities from the massive coal seams directly below Sydney, Newcastle and Wollongong, it could in time become one of the lowest cost producers of natural gas in Australia. The opening of the first wells mark the start of the process that Sydney Gas believes will lead to full-scale production.

The Federal Government has offered SGC $4.1 million in funding to help the development of the project. Success will not only provide Australia's most populous areas with a major source of energy but could also generate export earnings if the technology used can be licensed to other sites around the world.

The Sydney Basin is estimated to hold one of the largest coal-bed-methane resources in the world. Formed during the coalification process, the gas is adsorbed into the coal seam. However, up until now, no one has been able to successfully extract the methane in sufficient quantities to make it commercially viable.

In the area west of Sydney, SGC holds three petroleum exploration licences comprising nearly six million acres that cover about 85 per cent of the coal reservoirs in the Sydney Basin. The company has invested more than $20 million in the last two years to take their project from exploration to assessment stage. SGC is now assessing the gas gathered from 25 wells at the western Sydney site. These wells produce gas from depths of around 700-800m through a gathering system of polyethylene pipe and deliver the gas to an advanced treatment plant.

If the project comes to fruition gas from the resource will be transported via the AGL and Duke Energy pipelines that presently supply Sydney. The project also has the potential to supply the southern states as their indigenous supplies dwindle.

12.6 SA wine industry cluster

South Australia has a $4bn a year wine sector. The state has close to 43 per cent of the vineyard land in Australia. In 1983 there were 111 wineries in SA a total that had grown to 184 by 1992.[1]

Although there are still hundreds of small wineries dotted through SA's main wine regions, it is the sheer volume and scale of vineyards and winery production facilities that set the state apart.

Australia's total wine exports have surged to more than $2 billion annually, and the infrastructure needed to process the growing volumes of grapes being harvested is also expanding quickly.

One of the largest of the developments has been the $140 million bottling plant built by Amcor near Gawler on the edge of the Barossa Valley. It began producing wine bottles in May 2002, and once at full capacity will produce more than 220 million bottles a year.

Amcor's main competitor, ACI Glass, has spent close to $300

---

[1] Australian and New Zealand Wine Directory

million in the past four years upgrading a huge plant in the Adelaide western suburb of Croydon. The factory has a capacity of more than 800 million bottles annually.

This is a successful industry that has contributed to wealth creation and increased prosperity in the state. The wine industry in South Australia is a perfect example of a regional industry cluster. This cluster is responsible for sustainable growth and increasing export sales.

The cluster promotes activity across the whole value-chain. From the harvesting of the grapes to the bottling and retailing of the wine, the new Gawler plant is an extension of this grouping of firms.

Sometimes an overlooked fact is that wine itself is a high-technology product. Research on grape varieties and blending techniques, and automated bottling plants are examples of this. The cluster is not just made up of large firms like Amcor, Southcorp or Fosters. There are a large number of small to medium sized firms that play an important role in the industry.

On the whole the South Australian wine industry is an example of a successful industry cluster. It produces a superior product through a competitive advantage gained by the interaction of a large number of diverse firms. The cluster is responsible for a large level of employment not just in the wine industry itself but also in subsidiary industry such as tourism. It has lead to an increasing level of exports and substantial wealth creation for the state.

12.7   Mt Arthur coal expansion

BHP Billiton have commenced construction of the Mount Arthur North open cut thermal coal mine in the Hunter Valley, NSW.

The estimated capital cost of the Mount Arthur development is $800 million. The coal resource is the largest remaining undeveloped coal resource in the Hunter Valley, containing around 815 million tonnes. The mine development is adjacent to the Bayswater Colliery and the two resources will be mined as one large operation. This will ensure sustainability of the regions coal industry and contribute significantly to employment in the area. At present there are no figures on employment associated with the development available.

The mine will be capable of producing up to 15 million tonnes of raw coal per annum for a 21-year period. The expanded production from the mine is targeted at growing regional demand for steaming coal and local power production. Initial production will supply the Macquarie Generation power station in the region. By 2003 a little under half of the production will be exported.

12.8   Latrobe Valley call centre

A new $8.2 million Call Centre will create 65 jobs in the Latrobe Valley. The call centre will deal with inquiries and disputes by public housing tenants. The region has a high rate of unemployment and the new call centre is a significant investment in and a huge boost for the local community. The former Latrobe Regional Hospital campus site in Moe has been chosen as the preferred location.

The call centre will create 65 direct full and part-time jobs and provide further job and training opportunities for local residents. The multiplier impacts on the local economy will further stimulate employment in the region.

During the construction and fit-out stage of the development another 24 full-time positions will be created.

This venture will produce significant savings in public housing maintenance costs and these cost reductions will be used to build new public housing and provide better services to tenants. This impact too will boost jobs across the state by providing construction work and a platform for lower income tenants to enter/re-enter the workforce.
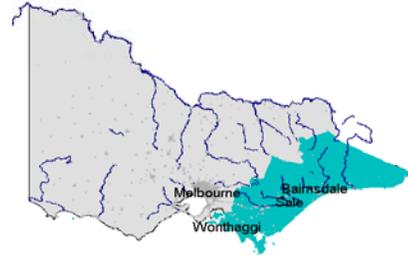
12.9   Castlemaine food manufacturing

Another vote of confidence for regional Victoria was demonstrated with the announcement of a $9m upgrade of the Castlemaine Bacon factory. The investment will create over 200 new jobs for the region.

A State Government grant helped facilitate the major expansion at the factory, which will see the new jobs created over the next three years. According to the projects proponents the grant gave the Company the security it needed to plan for significant future growth.

The expansion will help the company to meet new domestic and export opportunities and boost employment in the factory and supplying industries. The new state-of-the-art facility will incorporate the latest slicing, packaging and production equipment and additional employee amenities.

The Castlemaine Bacon Company was founded in 1905 and now employs in excess of 1000 people. It is Castlemaine's largest employer. With annual sales of $200 million, the company is the biggest manufacturer of hams, bacon and small goods in Victoria, in a fully integrated operation from piggeries to processing, packaging and distribution.

The Victorian food industry is very export orientated. It achieved $6.6 billion in exports last financial year and is on track to meet the Government's food and fibre target of $12 billion in exports by 2010.

12.10   Perth and Mandurah rail link

Award of a major design contract for railway infrastructure works signals a new phase in delivering the fast, direct rail link between Perth and Mandurah. A $10m contract for design of civil and railway works has been awarded to Maunsell SKM. The contract means the project is moving from the planning stage to the design and construction stage.

The rationale for the Mandurah rail link is to provide rail transport for the dormitory suburbs planned between Pinjarra/Serpentine/Armadale in the south-west and Mandurah/Rockingham/Kwinana on the coast. This will encourage new development in the region and reduce the reliance on cars.
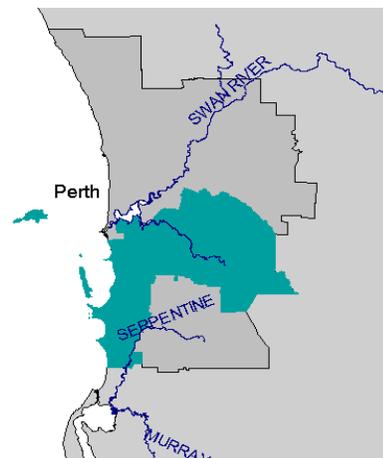
It is expected that the cost of the infrastructure for the

Perth Urban Rail Development Project will be in the vicinity of $350 million. The tenders for the construction work were scheduled to be called in mid-2003 and the contract for construction awarded at the beginning of 2004. The expected cost of the new rolling stock is $350m. The new rail cars will be available in late 2003 and the final stage, services to Mandurah, to be completed in early 2005.

The state government estimates that design and construction of the Mandurah to Perth railway will stimulate more than 6,000 jobs in Western Australia over the next five years. This railway project will inject almost $700 million directly into the Western Australian economy and this will generate further economic activity.

12.11   The Douglas Mineral Sands Project

The Douglas Heavy Minerals Project Stage 1 is a proposal to mine and process heavy minerals from the Douglas area about 50 km south-west of Horsham in western Victoria. The discoveries in the area are indicative of the presence of a world-class mineral sands field that has the capability to commence production in the next few years.

Metallurgical studies indicate excellent titanium mineral products and a premium grade zircon product that should be in demand. Market analysis shows that over the past 20 years the world demand for titanium and zircon mineral feedstock's has grown at a steady rate of 3 per cent per annum, which is a reflection of growth of western economies GDP.

This growth in demand is expected to continue in the foreseeable future due to the fact that the major products, white titanium dioxide pigment used in paints, plastics and paper, and zirconium silicate used in TV tubes and ceramic applications are not subject to recycling.

This should augur well for the region ensuring the benefits of the project will continue over time. The strong global demand is expected to lead to the development of other mineral sands projects across the greater region.

The project is awaiting final approval with the EES still undergoing public scrutiny. The company developing the site, Basin Minerals wants to start mining in mid 2003, producing 300,000 tonnes of heavy mineral per year by 2004. The total resource base of mineral concentrate in the region is estimated to be 25 million tonnes.

Basin has indicated that the capital expenditure to set up the mine, and the primary and secondary treatment plants would be about $95m. Revenue would be $125 million a year at start-up. Up to 185 people would be employed during construction, and up to 125 people when the mine is in operation.

The benefits of the proposal include creation of jobs both directly and indirectly at a local level, and with the flow-on effects, the project would have an impact on the economy of $250 million in the first year of operation.

These deposits could provide feedstock for possible mineral sands separation and value-added processing facilities at Broken Hill. This will be a great development for Australia's poor value adding record, reduce imports and a boost for employment in Broken Hill.

12.12   Comalco Alumina Refinery

The Gladstone and Calliope area is shaping up to be Australia's newest economic powerhouse with almost $10 billion worth of major projects now earmarked for the region over the next few years.

According to government sources if all the proposed major projects proceed, they will create an estimated 9000 direct and indirect jobs at the peak of the construction phase and countless business and flow on opportunities in the region.

The large projects will also encourage activity in smaller "supplying industries". Small to medium size enterprises will be able to take advantage of the opportunities offered by the new major projects in the region and to expand and enhance their operations. A major challenge for the region is to ensure that local small business people are able to make the most of the opportunities currently occurring.

Among the largest projects is the alumina smelter. Comalco Aluminium has selected the Gladstone State Development Area as the site for construction of a $1.6bn alumina refinery. The site is located at the Yarwun Industrial Estate, 10km north-west of Gladstone.

Refining of bauxite to make alumina is the intermediate step in the process of producing aluminium metal. The first step is mining of the raw material, bauxite. In the second step, bauxite is refined into alumina. Finally, alumina is smelted into aluminium metal. This process is highly energy intensive.

Initial production capacity of the plant is planned to be over 1 million tonnes of alumina per annum, with the potential to expand to over 4 million tonnes per annum. Estimated capital expenditure for the initial phase of the plant is over $1.56 billion.

There will be a peak construction workforce of up to 700 workers and up to 450 permanent employees for the initial phase, increasing to 800 permanent employees when the refinery is fully expanded. The first production of alumina is expected in early 2005.

12.13   Townsville Zinc Refinery

The Townsville Zinc Refinery, located approximately 8 kilometres south of Townsville Port in the suburb of Stuart, is a Sun Metals Corporation development.

There has been little investment in global zinc refining over the last 20 years, however there has been a growing demand for the metal. This project will deliver a state-of-the-art facility to help meet the demand.

Stage 1 of the project became operational in early 2000 with construction starting in 1997. It employs approximately 350 staff and has a production capacity of 170,000 tonnes of zinc per annum. The project is a major boost for the region and will be the largest investment in Australia by a Korean company, with the total sum invested expected to exceed $1.2bn.

The refinery is a major value adding, export-oriented project. Stage 1 will consume approximately 400,000 tonnes/year of zinc concentrates, mainly sourced from North West Queensland.

The new refinery will use the leading edge technology. It will draw on Australian skills and expertise particularly in the metalliferous industry and also in materials handling to achieve further improvements in process and technology.

The proponents of the development have sited the following reasons for locating the facility in Townsville and these include:

❑ Competitive electricity prices

❑ Access to growth markets in Asia

❑ Substantial scope for future expansion

❑ Skills and technology base

❑ Availability of industrial land in close proximity to infrastructure; and

❑ The ease of doing business in the region

12.14 Mitsubishi Expansion in SA

Mitsubishi Motors Australia has announced that it will retain and expand its Adelaide base, producing two new models in Adelaide. This will ensure the survival of ten thousand jobs and the creation of more than one thousand new jobs. The company will invest $1 billion expanding its car production and establishing an R&D facility in South Australia could offer spin-offs for the State's IT and electronics industries.

While significantly strengthening the State's manufacturing base for many years to come, Mitsubishi's decision also builds on the extensive research capacity existing in Adelaide's science, defence and tertiary education sectors, creating work in associated industries.

Mitsubishi's investment - based on its acceptance of an $85 million package offered by the South Australian and Federal governments – will result in the production of two new models at its Adelaide plant and the building of an international R&D centre of excellence.

As well as creating 900 new jobs, the new centre will add value to the Australian automotive industry. It is expected to focus on the important area of vehicle safety. The centre has the potential to add value to the Australian automotive industry as a whole. It will develop new exportable design and engineering skills.

The Mitsubishi investment is one of the largest manufacturing investment projects in the State's history. In total, the investment will support more than 4,000 jobs, new and old, in car production, automotive components and, now, automotive R&D.

In its submission to a recent Productivity Commission investigation into tariffs and assistance for the car industry, the SA Government estimated that SA's car industry - comprising two major manufacturers and 40 component suppliers - accounted for about one quarter of the state's manufacturing capacity and 2.4 per cent of its GDP.

The automotive industry in Australia has two areas of activity. One node is in Melbourne and the other has clustered around the big manufacturers in Adelaide, the Mitsubishi plants at Tonsley and Lonsdale and the Holden assembly plant at Elizabeth. The decision will bolster the competitive advantage of the SA and add to the long terms sustainability of employment and growth in the region.

12.15 Port River Expressway Project

Work on the first stage of the $131m infrastructure project began in July 2002. It will provide a major industrial and commercial transport corridor between the port and Adelaide city.

Work on the $57m Stage 1 of the project, is expected to be completed by August 2004. Stages 2 and 3, the road and rail bridges are expected to begin in January 2003.

The Port of Adelaide corridor is an important strategic route for South Australia. The corridor links directly with the National Highway to Perth and Darwin and the state's major port and rail terminals at the Port of Adelaide.

The Port located in Port Adelaide, is an important trade gateway for South Australia, particularly for exports of commodities such as grain, livestock, wine, citrus products chemicals and motor vehicles. Of course, the Port is a key gateway for imports including petroleum, fertilisers, iron and steel and motor vehicles.

The north-western area of Adelaide is a significant industrial centre and provides a link to port and rail terminals and a distribution center for the state. Major industries include Adelaide Brighton Cement, Pivot and the Australian Submarine Corporation.

The project will result in savings in travel time and travel costs resulting in operating cost savings. The improved freight access will not only reduce inefficiencies in the transport system, but will assist the Port Adelaide area to further develop tourism/visitor potential by reducing the impact of heavy road transport traffic on the amenity of the central business district.

In the construction phase of the project employment generation is likely to be around 500. The benefits will culminate in increased employment from decreased inefficiencies and greater levels of wealth creation.

12.16 The Geraldton Port expansion

The WA government has announced the go ahead for the $103 million enhancement project for the Geraldton Port. Negotiations were concluded earlier this month with the signing of a $73 million dredging contract. The dredging is to start in October 2002.

The upgrade of the Port is important for regional economic development. Just like many other ports in Australia the current channel depth at the Port impedes the berthing of larger Panamax ships, which are becoming more frequently used in international freight movements. This problem results in either the exclusion of such vessels or there use but not fully laden. The result of this is increase costs to exporters and importers.

Total freight charges currently make up 35 per cent of total exports prices. This is a significant proportion of the products final price and impacts strongly on regional competitiveness.

The importance of the Port and this project is highlighted by the following statistics. The Port is Australia's second largest export grain terminal. It is also the closest terminal to the grain markets of Japan, South East Asia, and the Middle East. Other industries, which use the Port, are importers and exporters of bulk goods (fertiliser, mineral sands, etc). The mining industry with mineral exports account for 27 per cent of total trade throughput. Total imports, by comparison, represent 10 per cent of trade.

The reduction in costs will allow growth in these industries to continue. A recent study by KPMG estimates that the benefits from an expanded Port will result in an increase in grain production between 3 to 4 per cent per year. With like benefits accruing to other local industries, employment and wealth creation in the region will grow.

Not only will users of the Port benefit from more efficient port functions job creation and the flow on effects of a large-scale infrastructure project will significantly enhance the regional economy.

Another benefit of the project is the reclamation of land, which will be an impetus from a landscaped and urban design upgrade of the 'town beach' area. This increases the opportunity to site the proposed Marine Training Centre close to the ocean and able to access good quality marine water. This development will further enhance employment and tourism opportunities in the region.

12.17   Alice Springs to Darwin Railway and East Arm Port Development

Following many years of discussion and controversy, work commenced on the construction of the Alice Springs to Darwin railway in July 2001. The $1.23 billion project is one of the largest infrastructure developments ever undertaken in Australia and will provide substantial economic benefits to Australia and in particular, the South Australian & Northern Territory economies. Connecting to the Port of Darwin, the railway will create a new transport system linking the southern states of Australia with the fast-growing economies of Asia.

The project is expected to:

❑   Create 2000 direct jobs during construction (7,100 nationally)

❑   Increase NT GSP by $200 million and SA GSP by $360 million during construction

❑   Increase SA & NT GSP by about $3 billion each in the operational phase from 2003-2025

❑   Improve freight competitiveness

❑   Lead to a reduction in the demand for road maintenance

❑   Boost regional initiatives

❑   Lead to an increase in training and employment opportunities;

❑   Encourage tourism through the Ghan rail journey

Effective July 2002, 1273 people had been employed (789 from NT, 139 from SA), $758 million of direct contracts had been awarded ($433m in NT, $297m in SA), 697,000 sleepers had been produced (out of a target of 2 million) and 383 km of track had been laid.

In conjunction with the railway development, the construction of new port facilities in Darwin at East Arm, has been continuing. Together, these 2 projects will leverage Darwin's geographical position and enhance its potential as a major transport, supply and service hub for trade with Asia.

Stage 1 of the port commenced construction in 1994 and works included:

❑   Access road upgrade

❑   Earthworks and bund walls

❑   Wharf construction and dredging

❑   Services, pavements and buildings

❑   Navigation aids; and

❑   Cargo transit shed and associated hardstand and services

The wharf during stage 1 was constructed to accommodate bulk carriers, oil tankers, live cattle exports, rig tender service vessels and general cargo vessels in all tidal conditions.

Following on from the completion of Stage 1 in Feb 2000, stage 2 commenced with an estimated cost of $100m and is expected to be completed toward the end of 2003. The focus of Stage 2 will be:

❑   Container Terminal and Railway Embankment

❑   Wharf Extension and Bulk Liquids Berth

❑   Oil Transfer Pipelines and Equipment; and

❑   Relocation of the Container Crane

Together with the completion of the Adelaide to Darwin railway, the new East Arm wharf will be an important component of the new multi-modal transport hub of Darwin. The new port will provide Australia's importers and exporters with an efficient, viable alternative for the transportation of goods.

12.18   NSW Action Plan for Transport 2010

The Parramatta rail link is the cornerstone of the NSW Governments wider transport initiative, 'Action for Transport 2010' which is a blueprint for transport infrastructure projects to be implemented throughout the state up until 2010. The plan, which is the largest transport improvement program in the state's history, will focus principally on the western, south-western and north-western areas due to the rapid employment and population growth in these regions. The objectives include:

❑   The construction of new rail, light rail, rapid bus only transitways and roadways

❑   Improving transport facilities to poorly serviced regions and contribute to local employment opportunities

❑   Reducing freight and transport costs

❑   Reducing the dependency on cars

❑   Improving air quality and reducing greenhouse gas emissions

These objectives will be met by:

❑   Allocating $300 million each year to fund new rail projects between 1998 and 2010

❑   Allocating in excess of $2 billion for rail maintenance in rural NSW. Major rail improvements are planned for the main North Coast line and the main Southern line while some disused lines will be considered for re-introduction

❑   Allocating $2 billion to the Rebuilding Country Roads Program to improve transport links between the farm and major regional centres. Roads will be strengthened, widened, sealed and several bridges will be refurbished

❑   Constructing integrated rail/bus interchanges to encourage the use of cross-transport travel

□   Inter-modal terminals at Casino, Grafton & Coffs Harbour will be made attractive to North Coast businesses & farmers

The NSW Governments detailed transport plan is an investment in the future of the states' economy. It is designed to improve the functioning of the economy and ensure it continues to adapt to the increasing stresses associated with large population increases in major centres and to support rural regions. New transport initiatives including the Parramatta Rail Link, the Western Sydney Orbital, M5 East Freeway and new transit ways are needed to cater for Sydney's expansion and in particular the expansion of Greater Western Sydney. The upgrading of railways throughout regional NSW is of paramount importance to encouraging tourism and improving efficiencies in the transportation of agricultural commodities.

The centrepiece of the Action Plan, the Parramatta Rail Link is detailed below.

12.19   Parramatta Rail Link

A new 28 km railway linking Sydney's North Shore with Parramatta (via Epping) was approved in February 2002 with preliminary construction works commencing in the latter half of the year. The railway, costing $1.4 billion is the NSW Governments largest publicly funded infrastructure project and forms part of the Carr Governments larger 10-year 'Action for Transport' initiative. The line will form part of the existing CityRail network with the Chatswood to Epping section of the route due to be opened in mid-2008. The full project is expected to be completed in 2010.

The rail link will involve not only the construction of new lines but also the substantial upgrading or rebuilding of existing track and stations. Parramatta and Epping stations will have additional underground platforms constructed while five new stations are planned – Rosehill/Camellia, Macquarie University, Macquarie Park, Delhi Road and the University of Technology. These will be built underground, and be similar in design to the new Olympic Park station, built for the 2000 Olympic Games. Due to the nature of the terrain and the high population density of the region, approximately 70 per cent of the route will be underground.

The project is expected to provide substantial economic, social and environmental benefits to metropolitan Sydney including:

□   Direct rail access to the major employment and educational centres at Macquarie Park and North Ryde

□   Facilitate access to the major business and employment centres of Parramatta, North Ryde and Chatswood for Central Coast and Western Suburbs commuters

□   Reducing travel times between major suburban centres as the use of public transport becomes an increasingly viable source of transportation.

□   Encouraging the design and development of state of the art rolling stock

□   Creating more than 1,000 direct and 4,000 indirect construction jobs.

The Parramatta Rail Link is the first significant rail infrastructure program to be built in Sydney since the 1920's. It is expected to generate significant economic benefits for the major Commercial centres of Chatswood and Parramatta as well as promote growth and employment opportunities along the route. In excess of 11 million new rail trips or 20,000 new passengers per day are forecast for the CityRail network.

12.20 Tasmanian Economic Initiatives

During the 1990's, the Tasmanian economy performed relatively poorly in comparison to the mainland, achieving growth rates approximately half those of the mainland states. This resulted in declining employment opportunities, higher than average unemployment rates, lower household disposable incomes (20% lower than the national average by the 2000-2001 financial year) and net emigration. Since 1999-00 and in particular this past year, there has been am impressive turnaround in the performance of the Tasmanian economy as it responded to the Government Industry Development Plan, an expansionary 2000-01 budget (including a major infrastructure fund) and significant tax cuts.

The following major infrastructure projects will add further impetus to the Tasmanian economy.

Tasmanian Gas Pipeline

The Tasmanian natural gas project will feature a 753 km pipeline that will bring natural gas from Victoria to Tasmania for the first time. The pipeline, which commenced in January 2002 starts at Longford and enters the Victorian coastline at Seaspray. It then travels approximately 300km across Bass Strait and enters Tasmania at Five Mile Bluff, north east of George Town. From there it travels to Westwood (slightly west of Launceston) and splits in two. The northern pipeline extends to Port Latta and the southern section extends to Bridgewater, on the outskirts of Hobart. By September 2002, in excess of 90% of the $400 million project had been completed. Natural gas is now flowing into Tasmania, down to the aluminium smelter at Bell Bay and Hobart, while the Port Latta section should be completed by the end of this year.

In addition to the 900 direct jobs created during the construction phase, the pipeline will be a catalyst for regional growth and employment in the downstream manufacturing and processing industries in Tasmania. It will also create opportunities for natural gas distribution to residential and commercial customers in the state.

BassLink

Basslink is a $500 million Australian energy initiative that will allow the trade of electricity between Tasmania and the mainland, and allow Tasmania to enter the National Electricity Market (NEM). The link involves the connection via cables running along the seabed, which allows the two-way flow of electricity. This is a similar type project to the France-England power link across the Channel.

The project will:

❑ Enhance security of supply on both sides of Bass Strait; protecting Tasmania against the risk of drought and protecting Victoria and southern states against the forecast shortage of power as forecast by NEMCO for 2002/03

❑ Increase mainland Australia's access to renewable energy sources, mainly Tasmanian hydro electricity and in the future wind generated power.

❑ Allow Victoria and other States that are part of the NEM, to export electricity to Tasmania

❑ Give Impetus for additional wind power developments in Tasmania, enabling Tasmania to export renewable wind-generated electricity to other States: and

❑ Also include a fibre optic telecommunications cable link between Tasmania and mainland Australia. This link will promote greater competition and capacity in the telecommunications sector.

Both the Tasmanian & Victorian Governments have given their approval for the scheme. Once Commonwealth approval is obtained the project will commence toward the end of 2002 and be completed during 2005.

Other projects in Tasmania include the following.

Bass Strait Ferries

The Tasmanian Government recently took possession of 2 new monohull ferries to replace the ageing Spirit of Tasmania on the Devonport to Melbourne crossing. The new ships can carry more passengers in greater comfort and will make the Bass Strait crossing 3 hours faster. At a total cost of $300 million, the Government is confident the new ferries will encourage additional tourists to the island.

Wind Power

Hydro Tasmania announced in February 2002 that it would proceed with Stage Two of the 130 megawatt Woolnorth wind farm project. The Bluff Point Development, a $200 million project includes the order of 128 megawatts of wind turbines that will be manufactured in Tasmania. The Danish manufacturer, Vestas has committed to establishing a manufacturing facility employing around 50 people. Overall, the Wind Farm project has provided a considerable boost to the North-West region and will ensure Tasmania remains at the forefront of wind technology in the Asia-Pacific region.

The Tasmanian economy has shown considerable improvement in the early years of the 21st century when compared to the underperformance during the 1990's. There has been a renewed sense of optimism in the outlook for the island as evidenced by high levels of consumer & business confidence, net population growth, declining unemployment and rising house prices. In addition to the $300 million of tourist related projects currently in progress, the major infrastructure projects outlined above are further proof of an expanding and buoyant economy. The introduction of natural gas will further spark industry development and enhance the state's attractiveness to businesses requiring significant quantities of energy.

References

John Holland Construction & Engineering Pty Ltd Minerals and resources NSW

http://www.Martincodax.com.au

Department of infrastructure, Victoria

NT Government web site

NSW Government web site

2001 Industry Development Plan, Tasmanian Government Publication

Department of Premier and Cabinet Victoria

Financial Review (various editions)

http://www.duke-energy.com.au

http://www.premier.tas.gov.au

http://www.railway-technology.com/projects/parramata/index.html

http://www.treasury.tas.gov.au

http://www.gws.org.au/transport.htm

http://www.hydro.com.au/newsroom/mediareleases/2002/13September2002_100.html

http://www.raillink.nsw.gov.au/Construction/constmenu.htm

http://www.tourismtasmania.com.au/research/bes/2002jul_indreport04.htm

13.   Environmental Information for Sustainable Regional Development

Agricultural production directly contributes 2.7% to the GDP but utilises most of the land mass of Australia. Extensive land degradation is therefore a significant issue if only because of the limited funding available for remediation. The ability to fund remediation from profits deriving directly from the land use is severely limited across much of the country.

Another issue arising with rural land use is the large fluctuations in production and profitability associated with the large fluctuations in climate. Australia is again experiencing drought across large areas and, while considerable advances have been made in preparing for such inevitable occurrences, the drought will have a significant adverse impact on Australia's regional communities.

Drought and land degradation are inextricably linked as landholders attempt to survive by gleaning the last of their natural resources. The damage done during a few years of drought may take decades to repair as no community has the funds needed to remediate such extensive areas

There is a need to address the long term sustainability of agricultural production systems to ensure the viability of regional communities. This need has been widely recognised. The issue is how. How, within the resources practically available, can support be provided to regional communities to allow them to develop and prosper?

Most past attempts at reversing environmental degradation have focused on environmental repair. Funds are expended in 'repairing' damage. While some successes have accrued the efforts have generally provided limited benefit. This situation is to be expected as the funds have been seen as an investment in the environment rather than in the community. The environment does not provide an ongoing return and is therefore a sink for funds. The community has the potential to produce a profit as well as improve the environment and can therefore provide the ongoing investments needed to achieve continuous improvement in performance.

The linking of the community viability and profitability with the environment represents the key new initiative that has the potential to produce large environmental as well as social benefits. The Pratt Water Project represents one such initiative whereby the efficient and reliable delivery of water is seen as a means of increasing profitability and of 'drought proofing' the country. The greater efficiency of water use that drives this initiative will inevitably provide environmental benefits.

Implementation of the Pratt Water Initiative requires identification of new opportunities for agricultural development away from the existing major areas. There is a need to identify the most suitable areas by way of factors such as climate and soils for new crops identified as having good export potential. Such requirements are addressed by providing detailed information on the natural resources that affect regional land use and agricultural production.

The following uses a 'case study' to illustrate the development and provision of natural resource information needed to identify new business opportunities, improve profitability of existing enterprises, and improve environmental outcomes. The provision of fundamental information on the natural resource assets is used to empower communities, allowing them to make decisions that promote their future. The 'case study' has been compiled from information developed for adjoining councils, and identifies the ongoing developmental and collaborative nature of the activities. It is a process of building the capability of rural communities to address their needs as well as the environment.

The case study represents an information based approach to land use and management. Implementation is via community groups such as councils and catchment management groups and authorities. The grouping of councils to address a large region is particularly effective as modern technology is most cost-efficient across large regions. Also, councils have the need and authority to apply the information in planning to address compliance

The full process involves the four stages of:

(i)   Development of baseline information;

(ii)   Development of user capacity to manipulate and apply the information;

(iii)   Monitoring to evaluate performance and report on outcomes;

(iv)   Provision of training to promote application.

This process is implemented in stages to tailor outcomes to specific user needs. For example, the detailed information provided is used to improve management of individual properties. Training is then directed to support individual land managers.

Benefits of application of the environmental information to councils are:

(i)   Improved planning;

(ii)   Reduced risk (compliance and duty of care);

(iii)   Identification of development opportunities;

(iv)   Reduced costs ;

(v)   Improved environmental outcomes;

(vi)   Ability to attract investment.

Potential additional benefits of the information to landholders include:

(i)   Improved productivity;

(ii)   Improved profitability;

(iii)   Improved property value.

Overall, the information empowers the community to make decisions that best serve its interests.

The potential to reduce costs is evidenced by a study undertaken for the Cootamundra Regional Development Council, which identified suitable sites for the development of intensive agriculture. Potential risks of more intensive land use include salinity hence salinity was mapped across the shire. This identified salt movement along geological structures such as fractures and fault lines. A 15km section of the Olympic Highway had been built on one of these salinity pathways with the consequence of major annual costs for road repairs. The situation is illustrated by the words of the Ken Trethewey from the Cootamundra Shire:

> *Council repaired this section of road for many years without ever being able to fully accept that runoff or recharge from the surrounding hills could have produced the volumes of water travelling along the straight. Many theories were considered to try and explain the problem in an attempt to justify and be reconciled to the constant cost of repairs. These included such things as blaming the Railways for damming the flows, blaming the farmers for clearing the land, blaming the settlers for placing the road in the valley, blaming anyone or anything. In real terms a pointless exercise other than to allow Council to deal with the frustration of an inherited and essentially natural process of salt movement.*

The cost of developing detailed and reliable baseline information can be less than the cost savings flowing from understanding the reason for one adverse impact alone. The same applies with risk, as use of the most advanced technologies to develop reliable information reduces the risk of litigation by improving decisions and by demonstrating attention to duty of care.

13.1   Funding

Substantial funds have been identified by governments as available for addressing environmental issues. These have previously mainly been expended by Landcare or Catchment Management groups under the direction or influence of State and Territory agencies. However, this is changing with the Commonwealth identifying that NHT funds can be directed towards regional development. Moreover, there has been a recent direction that Commonwealth funds to compensate councils for potential effects of the competitive neutrality must be disbursed through councils.

Overall there is more than $3 billion of Commonwealth funds earmarked to address regional environmental and developmental issues, and much of this is matched by the States and Territories. The issue is not a lack of funds but the targeting of funds to provide regional benefit. Achieving the necessary targeting depends on a proactive approach by councils. It requires that councils group together to form viable units with agreed strategies and objectives. The key strategy that will provide immediate gains and ongoing benefits is the development of a reliable and detailed natural resource information base.

The sources of ongoing benefits from the development of such information are diverse and include risk mitigation, identification of development opportunities, and the addressing of compliance. However, the main benefits may simply derive from the empowerment of local communities. The information provides the basis for communities to identify and determine the directions and opportunities that address their needs.

13.2   Case Study

The study of Cootamundra and surrounding shires provides a case example that has involved collection of considerable baseline information, has included education, and is now progressing to the development of their capacity to manipulate and apply the information. Information from the adjacent Harden Shire is also presented to further illustrate the scope of information that can be provided. The activities are continuing in the adjacent Coolamon, Junee and Temora Shires.

The initial Cootamundra Study was directed at promoting regional development. The objective was to identify areas within the shire suitable for more intensive development that would improve profitability without compromising environmental sustainability. The study therefore examined potential alternative land uses as well as the capacity of the land to support them. It also included community consultation.

The study identified areas that are particularly suitable for intensive, high profit agriculture. Some impacts of the study are immediate, as evidenced by a block with a reserve of $5.5 million selling for $7.5 million. Another is the identification of the cause for the annual failure of a stretch of main highway that over the years had cost several hundred thousands of dollars in repairs. Other benefits will take time to develop. For example, the region has a high potential for viticulture but major development depends on substantial investment into a major local winery.

The baseline information is presented as maps as this is the only means of providing the high level of detail required for management across large regions. The information is developed and stored as digital files, and presented in whichever format is most suitable (e.g. hardcopy).

The digital mapping allows storage and manipulation of the information in computer based Geographic Information Systems (GIS). This provides great efficiencies in accessing and applying the information. It also allows ready integration with other information routinely used by councils such as cadastre.

Accurate mapping in digital format provides further benefits in allowing comparison of results over time. It provides a highly efficient means of monitoring performance, and thereby of addressing compliance and improving performance.

13.3   Climate

The first maps address climate as this largely determines the suitability of areas for particular crops. Climate analysis is highly effective in identifying potential new crops and reducing their development risks. For example, the potential for new grape varieties can be evaluated without the need for planting. The identification of frost risk identifies which areas should be avoided.

The climate information is largely derived from climate surfaces produced by the Bureau of Meteorology, but additional processing is required to derive information directly applicable to regional development. Frost risk is derived by comparing the incidence of frost with the number of days when temperatures fall below zero. The potential for different grape varieties is identified by modeling the effect of temperature on the development of grape vines. Optimal conditions arise when there is sufficient heat over the growing season to produce mature fruit but when the grapes mature under cool conditions.

13.4   Land Cover/Land Use

Land cover/land use maps derived from satellite imagery provide basic information needed for planning and a cost-effective means of performance monitoring. The maps are used for applications such as monitoring clearing of native vegetation and mapping the extent and level of bare soil. They also provide the best basis for mapping biodiversity constraints such as the distribution of plant species and communities.

These maps are produced by numerical analysis of satellite imagery. The satellite imagery is routinely obtained and the information is therefore current. Satellite imagery is very cheap on a unit area basis and the costs are further limited by the use of numerical analysis to produce results. The numerical analysis is objective, allowing comparison of results over time. Satellite imagery provides a highly cost-effective means of performance monitoring.

Applications of land cover maps in land management include mapping the extent of waterlogging, mapping the distribution of crops, and mapping variations in crop performance.

13.5   Soil Properties

Knowledge of soil properties is a basic requirement in land management as soils are the basic land resource utilised in all forms of development. Issues addressed include agriculture, road and building construction and waste disposal, solid and liquid.   The soil property information is needed across broad regions to allow for effective planning but a high level of detail is required to ensure effective management.

The soil property information provided includes basic information such as the texture, pH and salinity of the soil horizons. This information can readily be interpreted by land managers and used to improve production and avoid adverse environmental outcomes. The ability to provide paddock level

detail across large regions is a key to the success of this technology in delivering benefits to land users.

Interpretation of soil property information for Cootamundra included identifying sites with soils that are most suitable for developments such as viticulture, and intensive cattle lots. It also identified areas of high salinity and salinity pathways. In identifying the reasons for adverse salinity, the information allows avoidance of adverse impacts with new developments and the effective remediation of existing impacts.

13.6   Water

Water is a key constraint in the Australian landscape that is becoming a significant issue. Analyses of natural resource information allow identification of potential surface water yields and the prospectivity for groundwater. The potential for accessing groundwater is assessed by analysis of geophysical data, coupled with examination of satellite imagery and information on existing bores. Use of the geophysical information, together with ground observations, increases the chance of success in bore siting by identifying the most prospective locations.

13.7   Climate Maps

As identified in the main report, the capability exists to map diverse aspects of climate such as rainfall, potential water use and frost risk. Such information is particularly useful for addressing broad regional constraints and identifies the basis for the main differences in the productive potential of regions.

The maps below identify more detailed information that can be provided for regions. This represents the form of information needed to identify the opportunities for new enterprises, and associated risks from factors such as frost.

13.8   Cold Air Drainage

The map on cold air drainage identifies how the regional susceptibility to frost is moderated by the topography. Cold air draining from the hills greatly increases the frost risk where it accumulates on the flats.

13.9   Homoclimes

The climate information can be used to identify the suitability of a regional climate for new crops. This is achieved by comparing climatic attributes of areas where the crops are known to perform well with the climate in the region of interest. The map below identifies the suitability of the Cootamundra climate for cherries.

13.10   Plant Phasic Development – Grape Maturation Dates

A more detailed evaluation of crop performance can be obtained by analysing the constraints imposed by the climate on plant development. The example for grape vines below identifies the maturation dates for late mid season variety grapes. Vines maturing too early have poor quality fruit. Vines 'maturing' too late do not have sufficient sugar for the production of quality wine. Such information allows selection of optimum varieties for planting as well as the optimum climates for wine production.

Cold Air Drainage and Frost Prone Areas
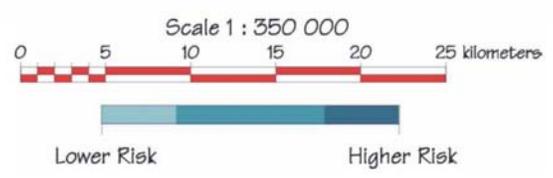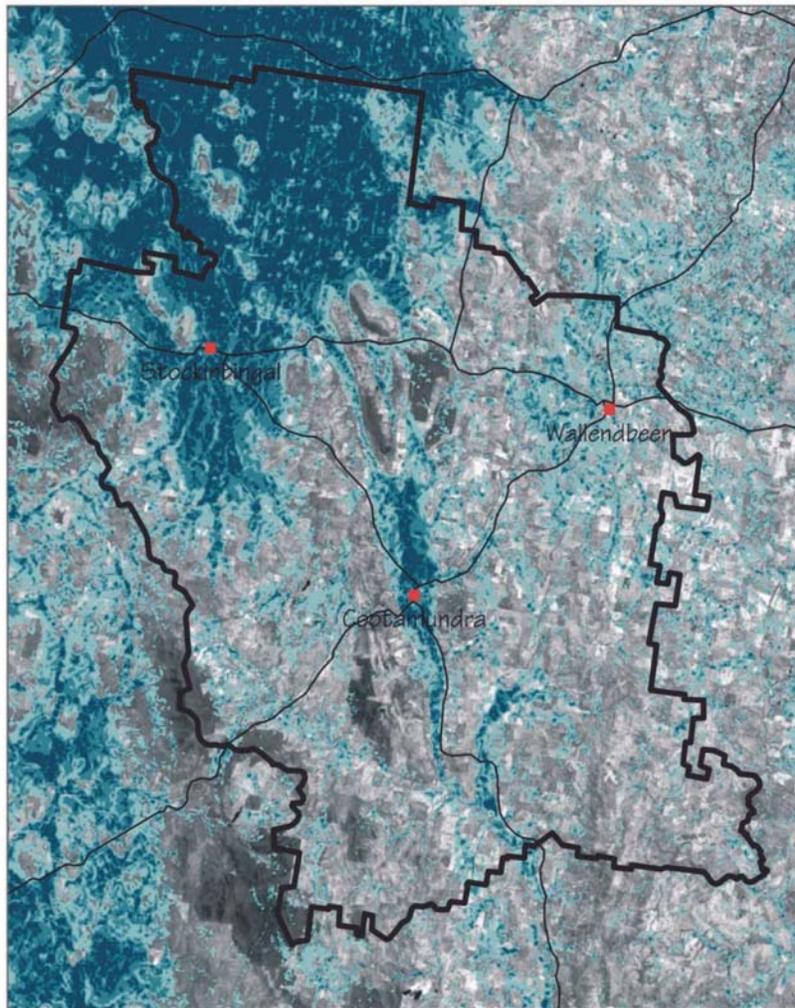
Scale 1 : 350 000

Lower Risk   Higher Risk

Map prepared by Mitchell Resource Intelligence
Pty Ltd (MRI), September 2002 using TNTmips
(GIS).

Homoclime for Cherries, Cootamundra Shire, NSW

Scale 1 : 350 000

0   5   10   15   20   25 kilometers
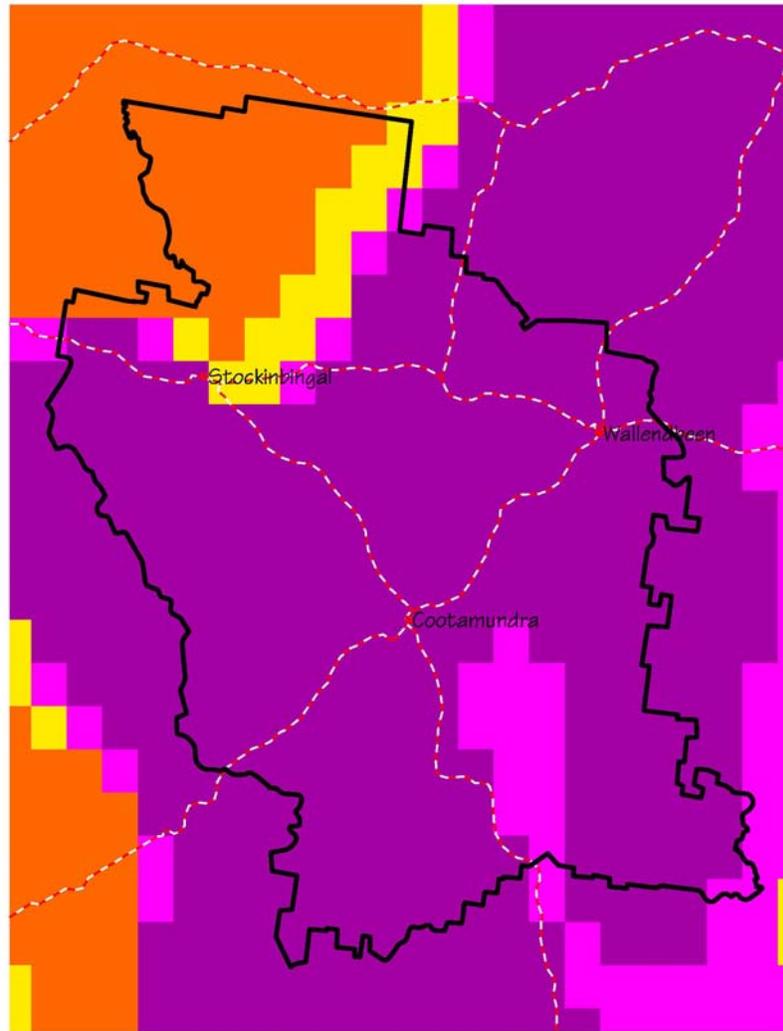
Homoclime Map for Cherries
Cootamundra Shire, NSW
Map derived from Bureau of Meterology
CLimate Data
Prepared by Mitchell Resource Intelligence
Pty Ltd (MRI), September 2002
using TNTmips (GIS)

Matching climate
Near matching climate
Very similar climate
Many climate similarities
Similar climate
Some climate similarities

Maturity Dates for Late Midseason Grape Varieties

(Shiraz, Cabernet Sauvignon and Riesling)

Stockinbingal

Wallendbeen
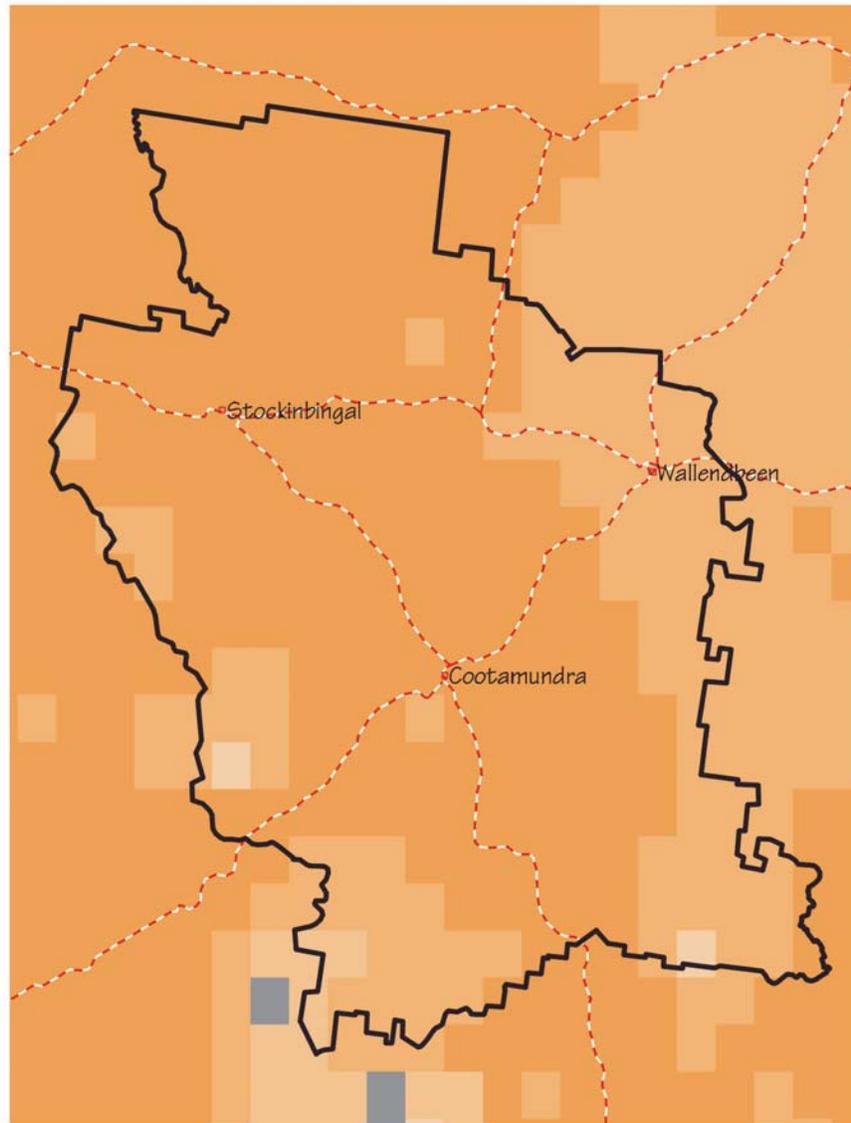
Cootamundra

Scale 1 : 350 000

0   5   10   15   20   25 kilometers

Maturity Dates for Late Mid Season Grape Varieties
which require 1250 EHDD to reach ripeness
Cootamundra Shire, NSW
Calculations based on algorithims written by
John Gladstones using climnate data from
the Bureau of Meterology
Map prepared by Mitchell Resource Intelligence
Pty Ltd (MRI) September 2002,
uisng TNTmips (GIS)

	10 Mar - 17 Mar
	17 Mar - 24 Mar
	24 Mar - 31 Mar
	31 Mar - 7 Apr
	7 Apr - 14 Apr
	14 Apr - 21 Apr
	21 Apr - 28 Apr
	28 Apr and later

3.11   Landcover/Land Use

This map is derived from satellite imagery and shows the land cover in the Cootamundra Shire for October 1999. The landcover ranges from bare ground through crops and pasture to woodland and forest. The advantages of using satellite imagery include the spatial accuracy, objectivity, the ability to reliably compare changes over time and cost effectiveness. Satellite imagery provides the only effective means of monitoring land use and land condition.

The land cover information can be used to map vegetative features of particular importance. Examples from the Harden Shire include:

❑   Remnant woody vegetation

❑   Areas subject to waterlogging.

❑   Distribution of wheat and canola

❑   Condition (relative yield) of canola.

The information on crop yield allows identification of reasons for good or poor performance. For example, the information on canola allowed identification of the reason for failure of a number of crops. They were all planted late in the season.

Monitoring of areas of remnant woody vegetation and areas subject to waterlogging addresses compliance and environmental management issues. The capacity also exists to map native grasslands, as distinct to introduced pastures, where this similarly addresses compliance.

Total Area of Remnant Vegetation
in the Harden Shire
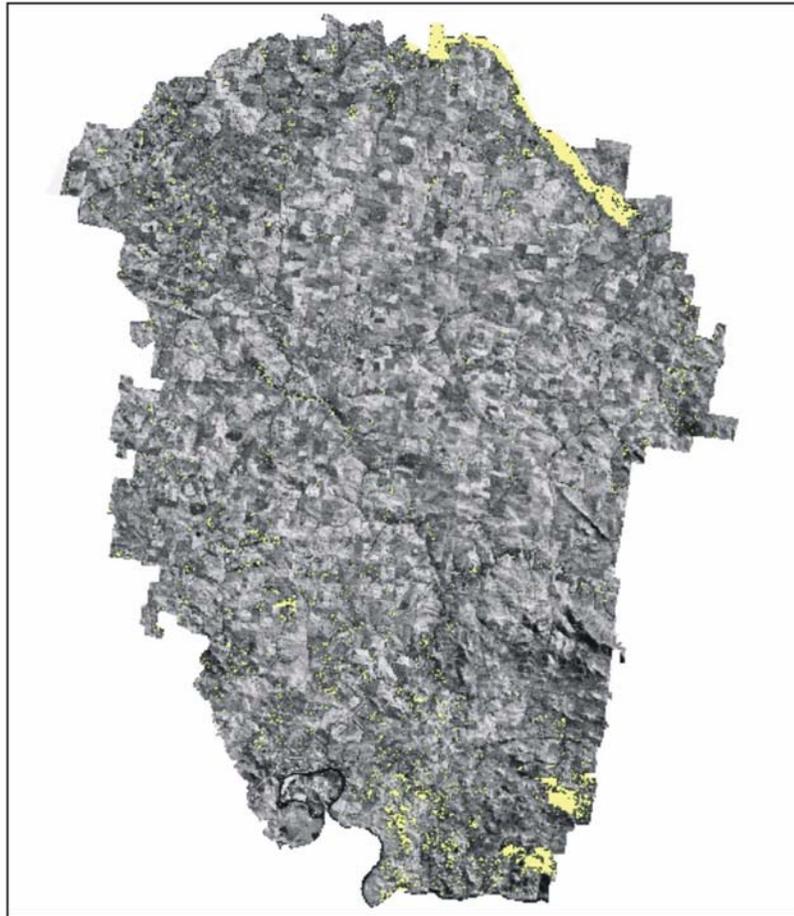
Remnant Vegetation

Map prepared by Mitchell Resource
Intelligence Pty Ltd (MRI), September
2002, using TNTmips (GIS).

Areas Subject to Waterlogging
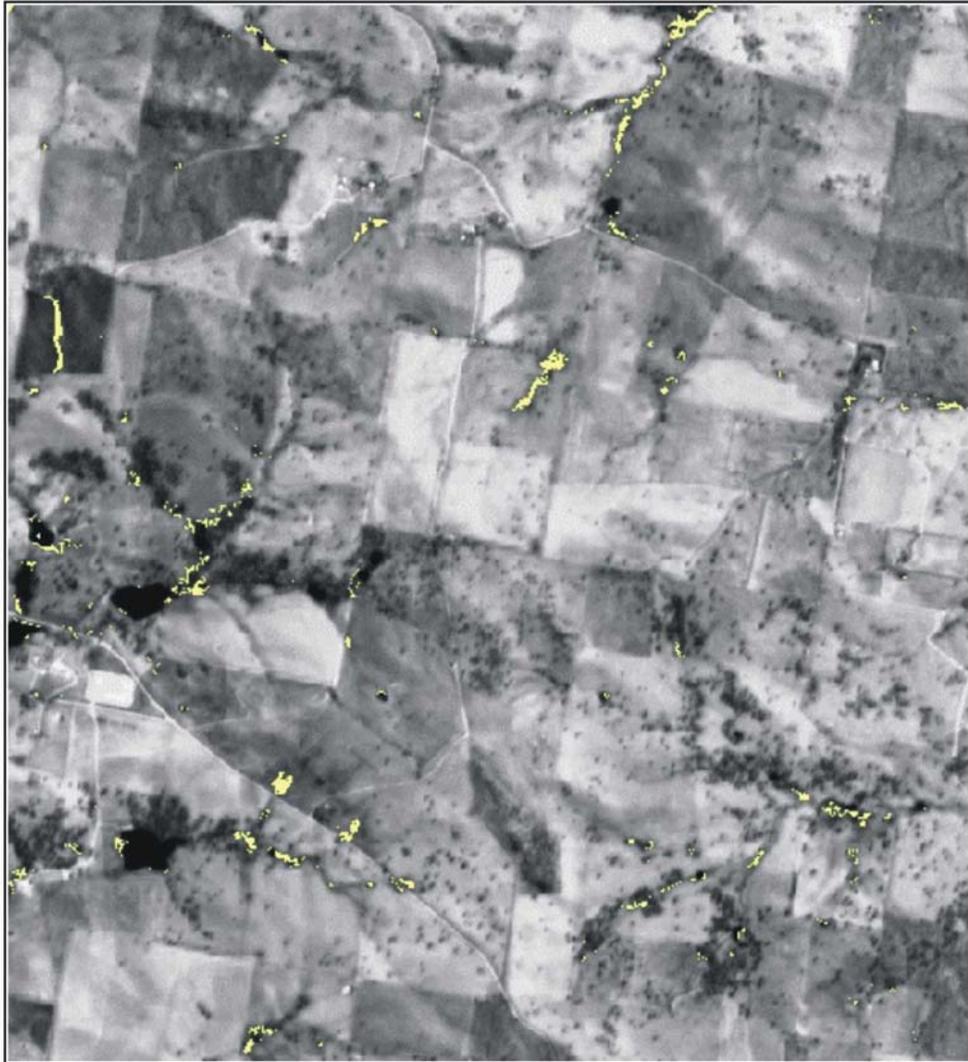
Areas of Waterlogging

Map prepared by Mitchell Resource Intelligence Pty
Ltd (MRI), September 2002 using TNTmips (GIS).

Distribution of Wheat and Canola - Harden Shire

Sparse or poor canola crop

Moderate ground cover consisting of grazing pasture and poorly performing crops)

Dense ground cover consisting of oats crops and wetter areas of triticale and wheat crops.

Moderate to dense groundcover consisting of improved pasture and wet areas late sown wheat, lucerne, triticale etc

Dense or very good canola

Dense ground cover consisting of wheat and triticale crops.

Very dense ground cover consisting of high yielding wheat and triticale crops.

Very dense ground cover consisting of very high yielding wheat and triticale crops.

Map prepared by Mitchell Resource
Intelligence Pty Ltd (MRI)
September 2002 using TNTmips (GIS)

Canola Distribution and Variation
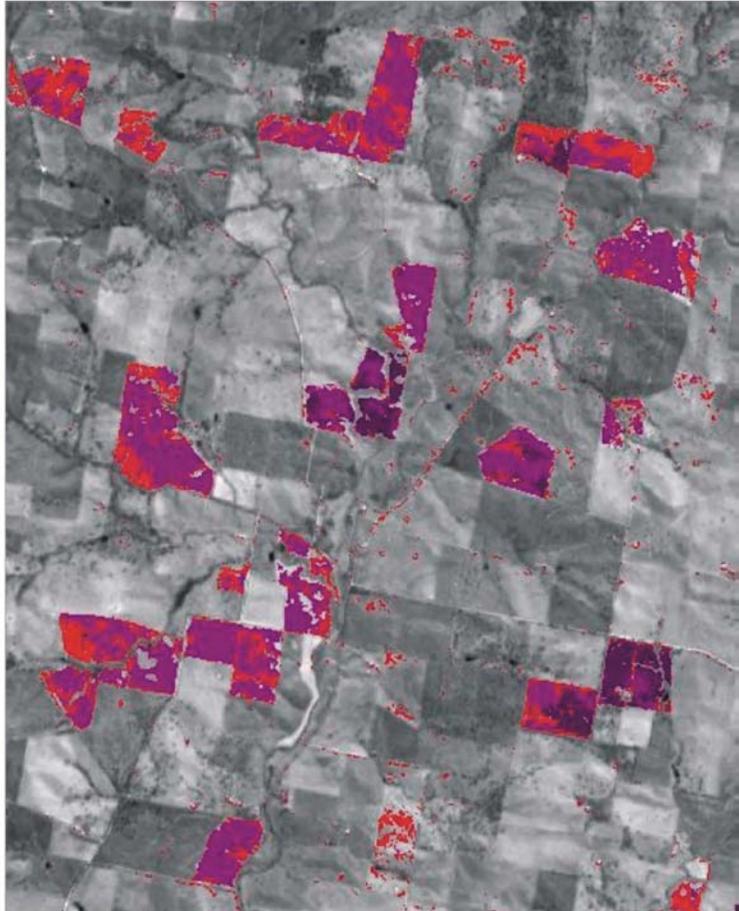
High canola yield
Moderately high canola yield
Low canola yield

Map prepared by Mitchell Resource Intelligence Pty Ltd (MRI), September 2002 using TNTmips (GIS).

13.12 Soil Property Mapping

Soil properties determine the suitability of the land for developments such as agriculture and construction.   Reliable soil property information is therefore critical to achieving sustainable development.

Soil property information is fundamental to the development of any new enterprise as it provides a means of improving profitability and reducing risk.

The soil property map below shows the distribution of soil texture for the B2 horizon across the Cootamundra Shire. This was produced using the SoilMap® technology. The information routinely provided includes texture, depth, pH, oxidation-reduction potential, and dispersibility for the A and B horizons.

The soil information in the maps below was derived from numerical analysis of airborne gamma-radiation data to map soil patterns, and field soil sampling and laboratory analysis to identify the soil properties associated with those patterns. The patterns are mapped using remotely sensed data, but the soil attributes are determined through detailed field sampling.

The soil property information can be used to identify the reasons for variations in crop performance within paddocks and for identifying suitable locations for new enterprises. For example, part of a paddock in the Harden Shire known to be unproductive was identified as having a different soil to the remainder of the paddock, where this was previously unknown.   The reasons for poor plant performance are now known to relate to a micro-nutrient deficiency.

Grapes are used as an example of using soil property information for site selection. Grapes will grow in a wide variety of soil types but only flourish within a defined range of soil properties. The site selection map below identifies areas having soils most suitable for viticulture based on the criteria:

❑   silty to medium clay B2 soil texture

❑   1.1 – 1.4 pe/pH ratio (favourability to plant roots, including fertility)

❑   Depth to B2 soil horizon greater than 50cm

❑   Minimal dispersibility

❑   Northerly aspect

7 Class Texture Feature Map (B2 Horizon)
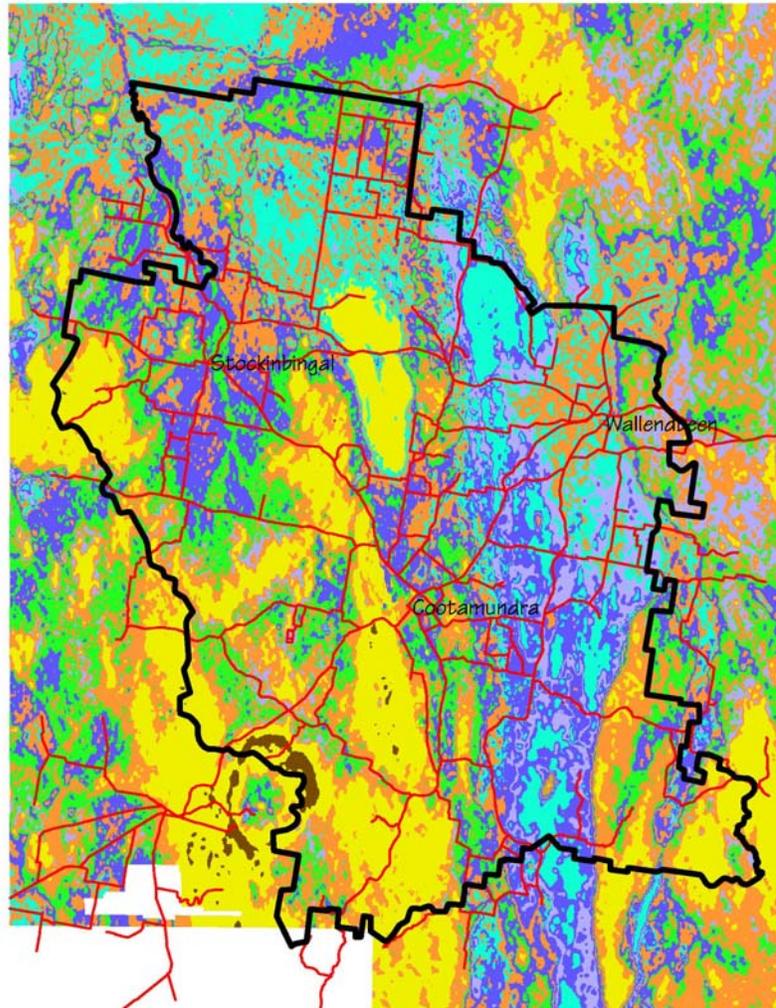
0   10   20 kilometers

Scale 1:350000

Rock

Sandy clays

Silty clays

Light clays

Light to medium clays

Medium clays

Medium to heavy clays

7 class texture feature map (B2 Horizon)
Cootamundra Shire Council Area, South West
Slopes, New South Wales. Derived from
radiometric data and field survey. Map
Prepared for Cootamundra Development
Corporation Ltd and Cootamundra Shire Council
by Mitchell Resource Intelligence Pty Ltd
(MRI), September 2002, using TNTmips (GIS).

Soil Usage
Site Selection Feature Map - Viticulture
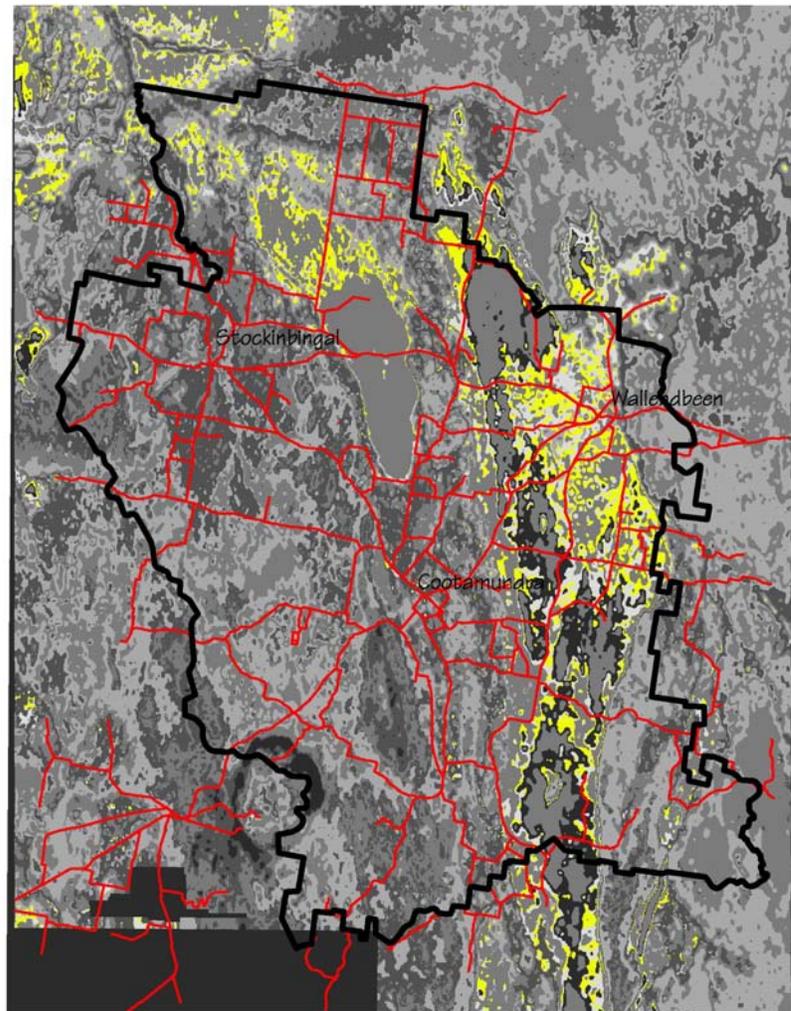
Legend

B2 Soils with:
Silty clay to medium clay
1.1 - 1.4 Pe/pH ratio
Depth to B2 > 50cm
Minimal dispersability
Northerly aspect

Gray scale
Dark ==> Lower suitability
Light ==> Higher suitability

Viticulture Site Selection Map
Map prepared by Mitchell Resource
Intelligence Pty Ltd (MRI)
September 2002, using TNTmips (GIS)

13.13   Salinity

The salinity information obtained with soil property mapping can be used to identify areas of salinity hazard and risk. It therefore provides an essential basis for decisions on mitigation and remediation.

Salinity Risk

A risk represents a potential for adverse change.   Salinity risk has been mapped for the Cootamundra Shire by identifying the soils with the highest salinity. These soils identify the potential for change as most of the high saline soils represent salinity pathways. This map depicts the radiometric class that displayed the highest specific electrical conductivity (salinity) in the B2 horizon based on lab analysis. In the southern part of Cootamundra Shire this soil class corresponds with geological fractures. In the northern part of the shire the class corresponds to alluvial processes such as prior streams.

Salinity Pathways

Sodium chloride is highly soluble and salt moves with water along preferred drainage lines or pathways. This map provides a zoom in (closer view) of the information in the salinity risk map.   It demonstrates how salt is moving between catchments along geological structures such as fractures and fault lines. Other pathways are accumulation at the break of slope around hills and adjacent to stream lines.

Infrastructure Risks for Salinity

This map identifies that a section of Olympic Way and the Melbourne – Sydney railway are located on a salinity pathway. Annual repair costs for this road were considerable and were encountered due to a lack of understanding of the cause of the problem. The mapping of salinity pathways demonstrated the cause and allowed effective remediation. The costs of salinity mapping are much less than expenditures on repairs to this section of road alone.

Salinity Risk Map - Cootamundra Shire
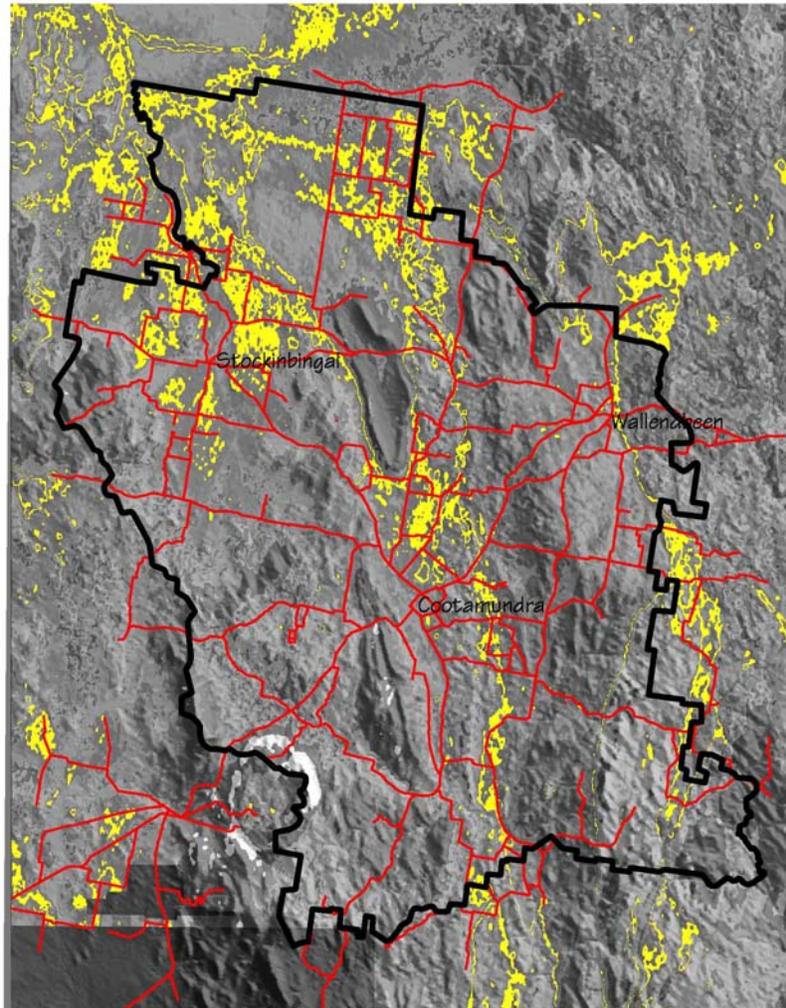
Legend

▮ B2 Soils with:
Ece values > 0.9 ds/m

Gray scale
Dark ==> Lower ECe
Light ==> Higher ECe

Salinity Rsik Map - Cootamundra Shire
Map prepared by Mitchell Resource
Intelligence Pty Ltd (MRI)
September 2002, using TNTmips (GIS)

Salinity Risk Map - Salt Pathways, Cootamundra Shire
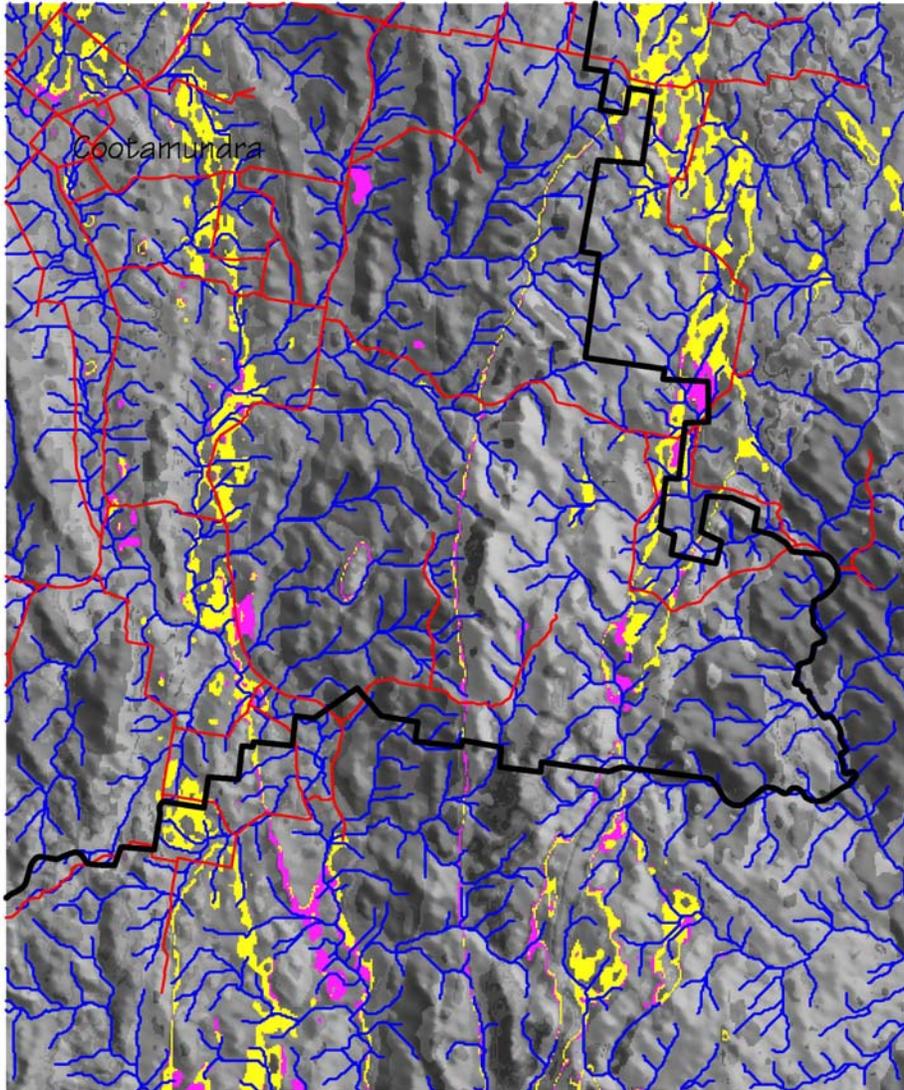
Cootamundra

Legend

B2 Soils with:
Ece values
> 0.9 ds/m

A2 Soils with:
ECe values
> 0.4 ds/m

Salinity Risk Map - Salt Pathways
Cootamundra Shire
Map prepared by Mitchell Resource
Intelligence Pty Ltd (MRI)
September 2002, using TNTmips (GIS)

Salt Risk - Paddock and Infrastructure Risks for Salinity
Cootamundra
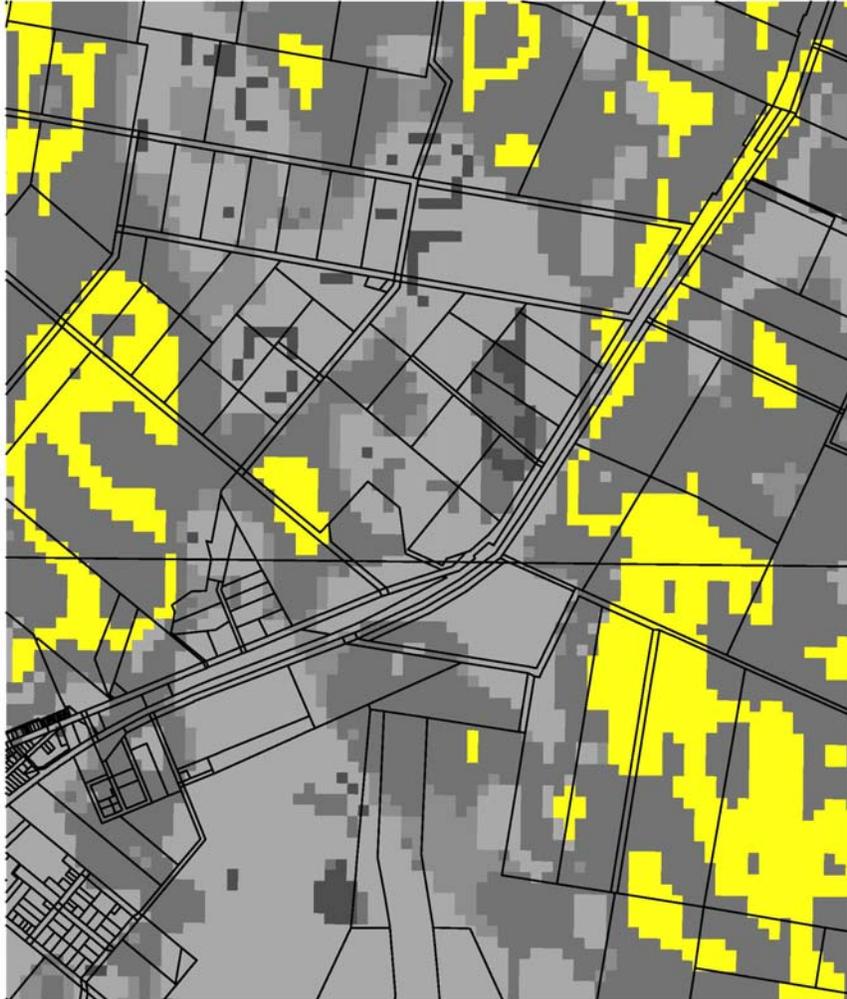
Legend

Soils with:
Ece values > 0.9 ds/m

Salinity Risk to Infrastructure - Cootamundra
Map prepared by Mitchell Resource
Intelligence Pty Ltd (MRI)
September 2002, using TNTmips (GIS)

13.14 Water Yield

Surface

Surface water yields can be evaluated by considering rainfall and catchment characteristics.

Groundwater

Ground water potential can be assessed using geophysical data such as airborne magnetics and radiometrics. This information is used to identify potential bore sites that are confirmed through field observation.

Groundwater exploration can be supported by analysing existing bores. The map below shows the number of bores in and around Cootamundra Shire licensed by the Department of Land and Water Conservation. Information on the bores includes flow rates and water quality, such as salinity.

Surface Water Catchment Yield
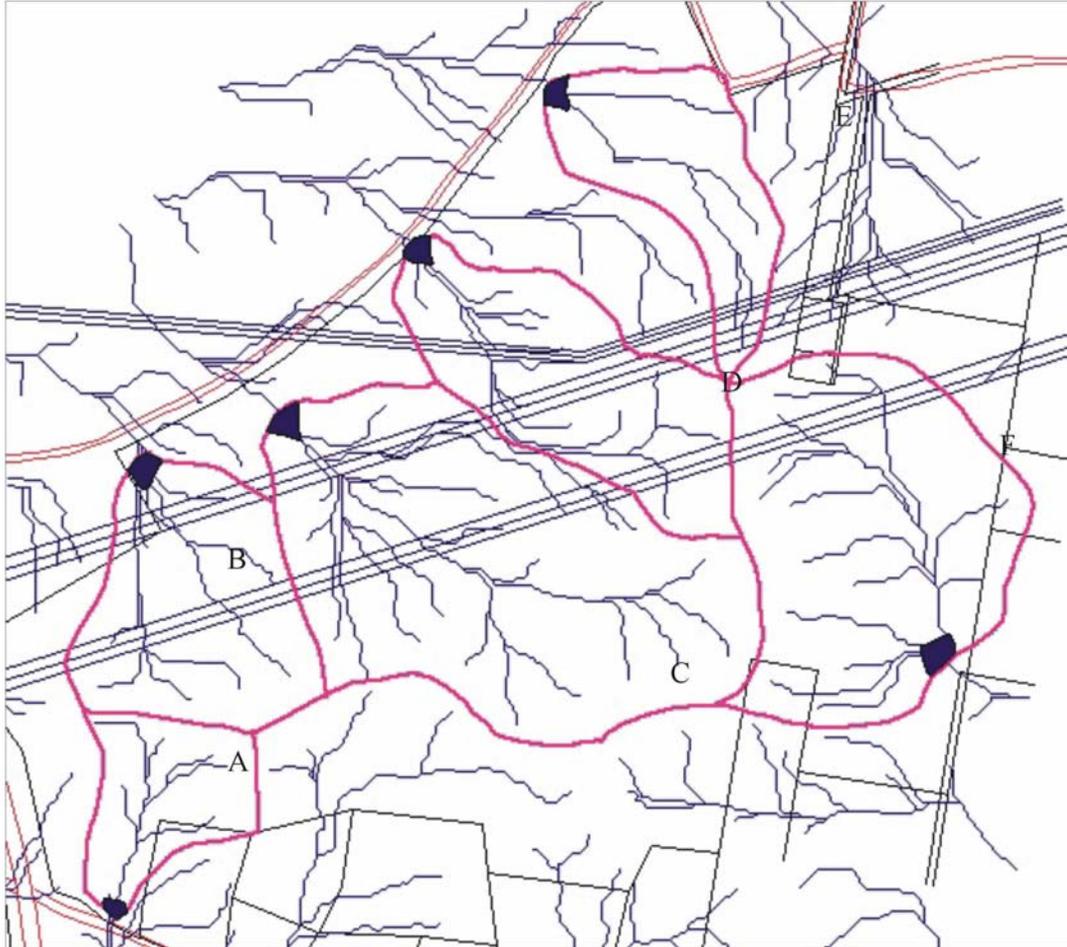
Area in Hectares (HA)

A= 18.0

B=3 7.7

C=9 8.3

D= 39.2

E = 26.1

F = 64.5

Map prepared by Mitchell Resource Intelligence Pty Ltd (MRI), September 2002, using TNTmips (GIS).

Distribution of Water Bores within the Cootamundra LGA
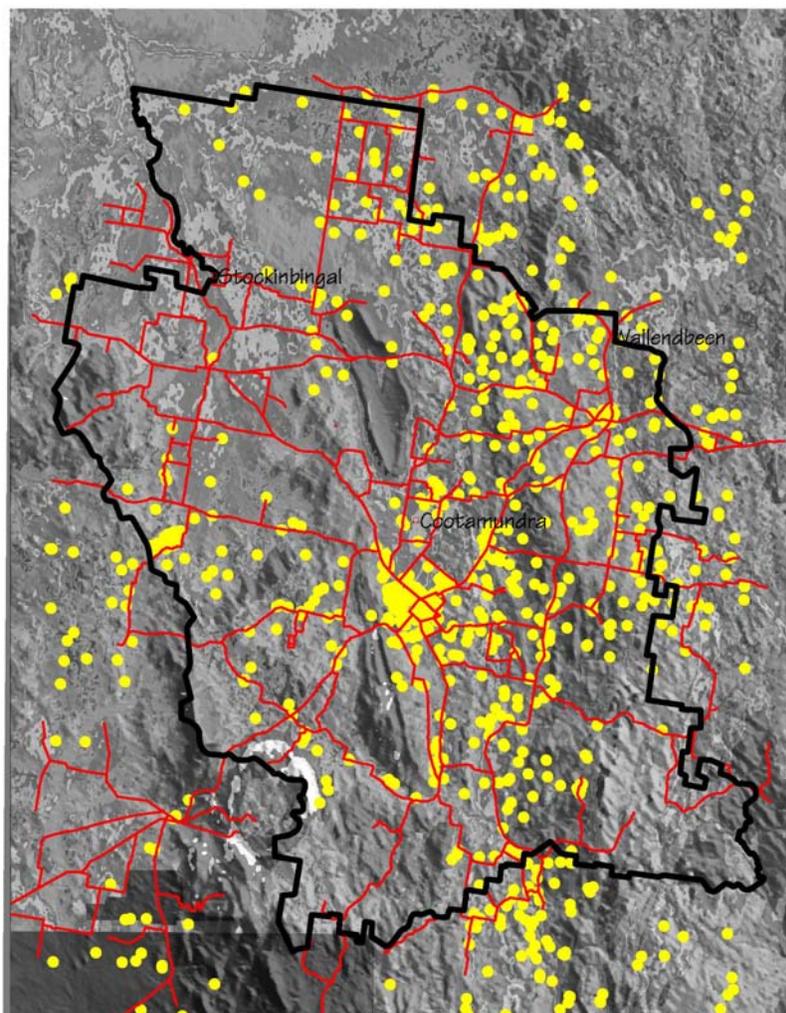
Bore Sites Map
Map prepared by Mitchell Resource
Intelligence Pty Ltd (MRI)
September 2002, using TNTmips (GIS)

13.15 MRI Map Notes

Explanatory Note

The maps presented here address basic biophysical constraints to agriculture and hence regional development across Australia. The maps were produced by averaging various climate factors across each region where the regions are composed of an aggregation of local governments. The regions are very large in some areas due to low population densities.

Given the large differences in the sizes of regions the index used for each factor in the maps is the most common value across the region. Statistically this is the mode.

Rainfall Water Inputs

Rainfall provides an example of using the most common value as the annual rainfall can vary greatly across a region. If the rainfall across **most** of the region is 600mm then the entire region will be indexed to 600mm. That is, the entire area is indexed as having a rainfall of 600mm even though some parts may have far more or less. The index shows the dominant factor in each region in all maps.

Regional Rainfall Zone Characteristics

Rainfall character of each region. The category of annual rain which covers the largest part of each region is shown. Map derived from Bureau of Meteorology data. Prepared by Mitchell Resource Intelligence Pty Ltd (MRI), September 2002, using TNTmips (GIS).

Majority of Region has Rainfall Characteristics of:
Arid - 0 to 400mm
Low Rainfall - 400 to 600mm
Intermediate Rainfall - 600 to 1000mm
High Rainfall - Over 1000mm

Rainfall Seasonality

This map shows which season delivers the majority of a region's rain. The general classifications are summer, winter and uniform. Summer dominance in rainfall reflects a tropical effect and includes monsoonal rain. Winter dominance is typical of temperate areas. Rainfall tends to be uniformly distributed across seasons in regions located between the tropical and temperate influences.

The significant difference between summer and winter dominance relates to the effectiveness of rainfall for soil water recharge and plant growth. Rainfall in northern areas falls in summer during periods for high potential evaporation and this reduces the water use efficiency of plants compared with winter dominant regions.

The potential negative aspect of winter dominance, or a Mediterranean climate of wet winter and dry summer, is illustrated by the winter dominated areas of mainland Australia. These areas, which include the WA Wheatbelt, VIC Mallee-Wimmera, Loddon, Goulburn and Ovens Hume, and NSW Murray and Murrumbidgee, are most susceptible to dryland salinity.

Tasmania is not as affected by dryland salinity due to the higher rainfall.

Dominant Rainfall Seasonality

Dominant rainfall seasonality, showing the season in which the majority of rainfall occurs for each region. Map derived from Bureau of Meteorology data. Prepared by Mitchell Resource Intelligence Pty Ltd (MRI), September 2002, using TNTmips (GIS).

Rain Season
Summer Dominant
Uniform
Winter Dominant
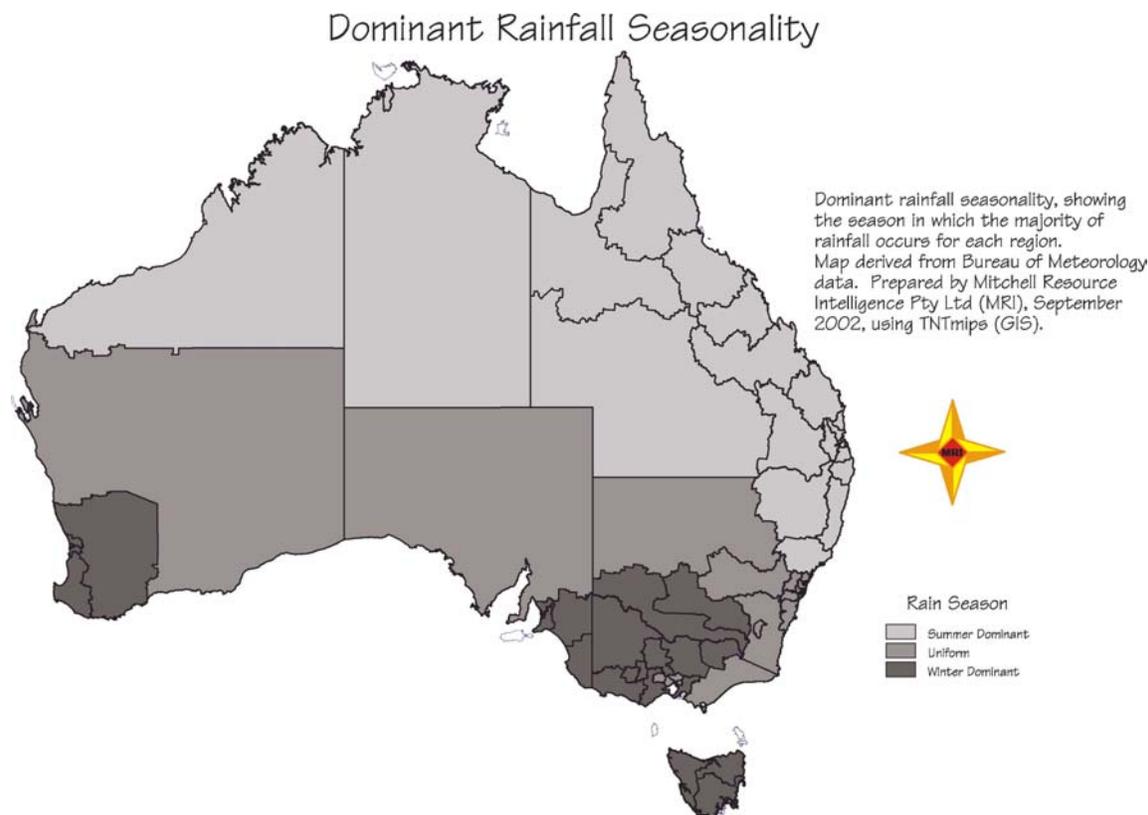
Rainfall variability

This map shows the variation in annual rainfall between years. It effectively identifies the level of variation between dry and wet years. Areas with low variability tend to be less effected by drought. High variability areas are those that experience large changes in annual rainfall and are prone to become drought effected.

The regions with low variability tend to be located in the south east and south west and reflect a combination of coastal influence and the reliability of the winter rainfall influences over southern Australia. All major agricultural production areas, except regions along the north Queensland coast, are in regions of low variability.

The regions with highest variability are located away from the coast between regions with winter and summer rainfall dominance. The QLD Pastoral region is the stand out region with high variability, however, the boundaries to the large regions of SA Eyre & Yorke, WA Gascoyne-Goldfields, WA Pilbara_Kimberly and NT Lingiari mask the extension of this zone across the centre of Australia

Rainfall Variability

Dominant rainfall variability, showing
how much total annual rainfall can change
between years for each region based on
30 year rainfall histories.
Map derived from Bureau of Meteorology
data. Prepared by Mitchell Resource
Intelligence Pty Ltd (MRI), September
2002, using TNTmips (GIS).

Variation in Annual Rainfall

Low
Moderate
High
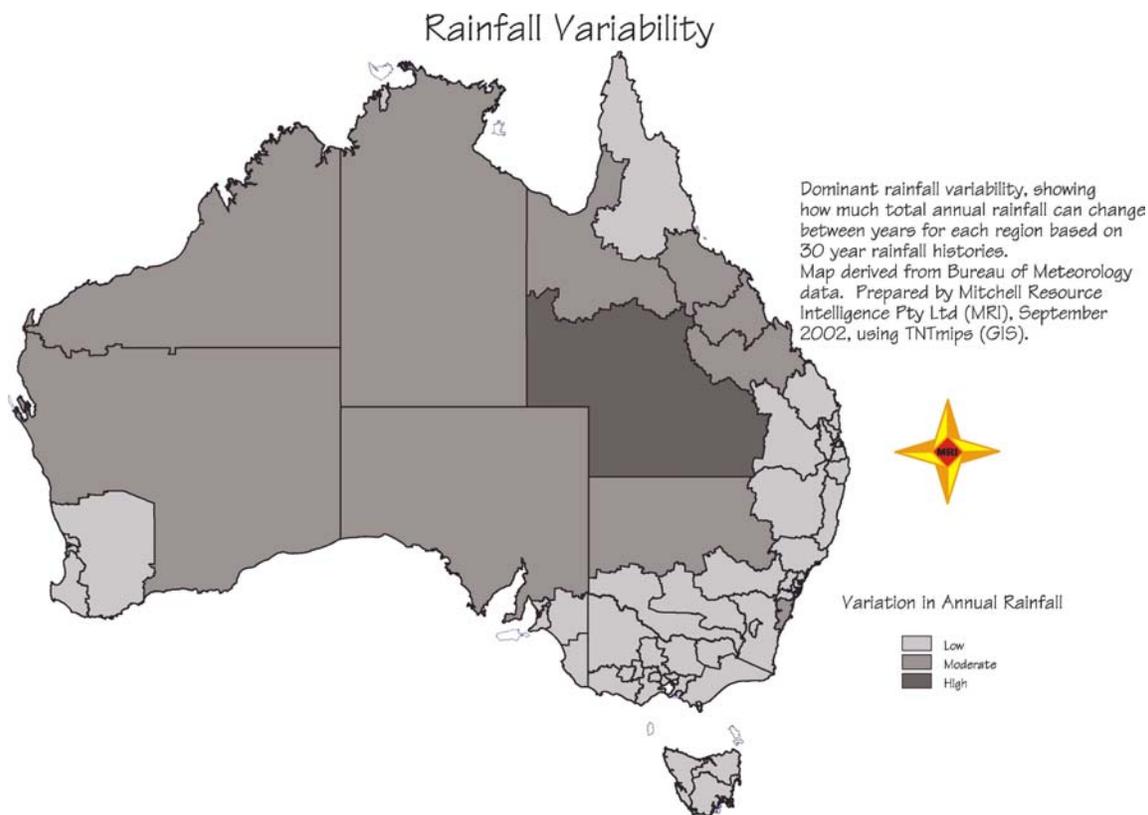
Regional Water Deficit

The water deficit is given by the difference between the water input via rainfall and the potential for the environment to evaporate water. Most of the continent is dry with potential for evaporation greatly exceeding rainfall. There are very few areas where the rainfall exceeds potential evaporation.

The regional water balance is most favourable along the east and southeast coast with a small additional area in the extreme southwest. Coastal areas in the north west also have a favourable water balance but this is masked in this analysis due to the size of the regions. Similarly, the map identifies a number of small regions around Sydney and Brisbane with wet environments but fails to identify similar but much wetter pockets in the Queensland wet tropics. Coastal areas in north Queensland with very high rainfall are included with extensive dryer western areas and these extensive areas determine the rainfall characteristics when using modal values.

The main 'exceptions' or locally favourable regions are VIC Goulburn and Adelaide Plains, Central and Outer. Both exceptions arise from local effects produced by topography (hills).

Tasmania has abundant water availability.

Regional Water Deficit

Water deficit map showing the relation between evaporative transpiration and rainfall for the regions. Map derived from Bureau of Meteorology data. Prepared by Mitchell Resource Intelligence Pty Ltd (MRI), September 2002, using TNTmips (GIS).

Majority of Region is:
- Dry
- Intermediate
- Wet
- Very Wet
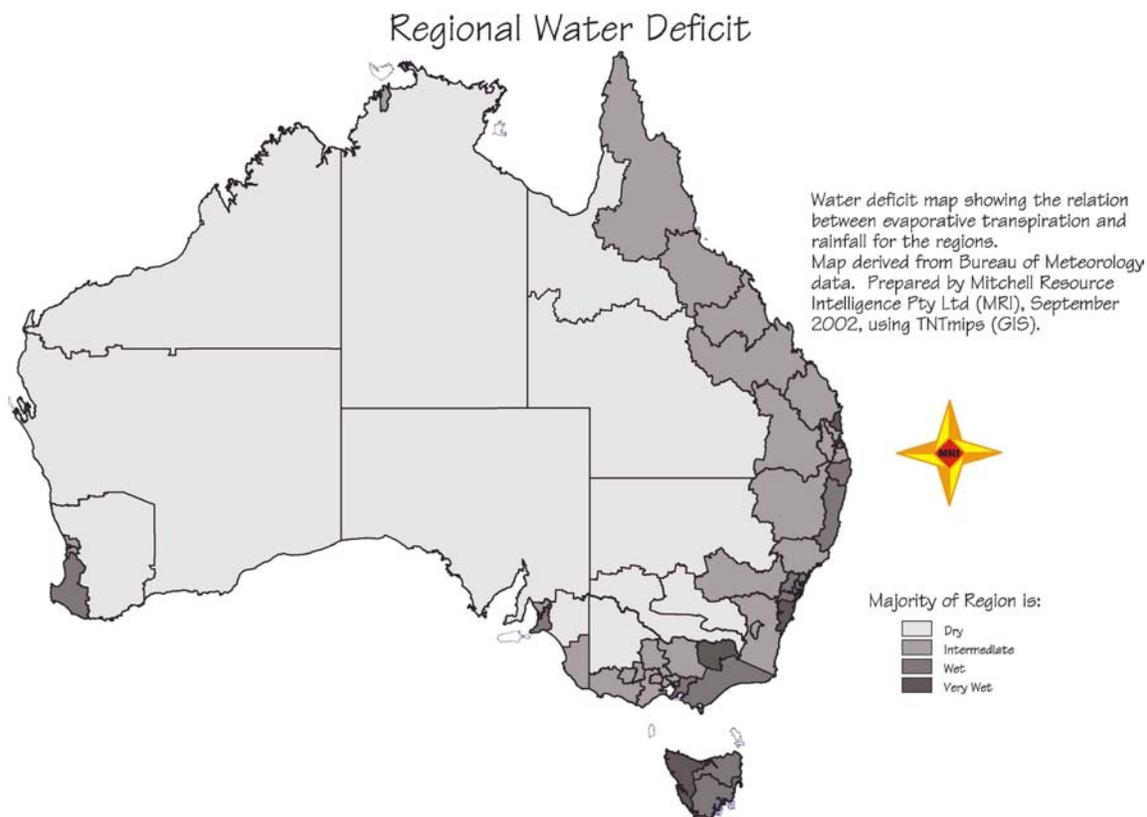
Surface Water Use

This map shows the amount of surface water that is harvested per year for use in applications such as watering livestock, irrigation, and urban water supplies. This is a total amount covering agricultural and urban usage, but 90% of this water is used for irrigation. Groundwater extraction is excluded from this amount.

Overall, surface water use is largely determined by water availability and hence inputs via rainfall. The exceptions are the VIC Gippsland, VIC Ovens-Hume and NSW South-East. These areas have high rainfall but the terrain, climate and soils are generally not conducive to large scale agricultural development. They therefore tend to be exporters rather than importers of water.

The highest surface water use in Queensland is associated with the Burdekin in the QLD North region and this mainly relates to sugar production.

The map shows the influence of irrigation along the Murray Darling River system. The NSW North, NSW Central West, NSW Murrumbidgee, VIC Mallee-Wimmera, VIC Loddon and VIC Goulburn are all major users of irrigation water. NSW Hunter is in the same category of high water use.

Hobart-South has a high use of surface water presumably associated more with electricity generation than agriculture.

Surface Water Use

Surface water used in the regions.
Map derived from year 2000 surface
water management area figures.
Prepared by Mitchell Resource
Intelligence Pty Ltd (MRI), September
2002, using TNTmips (GIS).

Water Use over
Majority of Region:

No data
Low Use - under 2.5Gl
Moderate Use
High Use - over 250Gl
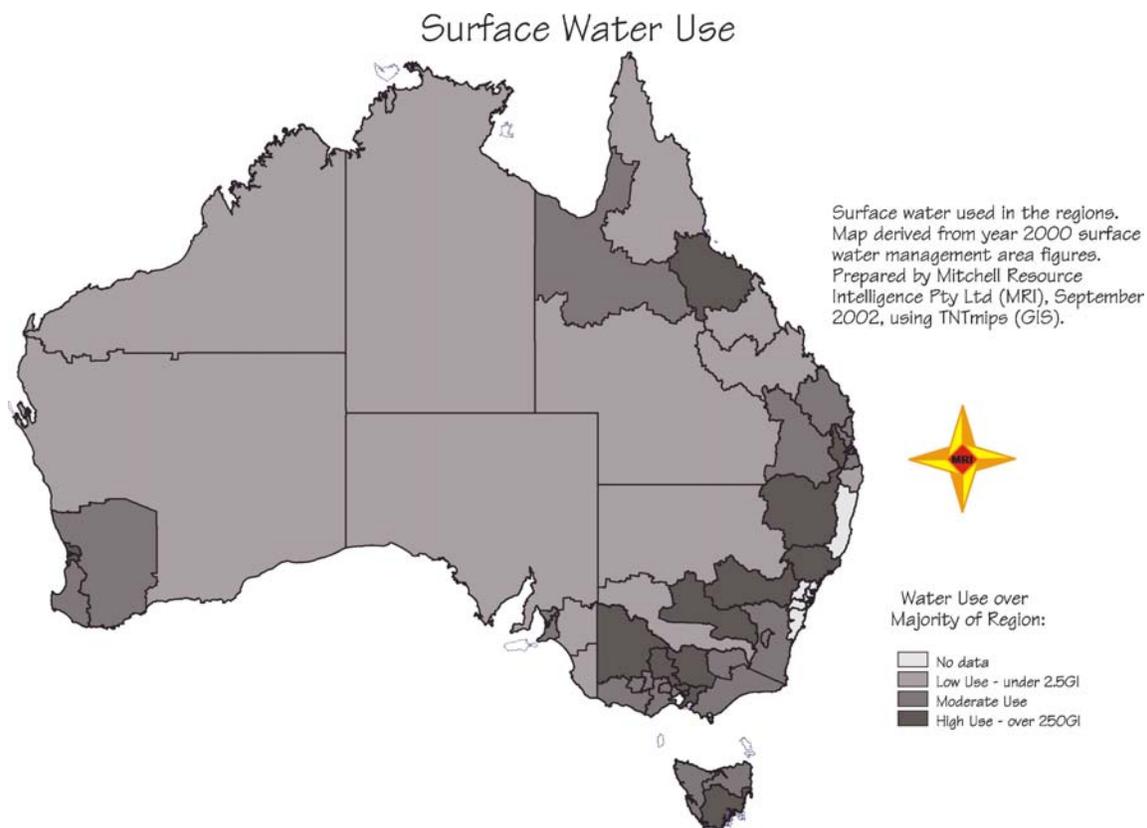
Frost risk

This map shows the degree of frost risk in each region. This risk is based on the total number of days annually where the minimum temperature drops below zero. High risk areas experience many days where temperatures drop below zero, while low risk areas experience very few.

The highest risk areas are Tasmania and the regions located along the southern end of the Great Dividing Range. The medium risk areas are regions dominated by plains, which on the mainland are the main cropping areas. The reasons for the medium risk relate to topography and the weather pattern. Winter winds tend from the south west and are cold. Still nights that occur over winter are highly conducive to radiation frosting. The flat terrain limits the drainage of cold air hence large areas are subject to frost risk.

The patterns of cold air drainage within frost prone regions strongly influence the realised risk. Upper slopes have lower risk while the risk is greatly enhanced in gullies and on flats. This is significant for broadacre farming as well as intensive enterprises such as viticulture. For example, cold air drainage west from the ranges in NSW Central West and NSW South-East has a pronounced effect on the distribution of frost damage within crops grown on the SW Slopes and adjoining plains.

Frost Risk

Frost risk as derived from the average annual number of days where the temperature falls below zero. Map derived from Bureau of Meteorology data. Prepared by Mitchell Resource Intelligence Pty Ltd (MRI), September 2002, using TNTmips (GIS).

Risk of Damaging Frost

Low Risk
Medium Risk
High Risk
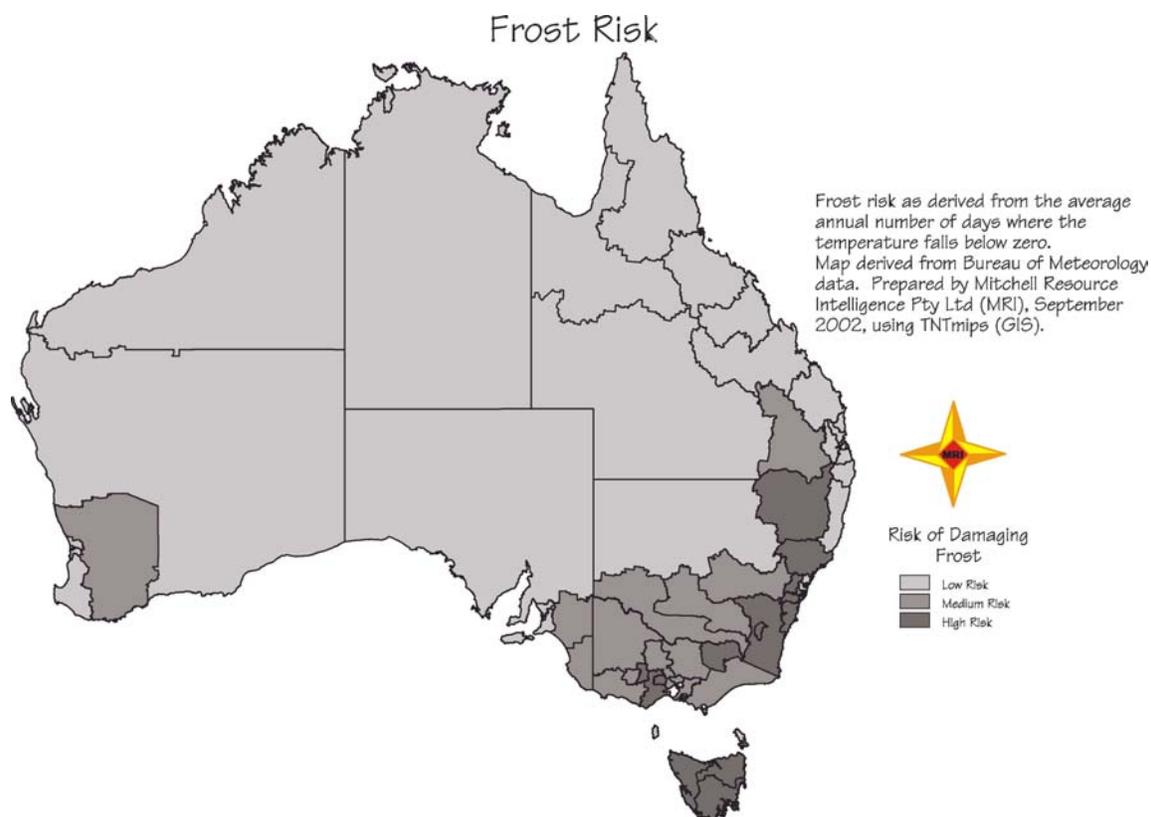
Agricultural production

Regional agricultural production has been expressed as gross product per region and as gross productivity per hectare. This allows evaluation of the regions that contribute most and those that have high value enterprises.

Gross Regional Product

The map for gross regional product is strongly influenced by the size of the regions but still identifies some dominant trends. The north west of Australia and Tasmania have low production, noting however that localised developments such as the Ord River irrigation area do not influence the results due to the use of the most common or modal values.

Highest levels of production generally derive from areas of broadacre farming and are largely determined by climate and soils. The WA Wheat belt, WA Gascoyne-Goldfields, VIC Malle-Wimmera, VIC Goulburn, NSW Murrumbidgee, NSW Central West, NSW North, NSW Far & North West and QLD Agricultural contribute most to agricultural production.

The somewhat unexpected entrants in the high production list are WA Gascoyne-Goldfields and NSW Far & North West. Their contribution partly relates to size but, for the NSW Far & North West region, it additionally relates to the expansion of dryland farming and irrigation.

Of the high productivity regions only the Adelaide regions also have high gross product.

Agricultural Gross Product for 1999 - 2000

Agricultural gross product for 1999 - 2000.
Map derived from Australian Bureau of Statistics data. Map prepared by Mitchell Resource Intelligence Pty Ltd (MRI), September 2002, using TNTmips (GIS).

Dollars per Region

- 400,000 - 10,000,000
- 10,000,000 - 150,000,000
- 150,000,000 - 400,000,000
- 400,000,000 - 1,000,000,000
- 1,000,000,000 - 3,000,000,000
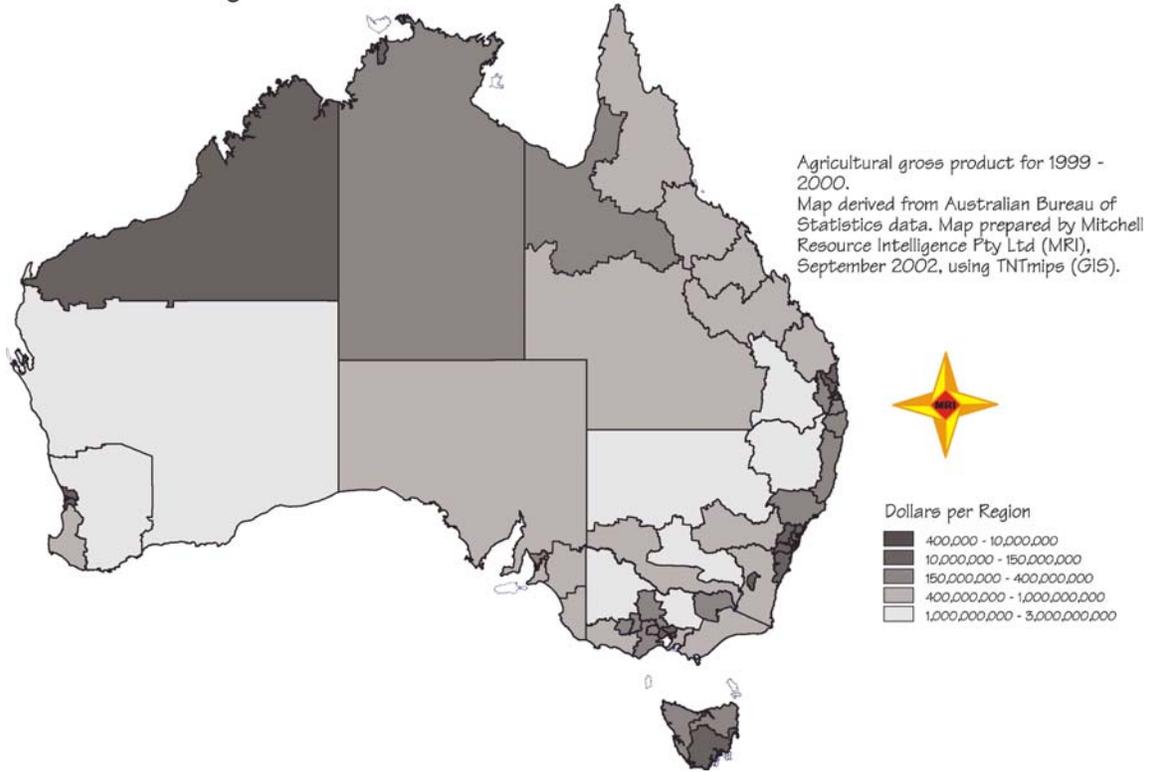
14. Core metropolitan regions

Core metro areas represent the central areas of Australia's major cities. The economic performance and prospects of core metro areas are associated with their size, history, location, economic structure, innovative capacity, and position in relation to state and territory boundaries. Globalisation and the emergence of the knowledge-based economy are having major impacts on their economic performance. Those cities or segments most integrated into the global economy are outstripping the rest. Global Sydney and Inner Melbourne dominate in terms of global investment and trade, while Perth and Brisbane are expanding their global potential. All of the core metro areas are giving priority to knowledge-based strategies including investing in knowledge infrastructure, technology parks and are seeking to strengthen knowledge based industry clusters. Globalisation and associated improvements in transport and communications have reduced the role of firms serving local and state markets, with the exception of low value added industries that are not footloose.

The core metropolitan regions are the City of Brisbane, Global and Inner Western Sydney, Canberra, Inner Melbourne, Southern Tasmania (centred on Hobart), Central Adelaide, Central Perth and Darwin. It should be noted that only Global and Inner Western Sydney, Inner Melbourne and Canberra are purely core metro regions. In the other cities the 'core metro' region includes suburbs and in some cases production areas.
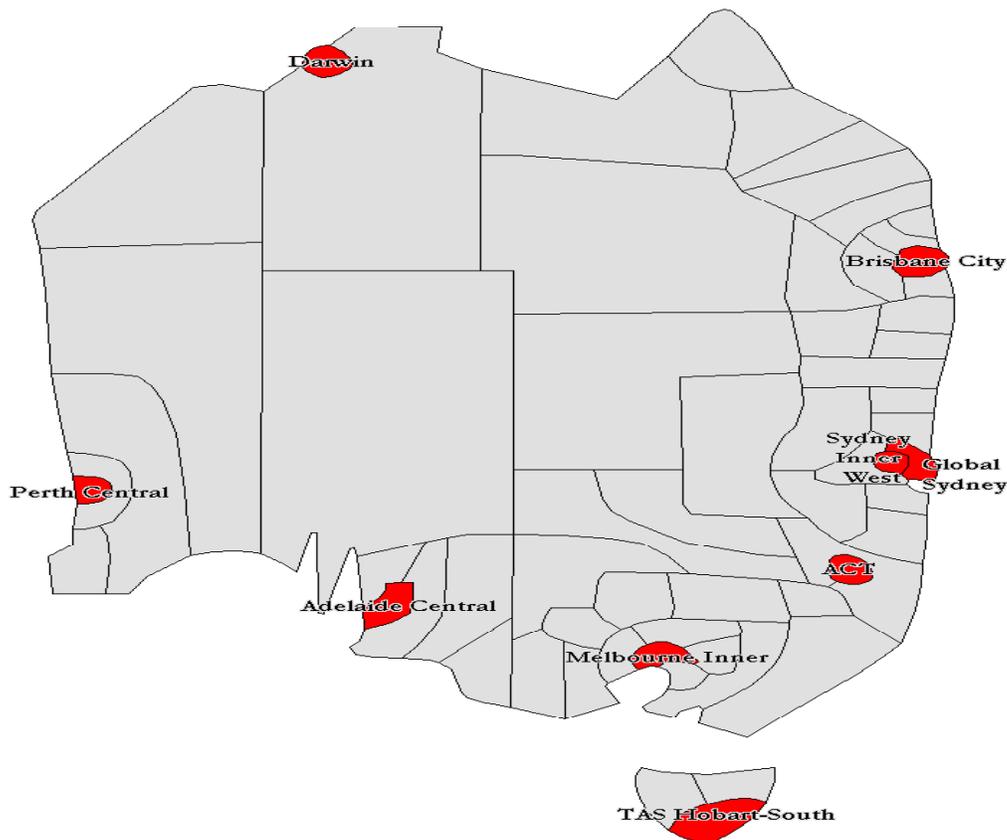
14.1   Income and Age Distribution

The analysis below looks at the age and income distribution of the regions. This is important so that the regions understand whether they attract young people, whether job opportunities exist and whether these jobs are high paying. If a region has a high proportion of young people in high paying jobs, the future prospects for the region are bright. The ensuing analysis also describes the prospects of the older part of the community (over 55) and whether high paying jobs are available. A progressive region will typically have a higher proportion of young people in high paying jobs relative to the older demographic.

The tables below show the proportion of 15-34 year olds and 55 and over earning less than $10,000, between 10K-30K, between 30K-50K and over 50K. The national average is shown on the bottom line of these tables to facilitate comparison.

Table 14.1 15-34 Year Old Earnings per annum – 2001				
	<10K	10-30K	30-50K	50K+
Global Sydney	15.9	23.8	31.7	28.6
Sydney Inner West	17.9	24.9	31.7	25.5
Melbourne East	28.9	29.2	28.7	13.2
Melbourne Inner	18.6	26.9	31.0	23.5
Brisbane City	28.2	33.4	27.8	10.6
Adelaide Central	30.9	33.3	26.6	9.2
Perth Central	29.0	32.7	26.0	12.2
TAS Hobart-South	35.9	39.2	20.3	4.6
ACT	27.1	28.8	30.8	13.3
National Average	29.6	35.2	25.1	10.1

The highest concentrations of 15-34 year olds earning in excess of the national average in the 50K + wage bracket are in Global and Inner West Sydney, Melbourne Inner and the ACT inner. These are the same areas that have the lowest concentrations of 15-34 year olds in the <10K and 10-30K brackets. This is indicative of these regions ability to provide higher income employment as compared to the less favoured regions.

The regions which fall well short of the national average in the 50K+ category are Adelaide Central and Hobart South. Interestingly these are the same two areas that exceed the national average in the <10K category. This denotes higher levels of part time or casual employment.

Similar to the distribution in the 15-34 year olds table, Global Sydney, Melbourne Inner and the ACT exceed the national average by the highest amounts. Hobart and Adelaide exhibit the poorest results in respect of the 50k+ category. A common element across all regions in the table is the high proportion of over 55s earning between 10-30k. The wage bracket with the second highest proportion of over 55s is the <10k category

---

Table 14.2	Over 55 Year Old Earnings per annum – 2001			
	<10K	10-30K	30-50K	50K+
Global Sydney	23.6	45.6	15.1	15.7
Sydney Inner West	31.5	47.2	11.6	9.7
Melbourne East	27.4	49.4	13.9	9.3
Melbourne Inner	26.6	43.2	13.4	16.9
Brisbane City	27.7	52.2	11.7	8.4
Adelaide Central	27.5	53.3	11.2	8.0
Perth Central	29.0	50.5	11.6	9.0
TAS Hobart-South	32.2	53.7	9.6	4.6
ACT	22.2	43.4	19.7	14.7
National Average	32.9	50.4	10.3	6.4

The table below shows the age distribution comparative to the national average. A score below 1 indicates that the region has less of that age demographic than the national average while a value greater than one implies more of that age demographic than the average. To understand how far the region is above or below the national average, the score below is subtracted from 1 (i.e. Global Sydney share for 15-34 is 14.8 per cent (1.148 - 1) above the national average for the 15-34 age demographic).

Table 14.3	Age Distribution – Compared to the national average		
Region	15-34	35-54	55+
Global Sydney	1.148	0.924	0.910
Sydney Inner West	1.072	0.973	0.944
Melbourne East	0.994	0.976	1.039
Melbourne Inner	1.325	0.848	0.784
Brisbane City	1.117	0.943	0.925
Adelaide Central	0.919	0.939	1.184
Perth Central	1.061	0.915	1.034
TAS Hobart-South	0.943	1.019	1.048
ACT	1.137	1.053	0.755

The analysis clearly demonstrates Melbourne inner has the highest concentration of young people, followed by Global Sydney, ACT and Brisbane. These concentrations are related to tertiary education and job training opportunities, in conjunction with more diverse employment and recreational amenities. Interestingly Melbourne's Inner and the ACT age profiles are highly skewed towards young people, having the lowest level of all regions in the 55+ category. A similar distribution is evident in Global Sydney, Inner West Sydney and Brisbane but to lesser extent.   Tasmania and Adelaide have the lowest proportion of young people with comparatively higher levels of older people. This is explained by the export of young people to the aforementioned regions, and the repatriation of retirees to lifestyle regions.

The core metro regions are ideally positioned to capitalise in the future. The majority of the regions have a higher than average proportion of young people and a significant number of these people are in

high paying jobs. It is these types of people that will drive future prosperity in the region and attract similar types of people to the region. The core metro regions are also well above average for the older category in terms of income distribution.

14.2   Unemployment

Comparison of unemployment rates, Core Metro vs. Australia
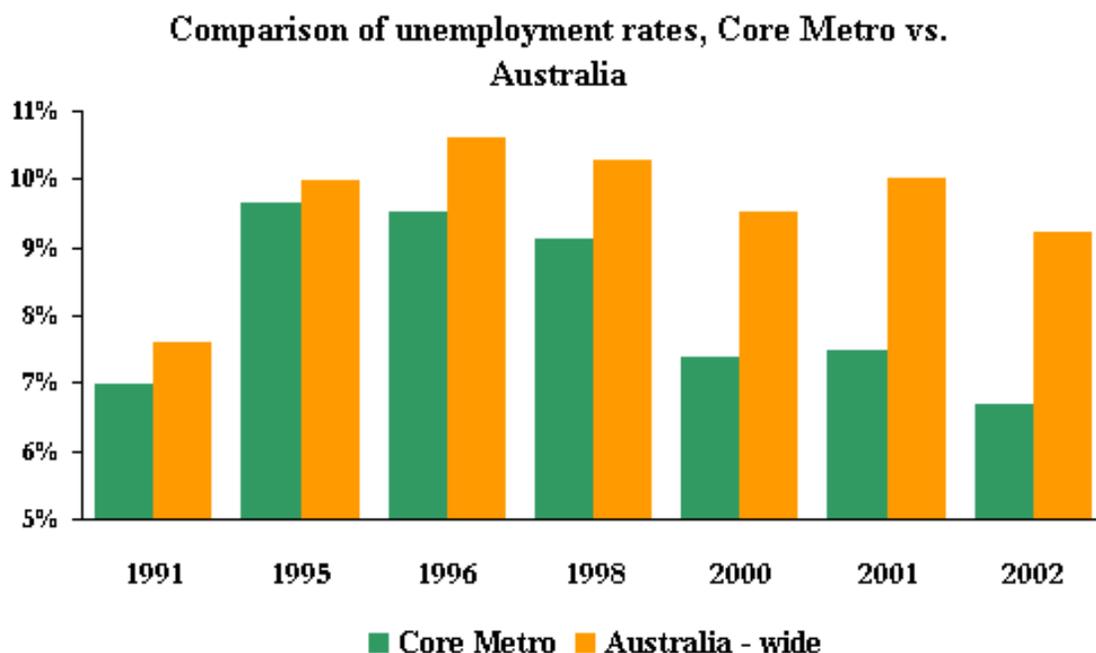
The level of unemployment in Australia as a whole has been comparatively high relative to the level of unemployment in the core metro regions. However, the core metro regions have exhibited a higher level of volatility. The superior employment growth in the core metro regions is evident in the graph above. Despite metro unemployment growing strongly between 1991 to 1996, there has been significant reductions post 1998, whereas national unemployment has remained relatively high. This reflects the growth in unemployment in Australia's non-core metro regions.

14.3   Creativity and Diversity

The creativity index is a measure combining the regions high-tech output, innovation, diversity and human capital. The higher the creativity index score, the greater potential for future growth and prosperity in the region. Of the 64 regions in the State of the Region (SOR), the top 7 regions with the highest creativity index value are all core metropolitan areas. This is indicative of their progressive social and economical qualities vis-à-vis other regions in Australia. The Core Metro regions with the lowest score still rank high compared to the other SOR regions, with a rank of 20 for the poorest performing core metro region. This is symptomatic of a concentration of creative industries and workers in metropolitan areas.

Table 14.4   Creativity Index

	Score	SOR Rank	US Rank
Global Sydney	992	1	6
Melbourne Inner	985	2	7
ACT	831	3	34
Perth Central	744	4	52
Adelaide Central	735	5	58
Sydney Inner West	733	6	58
Brisbane City	720	7	62
Darwin	317	19	217
TAS Hobart-South	295	20	225

Compared to the USA index values, Global Sydney and Melbourne Inner rank very favourably, ranking sixth and seventh respectively. In the remaining core metropolitan regions their index values compared with the USA vary significantly. The region ranking 3rd out of all SOR regions, ACT has a rank of 34 when measured against the US regions. Despite a ranking of 20th in the SOR regions, Hobart-South has a US comparative rank of 225. This reflects an inherent weakness in regions outside the major capital cities when assessing creativity. The relatively low values are a result of low levels of ITC production, poor occupational skills and little R&D outside the global nodes of Melbourne and Sydney.

In terms of international comparison and in particular with the US, only the top 10 Australian regions can compete on an equal basis. The other regions in Australia will see low growth in the increasingly important industries that are essential for future prosperity and economic development.

Table 14.5   Composite Diversity Index

	US Rank	SOR Rank
Global Sydney	1	1
Sydney Inner West	2	2
Melbourne Inner	2	2
Adelaide Central	36	5
Brisbane City	39	6
Perth Central	43	7
ACT	48	8
Darwin	66	12
TAS Hobart-South	80	17

The composite diversity index measures a region's diversity in terms of its demographic and cultural amenities. The higher the region's diversity, the higher the region's potential growth and prosperity (Chapter 6 of this report documents this analysis in far more depth). Again, the core metropolitan regions rank highly, with 7 of the top 8 SOR regions in this category.

Also, Global Sydney, Sydney Inner West and Melbourne Inner rank highly compared to the USA. These 3 regions rank 1st and equal 2nd respectively. Similar to the creativity index, after these highly competitive regions, the following regions slide comparative to the USA (although by far less than the Creativity Index) despite their high rankings within Australia.

14.4   Issues facing the region

❑ Share market volatility

❑ The erosion of retirement incomes over the previous twelve months has been currently offset by the very strong increases in house prices.

❑ If continued weakness in the equity / superannuation sector continues, National Economics believes there will be a strong move back towards savings at the expenses of current consumption.

❑ Continued congestion and increasing car ownership levels are prompting discussions about the role of public transport in our core metro regions.

❑ Consolidation of youth oriented high-income regions. Labour force participation continues to increase, as residents are more and more likely to be working.

❑ Important issues surrounding the viability of our university sector will impact of the economic development of the core metro regions over the next year

❑ House prices rising significantly, question what percentage of the increase is sustainable

❑ Can the move to lifestyle outcomes and apartment living underpin investment property over-supply

❑ Ability to reorganize the economy to target new industries that are poised to grow steadily over the next decade. Such industries include chemical and pharmaceutical products, ITC manufacturing and industrial machinery and equipment. ITC industries that could be targeted include PC assembly plants, software production and telecommunication product manufacturing.

❑ Industry policy that encourages the shift from traditional manufacturing to new, more dynamic industries. This should ensure a smoother transition and provide greater incentives for education and training.

❑ Creating industry clusters to value add and increase competitiveness of regions.

❑ Retraining of displaced workers in the regions where unemployment is high.

15.   Dispersed metropolitan regions

Dispersed metropolitan regions accommodate the highest proportion of Australia's population growth. This is suburban Australia. The suburbs developed originally at low-density as population growth spread out from inner city centres. A number of state governments have sought to limit what they term "urban sprawl" in the dispersed metro regions by encouraging medium density population growth in or close to core metro regions. But high growth rates continue, albeit at a more subdued rate.

The dispersed metro regions are predominantly residential areas with workers commuting to employment centres in core metro areas or production zones. They include: 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 and Perth Outer South[1].

---
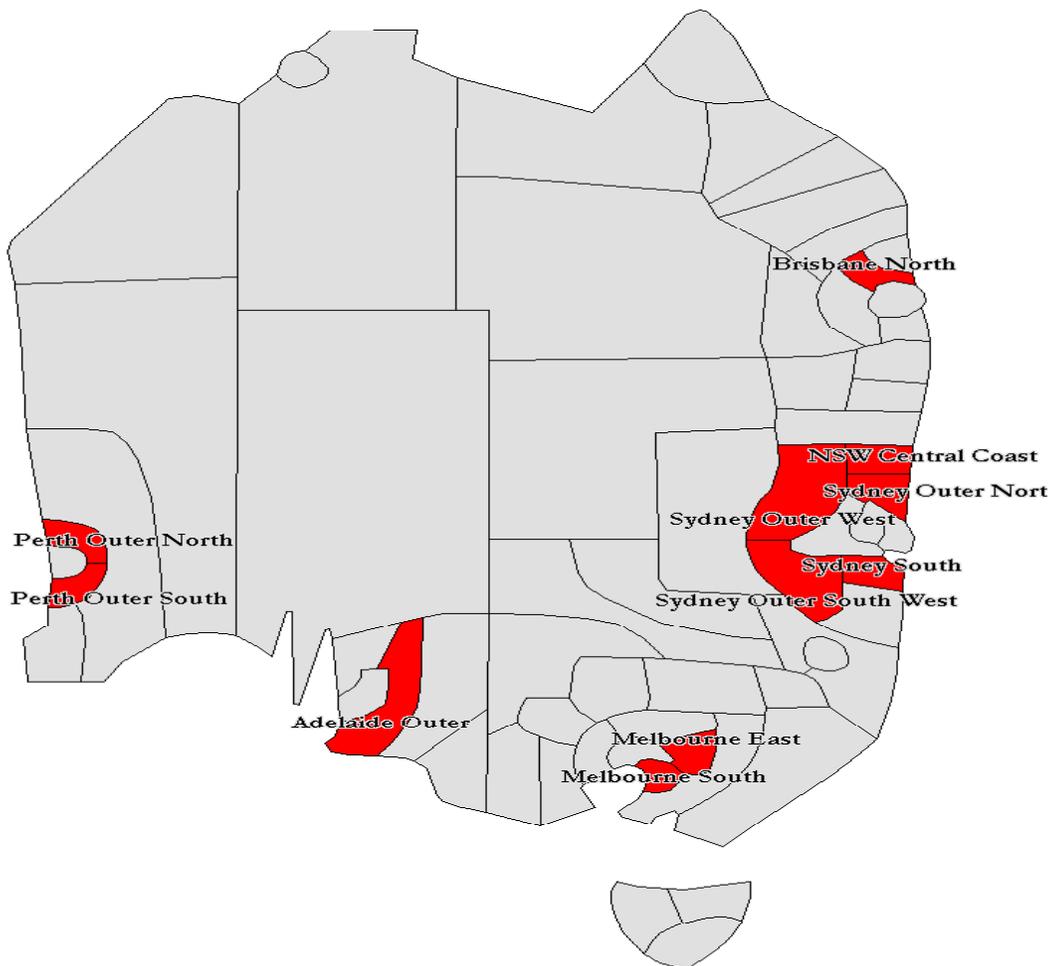
[1]   We have defined Brisbane, the biggest LGA in Australia, as a core metro region, even though parts of it should really be considered as dispersed metro.

15.1   Income and Age Distribution

The analysis below looks at the age and income distribution of the regions. This is important so that the regions understand whether they attract young people, whether job opportunities exist and whether these jobs are high paying. If a region has a high proportion of young people in high paying jobs, the future prospects for the region are bright. The ensuing analysis also describes the prospects of the older part of the community (over 55) and whether high paying jobs are available. A progressive region will typically have a higher proportion of young people in high paying jobs relative to the older demographic.

Table 15.1 15-34 Year Old Earnings per annum – 2001				
	<10K	10-30K	30-50K	50K+
NSW Central Coast	29.7	38.2	23.9	8.2
Sydney Outer North	25.5	25.6	29.7	19.2
Sydney Outer South West	27.6	36.0	27.5	8.9
Sydney Outer West	26.1	34.6	29.6	9.8
Sydney South	22.4	28.6	33.1	15.9
VIC Barwon	33.0	37.4	22.8	6.8
Melbourne South	27.1	28.8	29.5	14.6
Melbourne West	29.8	32.8	28.1	9.3
Melbourne Westernport	31.2	37.3	25.0	6.5
Brisbane North	32.5	40.1	21.9	5.5
Adelaide Outer	32.6	38.7	23.8	4.8
Perth Outer North	33.0	35.5	24.3	7.2
Perth Outer South	33.9	36.2	22.9	7.0
National Average	29.6	35.2	25.1	10.1

The above table shows the proportion of 15-34 year olds and 55 and over earning less than $10,000, between 10K-30K, between 30K-50K and over 50K per annum.

For example, 8.2 per cent of the 15-34 year old population located in Sydney South, earn in excess of $50K p.a., while 22.4 per cent earn less than $10K p.a. Compared to the national average, only Sydney Outer North, Sydney South and Melbourne South have a greater proportion of people earning above $50K. When considering the $30-$50K income bracket, a total of 6 Sydney & Melbourne regions exceed this level. This highlights the income differential associated with living near Australia's two largest cities, compared to living in another city. Sydney & Melbourne have the largest concentration of highly paid knowledge based industries, are major finance centres in the Asia Pacific region and have been the recipient of strong growth in development and construction activity during the last few years.

When considering the lower income levels, the number of areas where people earning in excess of the selected income increases. The variability of the number of people earning a particular income level is the lowest for the $30-$50K bracket, followed by the <$10K bracket.

Table 15.2	Over 55 Year Old Earnings per annum – 2001			
	<10K	10-30K	30-50K	50K+
NSW Central Coast	33.4	54.7	8.0	3.8
Sydney Outer North	19.2	46.6	17.9	16.4
Sydney Outer South West	34.4	46.6	12.6	6.4
Sydney Outer West	30.4	49.8	12.8	6.9
Sydney South	28.8	50.2	12.8	8.2
VIC Barwon	35.7	51.8	8.2	4.3
Melbourne South	27.3	51.6	12.8	8.4
Melbourne West	42.2	45.7	8.5	3.6
Melbourne Westernport	33.9	50.5	10.7	4.9
Brisbane North	34.6	52.3	9.1	4.1
Adelaide Outer	32.4	52.4	10.4	4.8
Perth Outer North	32.9	49.4	12.0	5.6
Perth Outer South	32.4	50.2	11.3	6.1
National Average	32.9	50.4	10.3	6.4

When considering the age bracket over 55, in excess of 82 per cent of people earn less than $30K p.a while on average, in excess of 50 per cent of people across all regions earn between $10-$30K p.a. Only Sydney Outer North, Melbourne South, Sydney South and Sydney Outer West regions have a higher percentage of people earning above $50K than the national average of 6.4 per cent. Sydney Outer North has nearly 3 times the national average of 6.4 per cent. This area covers the Manly, Pittwater and Warringah LGA's which are seen as attractive lifestyle retirement regions due to their proximity to both Sydney and the northern beaches. These areas have also been major beneficiaries of the strong growth in Sydney house prices during the past 5 years.

The table below shows the age distribution comparative to the national average. A score below 1 indicates that the region has less of that age demographic than the national average, while a value greater than one implies more of that age demographic than the average. To understand how far the region is above or below the national average, the score below is subtracted from 1. (ie – Central Coast for 15-34 is 15.4 per cent (1 – 0.846) below the national average for the 15-34 age demographic).

The data highlights that there is a much larger proportion of young people (15-34) living in Sydney Outer South West, Melbourne West and Sydney Outer West. Increased housing affordability in these regions is a significant factor contributing to this trend. The opposite is actually true for the over 55 aged bracket. There is a much smaller proportion of people in this aged bracket living in these regions. This is because people approaching retirement choose to live in more lifestyle orientated locations with the added benefit of housing affordability.

Table 15.3	Age Distribution – Compared to the national average		
Region	15-34	35-54	55+
NSW Central Coast	0.846	0.962	1.246
Sydney Outer North	0.932	1.042	1.032
Sydney Outer South West	1.139	1.100	0.690
Sydney Outer West	1.092	1.075	0.784
Sydney South	0.985	0.983	1.041
VIC Barwon	0.933	0.997	1.090
Melbourne South	0.917	0.997	1.110
Melbourne West	1.096	1.024	0.846
Melbourne Westernport	1.012	1.044	0.927
Brisbane North	0.966	1.054	0.973
Adelaide Outer	0.945	1.087	0.956
Perth Outer North	1.043	1.112	0.798
Perth Outer South	1.039	1.034	0.904

The most prosperous regions in the dispersed metro category are the suburban Sydney regions. These regions follow a similar trend to the core metro regions with above average young people and a number of people, of all ages, in the highest income category (50K +).

15.2   Unemployment

Comparison of unemployment rates, Dispersed Metro vs. Australia

As can be seen in the graph above, the dispersed metro regions have consistently had lower unemployment than the national average. For the majority of the time since 1991, the national unemployment rate has been between 2 and 3 per cent higher than the dispersed metro regions. This is due to the relative high skills of people who live in these regions, as well as access to job opportunities both within their own regions, and through their close proximity to the major city centres.

15.3   Creativity and Diversity

Table 15.4   Creativity Index

	Score	SOR Rank	US Rank
Melbourne South	606	8	105
Sydney Outer North	535	9	130
Melbourne East	519	10	136
Sydney Outer West	332	17	209
Sydney South	325	18	212
NSW Central Coast	284	21	227
Perth Outer South	243	25	242
Perth Outer North	200	30	251
Adelaide Outer	186	31	254
Sydney Outer South West	77	39	267
Brisbane North	51	43	n.a.

The creativity index is a measure combining the regions high-tech output, innovation, diversity and human capital. It is generally considered as a proxy for a regional economies long run economic potential. The higher the creativity index, the greater the regions future growth and prosperity potential (Chapter 6 of this report documents this analysis in far more depth). The above table shows that these regions are second only to the Core Metropolitan regions. Typically, the dispersed metropolitan regions of NSW and Victoria rank higher than those of other states due to their concentration of high-tech industries and creative talent.

Table 15.5   Composite Diversity Index

	US Rank	SOR Rank
Melbourne South	20	4
Sydney Outer West	73	15
NSW Central Coast	88	20
Perth Outer North	91	21
Melbourne East	99	23
Sydney Outer North	103	25
Adelaide Outer	112	26
Perth Outer South	115	28
Sydney South	118	31
Sydney Outer South West	159	43
Brisbane North	160	44

The composite diversity index measures a region's diversity in terms of its human capital and cultural amenities. The higher a regions' diversity, the greater the ability to attract creative capital and develop high-tech industry. Other than Melbourne South which is ranked 4th among the dispersed metro regions, the other regions are ranked more or less in the middle of the 64 SOR regions. Melbourne South ranks highly due to a proliferation of firms operating in the high-tech and design sectors. The region also provides a significant level of cultural activity with many restaurants and cafes located around the bay. The remaining regions, which rank between 73 and 160 are seen as less appealing to the creative class due to the nature of their industries and recreational amenities.

15.4   Issues

❑   Large escalation in house prices especially in Melbourne and Sydney.

❑   Strong increase in employment over the past year, especially in areas that rely on the construction boom. Although structurally the levels of unemployment in the production zones have been falling since early 2000, the hiccup of the GST induced contraction had hit the dispersed metro regions hard. The lesson however from the situation of the July-September 2000 experience does not augur well for employment in the dispersed metro regions following the expected contraction in the housing over the next twelve months.

❑   The movement of the cafes to the suburbs has strengthened considerably over the past year, suburbs from poorest to wealthiest have a wide range of places for a latte'.

❑   Impact of possible increases in interest rates on consumer spending especially considering the continued increase in indebtedness

❑   Continuing large increase in retail sales especially in the areas of homewares

❑   Increasing casualisation of the workforce, are we approaching the stage were there are families of "working poor" even with two people working.

❑   Local issues such as increased household density through small block redevelopments

❑   Importance of the super regional and sub regional shopping centres has been solidified in the past two to five year. The integration of leisure, especially cinemas and other entertainment venues, has strengthened their role in the day-to-day lives of those in the dispersed metropolitan regions.

❑   Ability to reorganize the economy to target new industries that are poised to grow steadily over the next decade. Such industries include chemical and pharmaceutical products, ITC manufacturing and industrial machinery and equipment. ITC industries that could be targeted include PC assembly plants, software production and telecommunication product manufacturing.

❑   Industry policy that encourages the shift from traditional manufacturing to new, more dynamic industries. This should ensure a smoother transition and provide greater incentives for education and training.

❑   Creating industry clusters to value add and increase competitiveness of the region.

❑   Retraining of displaced workers in the regions where unemployment is high.

16.   Production regions

By production zones we are referring to areas characterised by a high concentration of manufacturing industries. We consider them as distinct regions because they have a number of features in common. Apart from the proportion of manufacturing in the local economy, other characteristics include a high proportion of semi-skilled workers, trades people and routine production workers, high structural unemployment, a large number of residents from non-English speaking backgrounds, and a shortage of opportunities for young people.

16.1   Income Distribution

The analysis below looks at the age and income distribution of the regions. This is important so that the regions understand whether they attract young people, whether job opportunities exist and whether these jobs are high paying. If a region has a high proportion of young people in high paying jobs, the future prospects for the region are bright. The ensuing analysis also describes the prospects of the older part of the community (over 55) and whether high paying jobs are available. A progressive region will typically have a higher proportion of young people in high paying jobs relative to the older demographic.

The following tables show the proportion of 15-34 year olds and 55 and over earning less than $10,000, between 10K-30K, between 30K-50K and over 50K. The national average is shown on the bottom line of these tables to facilitate comparison.

Table 16.1	15-34 Year Old Earnings per annum – 2001			
	<10K	10-30K	30-50K	50K+
NSW Hunter	34.1	38.8	20.3	6.8
NSW Illawarra	33.0	36.8	21.8	8.4
Sydney Mid West	27.7	33.7	28.5	10.0
Melbourne North	29.7	34.1	27.2	9.0
QLD West Moreton	32.7	41.8	21.7	3.8
Adelaide Plains	33.4	39.8	22.4	4.4
National Average	29.6	35.2	25.1	10.1

As mentioned previously, the production zone regions are characterised by a high proportion of low and semi-skilled workers. This is evident by the fact that the majority of the population aged 15 to 34 earn less than $30,000 per annum. Also, not one of the production zone regions are above the national average for this age demographic earning over 50,000 per annum. Only two of the regions are above the national average when comparing the 30K-50K category. This is the result of not only the low skilled human capital, but also the lack of opportunities in these regions.

Table 16.2	Over 55 Year Old Earnings per annum – 2001			
	<10K	10-30K	30-50K	50K+
NSW Hunter	36.2	51.9	7.4	4.5
NSW Illawarra	37.3	50.0	7.9	4.9
Sydney Mid West	42.1	44.8	9.2	4.0
Melbourne North	41.1	46.4	8.5	4.0
QLD West Moreton	36.7	51.8	8.2	3.3
Adelaide Plains	39.0	51.5	6.9	2.6
National Average	32.9	50.4	10.3	6.4

The same trend can be seen in the population aged over 55. Not one of these regions has a higher proportion than the national average in the 30-50K category as well as the 50K+ category. Again, the relatively low skills and lack of opportunities are driving these trends.

The table below shows the age distribution comparative to the national average. A score below 1 indicates that the region has less of that age demographic than the national average, while a value greater than one implies more of that age demographic than the average. To understand how far the region is above or below the national average, the score below is subtracted from 1. (ie – NSW Hunter for 15-34 is 8.3 per cent (1 - 0.917) below the national average for the 15-34 age demographic).

The regions of Sydney Mid West, Melbourne North and West Moreton are above the national average for the age category between 15 and 34. These regions are also about the same as the national average for the 35-54 category. The higher the proportion in these two categories, but particularly the 15-34 category the better. This is because the younger the region, the better chance of future prosperity. The other 3 regions, Hunter, Illawara and Adelaide plains are all older regions. In particular Hunter and Illawarra, with 14.1 and 15.8 per cent above the national average for over 55's respectively.

Table 16.3	Age Distribution – Compared to the national average		
Region	15-34	35-54	55+
NSW Hunter	0.917	0.974	1.141
NSW Illawarra	0.907	0.971	1.158
Sydney Mid West	1.107	1.000	0.862
Melbourne North	1.081	0.984	0.916
QLD West Moreton	1.033	1.031	0.916
Adelaide Plains	0.986	0.965	1.064

Regions classified as production zones can be put into one of two of the following categories, although neither is preferential. Firstly, those with a high proportion of young people have concerns because a number of them are not in high paying jobs. This is due to either a lack of job prospects, in which case they move to regions where these opportunities increase (core metro regions), or a lack of quality skills. Secondly, regions with a high proportion of older people have the same difficulty, with lower than average numbers earning over $50K p.a.

16.2   Unemployment

Comparison of unemployment rates, Production Zone vs. Australia
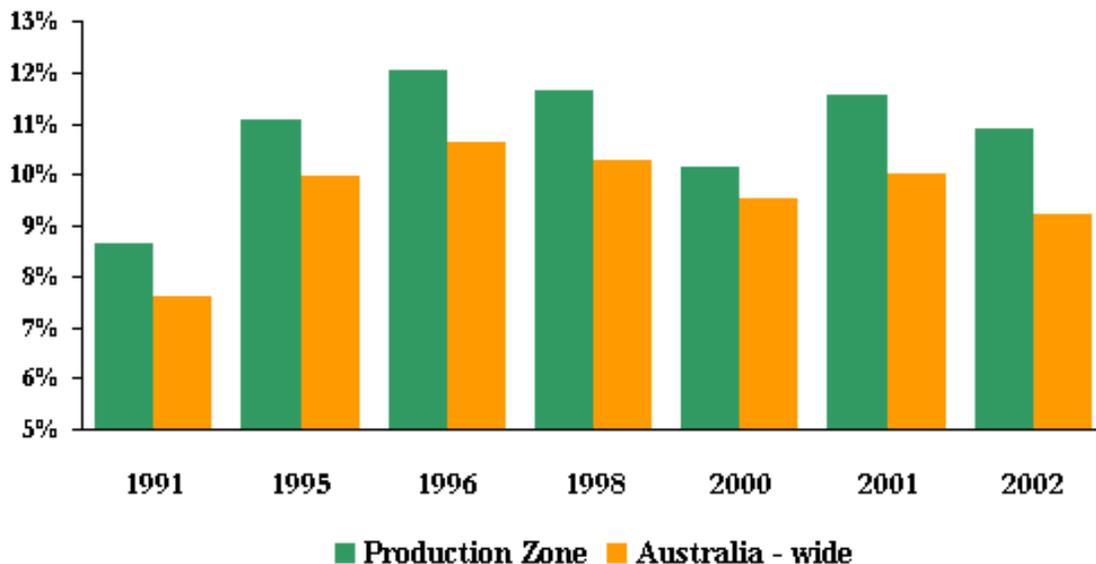
There has been strong improvement in unemployment since last year. Unfortunately most of this has been the result of a lower participation rate, moderate increases in population aged 18 to 65 (0.68 per cent), and continued movement of people to Disability Support Pensions (DSP). The total level of employment of residents in the production zones contracted to 2.31 million workers, from 2.34 million one year ago. This is still a significant improvement on the employment level of 2.14 million in 1996.

The fact the number of people receiving DSP grew again this year in the production zones highlights the structural problems in the economy that must be addressed. Since 1998 alone, the percentage of adults aged 18 to 65 years that receive the DSP has grown from 3.44 per cent of the population to 3.86 per cent of the population, this was a rate of growth almost three times that of the general population.

16.3   Creativity and Diversity

Table 16.4   Creativity Index

	Score	SOR Rank	US Rank
Sydney Mid West	518	11	138
Melbourne North	503	12	144
Adelaide Plains	433	13	171
Melbourne West	420	14	178
Melbourne Westport	253	23	239
NSW Hunter	242	26	242
NSW Illawarra	211	28	250
VIC Barwon	168	33	258
QLD West Moreton	167	34	258

The creativity index is a measure combining the regions high-tech output, innovation, diversity and human capital. The higher the creativity index, the more likely the regions future growth and prosperity potential. The production zone regions are mostly ranked in the top half of the Australian regions. The top 4 regions in the production zone SOR are ranked 11 to 14 in Australia respectively, while this places them at about the 50th percentile comparative to the USA. Typically these areas have a high level of ethnic diversity and combined with higher learning institutions, considerable innovative potential.

Table 16.5   Composite Diversity Index

	US Rank	SOR Rank
Melbourne North	53	9
Sydney Mid West	59	11
Adelaide Plains	70	14
Melbourne West	80	18
VIC Barwon	113	27
NSW Illawarra	116	29
QLD West Moreton	117	30
NSW Hunter	122	32
Melbourne Westport	137	37

The composite diversity index measures regions diversity in terms of its human capital and cultural amenities. The higher the regions diversity, the more likely the region's potential growth and prosperity (Chapter 6 of this report documents this analysis in far more depth). Like the creative index, the production zone regions also rank in the better half of Australia's regions. Again Melbourne North and Sydney Mid West are the top two ranked production zone regions. They are ranked 9 and 11 in Australia and are in the top 60 regions compared to the USA.

16.4   Issues for the region

❑   Reform to car industry assistance promises to be a significant issue. Previous "State of the Regions" reports have highlighted the importance of strong supply chains in Australia. The car industry has worked very hard at developing these chains and now provides a fantastic example of the way innovation capacity and technology transfer can be developed in Australia. The proposed changes have the potential to ruin some of this good work.

❑   Impact of possible increases in interest rates on consumer spending, especially considering the continued increase in indebtedness.

❑   Continued reform in the steel industry will also affect the production regions ability to provide employment.

❑   The aging of the population.

❑   The transition of large-scale industries, that will increasingly be subject to environmental restrictions, decreasing profitability and in the long run, depletion of the resource that some industries are based on. For instance, a shift from coal production to coal seam methane may be a viable solution.

❑   Ability to reorganize the economy to target new industries that are poised to grow steadily over the next decade. Such industries include, chemical and pharmaceutical products, ITC manufacturing and industrial machinery and equipment. ITC industries that could be targeted include PC assembly plants, software production and telecommunication product manufacturing.

❑   Dealing with the environmental issues, which are a legacy of the old "heavy industry". Positive aspects flowing from a cleaner environment could include increase tourism and an improved quality of life for residents.

❑   Industry policy that encourages the shift from traditional manufacturing to new, more dynamic industries. This should ensure a smoother transition and provide greater incentives for education and training.

❑   Creating industry clusters to value add and increase competitiveness of the region.

❑   Retraining of displaced workers in the regions where unemployment is high.

17.   Lifestyle regions

Lifestyle regions are those areas where lifestyle attributes are driving population and economic growth. These regions are concentrated on Australia's east coast – "Australia's Holiday Coast". They include Northern Rivers, Gold Coast, Sunshine Coast, Wide-Bay Burnett and Tropical Far North Queensland. South-eastern NSW and Shoalhaven have some of the characteristics of lifestyle regions. Southern Western Australia is taking on many of the attributes of a Lifestyle region. The fastest growing area in Western Australia is Peel, south of Perth, which is growing at 5.3 per cent per year, predominantly because of its lifestyle attributes.

17.1   Income and Age Distribution

The analysis below looks at the age and income distribution of the regions. This is important so that the regions understand whether they attract young people, whether job opportunities exist and whether these jobs are high paying. If a region has a high proportion of young people in high paying jobs, the future prospects for the region are bright. The ensuing analysis also describes the prospects of the older part of the community (over 55) and whether high paying jobs are available. A progressive region will typically have a higher proportion of young people in high paying jobs relative to the older demographic.

The following tables show the proportion of 15-34 year olds and 55 and over earning less than $10,000, between 10K-30K, between 30K-50K and over 50K. The national average is shown on the bottom line of these tables to facilitate comparison.

Table 17.1   15-34 Year Old Earnings per annum – 2001

	<10K	10-30K	30-50K	50K+
NSW Mid North Coast	40.1	42.7	13.7	3.5
NSW Richmond-Tweed	40.3	43.3	13.2	3.2
QLD Far North	29.3	42.7	21.9	6.1
QLD North	30.4	36.3	26.4	7.0
QLD Wide Bay-Burnett	37.4	44.0	15.1	3.5
QLD Gold Coast	29.9	42.8	21.7	5.6
QLD Sunshine Coast	35.1	43.0	17.3	4.6
National Average	29.6	35.2	25.1	10.1

The opportunity for young people to earn reasonable to high incomes in lifestyle regions is somewhat limited, as indicated in the table above. Approximately 80 per cent plus are earning below 30k per year. This reflects the limited diversity of the employment base in these types of regions. All regions (excluding North Queensland in the 30-50k bracket) fall well below the national average for wages greater than 30k per year. In all regions (excluding Far North Queensland and the Gold Coast) the proportion of people earning above 50k is half the national average.

Table 17.2   Over 55 Year Old Earnings per annum – 2001

	<10K	10-30K	30-50K	50K+
NSW Mid North Coast	36.6	54.0	6.5	2.9
NSW Richmond-Tweed	34.6	55.2	7.2	3.1
QLD Far North	31.4	52.4	10.3	5.9
QLD North	31.7	53.2	9.9	5.2
QLD Wide Bay-Burnett	40.9	50.3	6.1	2.7
QLD Gold Coast	31.6	52.4	10.5	5.5
QLD Sunshine Coast	32.2	54.7	8.7	4.4
National Average	32.9	50.4	10.3	6.4

The income distribution for people aged over 55 mirrors the results from the preceding table. This indicates that earning potential is not correlated with age but rather the economic and industry composition of these regions. There is obviously a greater degree of part time work and lower levels of high-income full time employment as compared to the core metropolitan regions. These results are underwritten by the fact that these regions cater for retirees and are not employment centres. This is confirmed by the age distribution presented below

The table below shows the age distribution comparative to the national average. A score below 1 indicates that the region has less of that age demographic than the national average while a value greater than one implies more of that age demographic than the average. To understand how far the region is above or below the national average, the score below is subtracted from 1. (ie – Mid North Coast for 15-34 is 28.7 per cent (1 – 0.713) below the national average for the 15-34 age demographic).

Table 17.3 Age Distribution – Compared to the national average			
Region	15-34	35-54	55+
NSW Mid North Coast	0.713	0.983	1.390
NSW Richmond-Tweed	0.770	1.009	1.283
QLD Far North	0.976	1.044	0.972
QLD North	1.088	0.972	0.924
QLD Wide Bay-Burnett	0.778	0.968	1.326
QLD Gold Coast	0.987	1.011	1.002
QLD Sunshine Coast	0.779	0.984	1.304

In accordance with the income distributions above, all regions (excluding North Queensland) fall well short of the national average in the 15-34 year old bracket, with concentrations increasing moving through the age categories. The excesses concentrations above the national average for the 55+ category, indicates the lifestyle orientation of the regions with high proportions of retirees.

What is of a major concern is that of the regions with a high proportion of older people (over 55), very few earn more than $50K p.a. As such, the people who live or move to these highly liveable regions will be living off a low income. If these trends continue, these regions will fall further behind those more prosperous ones.

17.2   Unemployment

Comparison of unemployment rates, Lifestyle vs. Australia
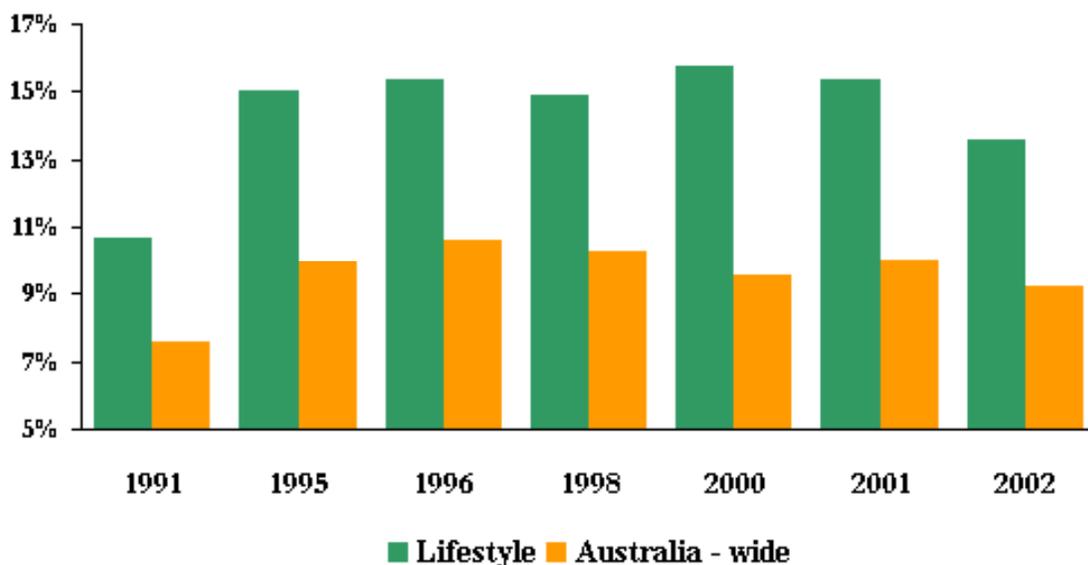
The above graph indicates unemployment in lifestyle regions has consistently remained above the Australian average, however the differential reduced in 2002. Post 1991 lifestyle regions' unemployment increased considerably, and has remained high, with the only significant abatement occurring post 2001.

17.3   Creativity and Diversity

Table 17.4 Creativity Index			
	Score	SOR Rank	US Rank
QLD Sunshine Coast	405	15	187
NSW Richmond-Tweed	340	16	207
NSW South-East	270	22	235
QLD Gold Coast	206	29	252
NSW Mid North Coast	111	36	262

The creativity index is a measure combining the regions high-tech output, innovation, diversity and human capital. The higher the creativity index, the higher the regions future growth and prosperity potential. The lifestyle regions rank better than average overall in Australia. The Sunshine Coast is the highest ranked lifestyle region and ranks 15th in Australia. The region attracts a large number of SME and researchers due to its location and environment. Compared to the USA, the region ranks 187th.

The lifestyle regions rank relatively well when comparing them to all regions in Australia, except the core metropolitan regions. When measured against the US regions however, their values are in the lowest quartile. This highlights the breath of creativity across the US regions and the concentration of creativity in Core and Metropolitan SOR regions.

Table 17.5 Composite Diversity Index		
	US Rank	SOR Rank
QLD Sunshine Coast	53	9
NSW Richmond-Tweed	66	12
NSW South-East	94	22
QLD Gold Coast	128	34
NSW Mid North Coast	144	38

The composite diversity index measures regions diversity in terms of its human capital and cultural amenities. The higher the regions diversity, the more likely the region's potential growth and prosperity will be realised (Chapter 6 of this report documents this analysis in far more depth). Again, the Sunshine Coast is the highest ranked lifestyle region in terms of diversity. This is not surprising since it has a vibrant street culture and attracts a number of diverse and artistic people. Richmond-Tweed also ranks highly in diversity, with both it and the Sunshine Coast ranking in the top 70 compared to the USA.

17.4   Issues

❑   Growing tensions in the reconciliation of lifestyle, population growth and the environment

❑   Likely that the switch to domestic tourism and the introduction of Virgin Airways has been responsible for the recent strong employment growth.

❑   Some areas will be affected by the drought

❑   High levels of unemployment.

❑   International visitor numbers have declined. Partly a result of a downturn in Japan, however the low Australian dollar should compensate.

❑   Over capacity in accommodation.

❑   Diversification because the regions are too reliant upon tourism. Domestic visitors could decline significantly with high debt levels, unemployment and declining asset values curtailing leisure expenditures.

18.   Rural based and remote regions

The debate about regional Australia is heavily concentrated on rural-based regions. This is partly for political reasons but partly because of economic and social hardships in the "bush". These hardships have been highlighted by widespread media coverage and government initiatives such as the Commonwealth Government's Regional Summit - some call it the Rural Summit - held in Canberra in October 1999. Of the 64 SOR regions, 23 are defined as rural-based and remote[1]. In our framework, rural-based regions are those areas that derive much of their wealth from agriculture, forestry and fishing.
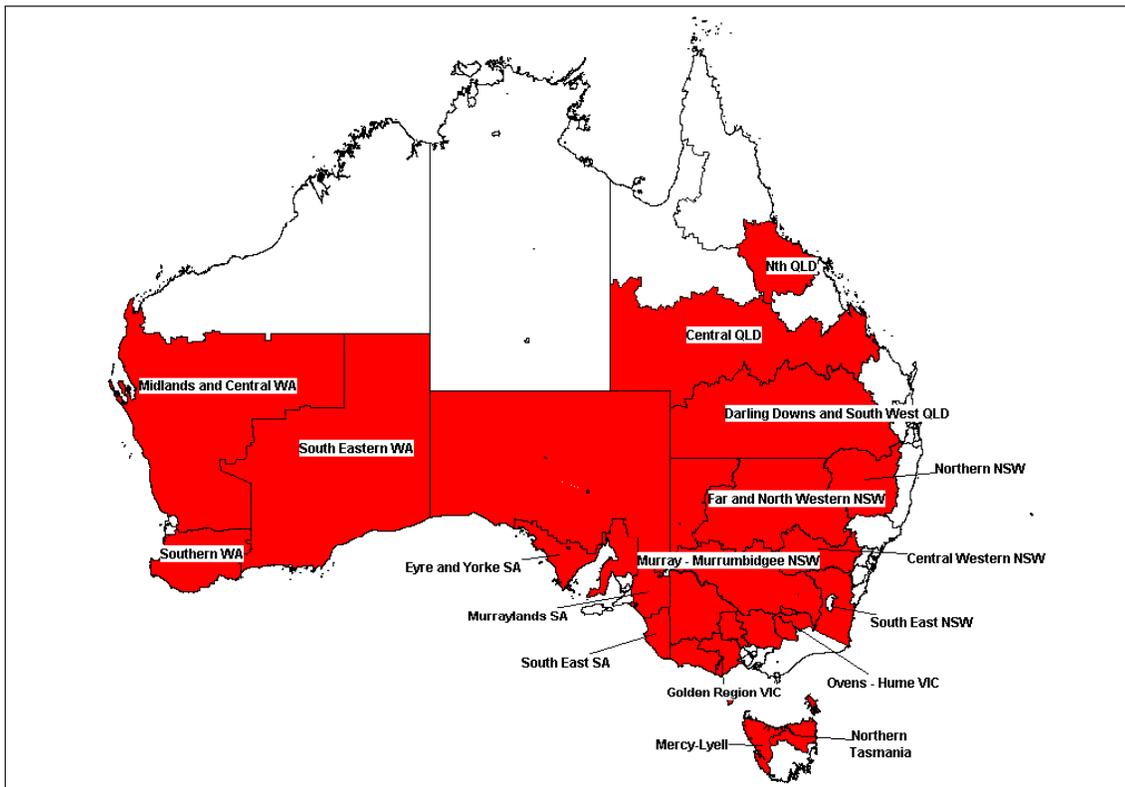
These regions are very diverse. For example, they include:

❑   Remote pastoral areas of North Western and Far west NSW, South West Queensland, and Central WA;

❑   Timber and agricultural areas of South Western WA, and Tasmania;

❑   Rich farming areas such as the Darling Downs; and

❑   Water intensive and irrigated regions in the Murrumbidgee NSW and Riverlands SA, Northern and (parts of) Central Queensland.

---

[1]   We have excluded unincorporated territories from statistical analysis.

18.1   Income and Age Distribution

The analysis below looks at the age and income distribution of the regions. This is important so that the regions understand whether they attract young people, whether job opportunities exist and whether these jobs are high paying. If a region has a high proportion of young people in high paying jobs, the future prospects for the region are bright. The ensuing analysis also describes the prospects of the older part of the community (over 55) and whether high paying jobs are available. A progressive region will typically have a higher proportion of young people in high paying jobs relative to the older demographic.

The following tables show the proportion of 15-34 year olds and 55 and over earning less than $10,000, between 10K-30K, between 30K-50K and over 50K. The national average is shown on the bottom line of these tables to facilitate comparison.

Table 18.1 15-34 Year Old Earnings per annum – 2001				
	<10K	10-30K	30-50K	50K+
NSW Central West	31.5	44.1	17.6	6.8
NSW Far and North West	32.0	39.8	21.1	7.2
NSW Murrumbidgee	30.6	41.9	21.8	5.7
NSW Murray	32.0	41.2	21.0	5.8
NSW North	36.4	40.9	17.8	4.8
NSW South-East	29.9	40.4	22.0	7.7
VC Goulburn	32.3	39.8	22.6	5.3
VIC Loddon	36.5	39.3	19.7	4.5
VIC Mallee-Wimmera	32.0	43.9	19.5	4.6
VIC Ovens-Hume	31.8	38.3	23.4	6.5
VIC West	33.6	40.9	19.7	5.9
VIC Central Highlands	36.8	38.2	20.1	4.9
QLD Pastoral	22.6	44.3	24.6	8.4
QLD Agricultural SW	33.9	41.4	19.6	5.1
SA Eyre and Yorke	35.0	38.9	19.2	6.9
SA Murraylands	31.6	48.0	17.2	3.2
SA South East	28.1	43.1	22.6	6.2
WA Gascoyne-Goldfields	26.0	31.7	23.6	18.7
WA Wheatbelt-Great Southern	32.0	43.0	19.8	5.2
TAS North West	35.9	41.8	17.5	4.8
TAS North	36.3	40.5	19.2	4.0
National Average	29.6	35.2	25.1	10.1

The majority of rural regions have in excess of 30 per cent of their young people earning less than <10K per year. On average the rural regions have 72 per cent of their workforce earning less than 30k per year. Similar to the levels of unemployment this is indicative of the hardship these regions are subjected to, and the consequent effects on the provision of gainful employment.   Another characteristic shared by the majority is the proportion of people earning on average 3.5 per cent below the national average for the 50k+ income bracket.

Table 18.2	Over 55 Year Old Earnings per annum – 2001			
	<10K	10-30K	30-50K	50K+
NSW Central West	34.0	52.3	8.8	4.9
NSW Far and North West	36.2	51.2	8.1	4.5
NSW Murrumbidgee	32.8	52.0	9.8	5.5
NSW Murray	32.7	53.0	9.8	4.5
NSW North	34.3	51.6	9.0	5.1
NSW South-East	32.6	51.6	10.1	5.8
VC Goulburn	33.6	54.2	8.4	3.8
VIC Loddon	35.0	53.1	8.2	3.7
VIC Mallee-Wimmera	34.1	54.8	7.3	3.7
VIC Ovens-Hume	32.3	54.6	9.0	4.1
VIC West	31.5	55.1	8.9	4.4
VIC Central Highlands	34.3	54.2	8.0	3.5
QLD Pastoral	30.2	51.6	10.9	7.2
QLD Agricultural SW	33.7	53.1	8.6	4.6
SA Eyre and Yorke	38.4	51.0	7.1	3.6
SA Murraylands	37.8	51.3	7.6	3.3
SA South East	33.5	51.8	9.8	4.8
WA Gascoyne-Goldfields	34.5	48.2	10.6	6.7
WA Wheatbelt-Great Southern	33.8	52.0	9.8	4.4
TAS North West	38.7	51.5	6.7	3.1
TAS North	35.7	53.5	7.4	3.4
National Average	32.9	50.4	10.3	6.4

The limited income opportunities for over 55s are analogous to the difficulties faced by young people in rural communities. The problems that have been experienced in the rural sector are seeping into other sectors within these rural regions, depressing income levels and the provision of full time employment.

The table below shows the age distribution comparative to the national average. A score below 1 indicates that the region has less of that age demographic than the national average while a value greater than one implies more of that age demographic than the average. To understand how far the region is above or below the national average, the score below is subtracted from 1. (ie – Central West for 15-34 is 6.6 per cent (1 – 0.934) below the national average for the 15-34 age demographic).

Due to the limited employment and education/job training potential within rural areas, there has been significant migration of young people to areas with improved prospects, primarily the core metro regions. This is clearly evident in the rural age profile displayed above. On average, the proportion of people aged 35 and above is higher than the national average

In general, the established people in the region although not prospering, are living adequately. The major concern for these regions is that the young people in these regions have very low incomes. This is a result of relatively low skills and low job opportunities as a result of a lack of high-output industries.

Table 18.3	Age Distribution – Compared to the national average		
Region	15-34	35-54	55+
NSW Central West	0.934	0.986	1.102
NSW Far and North West	0.899	1.000	1.129
NSW Murrumbidgee	1.002	0.977	1.027
NSW Murray	0.875	1.003	1.157
NSW North	0.916	0.984	1.129
NSW South-East	0.860	1.017	1.157
VC Goulburn	0.900	1.022	1.100
VIC Loddon	0.889	1.040	1.090
VIC Mallee-Wimmera	0.842	0.994	1.210
VIC Ovens-Hume	0.938	1.041	1.026
VIC West	0.863	1.020	1.149
VIC Central Highlands	0.959	1.005	1.047
QLD Pastoral	0.971	0.999	1.038
QLD Agricultural SW	0.989	0.967	1.057
SA Eyre and Yorke	0.844	1.017	1.178
SA Murraylands	0.854	1.017	1.164
SA South East	0.946	1.048	1.007
WA Gascoyne-Goldfields	1.046	1.037	0.891
WA Wheatbelt-Great Southern	0.871	1.077	1.064
TAS North West	0.895	1.026	1.100
TAS North	0.937	1.002	1.079

18.2   Unemployment

Comparison of unemployment rates, Rural vs. Australia
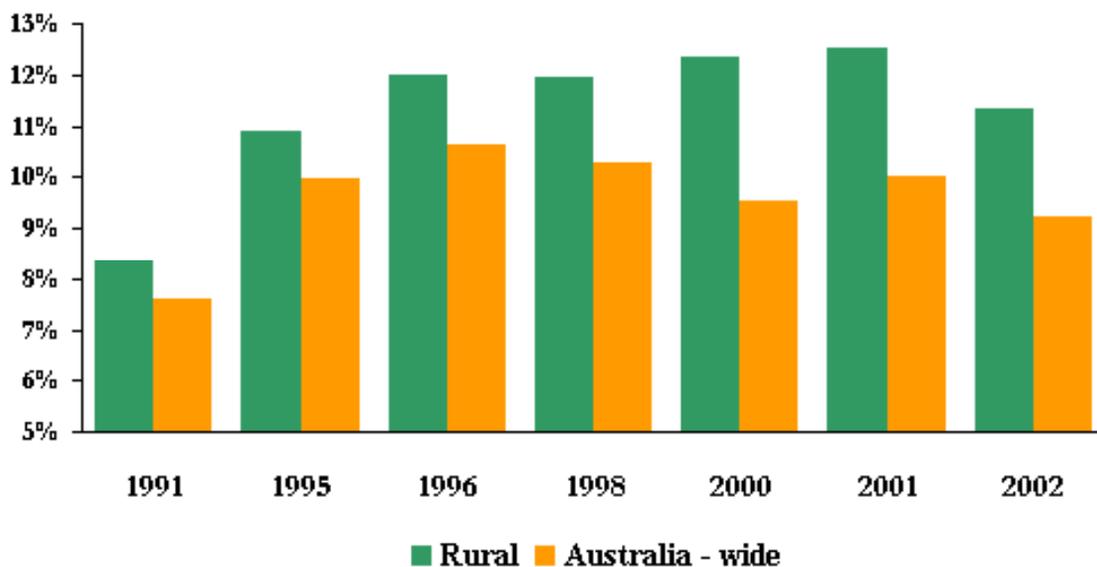
The graph indicates that rural unemployment and national unemployment are significantly correlated. However despite the national downward trend in unemployment post 1996 rural unemployment continued to increase, with abatement only occurring post 2001. Since 1995 rural unemployment has persisted at levels above 11 per cent, indicative of the hardships, which these regions have endured.

18.3   Creativity and Diversity

Table 18.4   Creativity Index

	Score	SOR Rank	US Rank
QLD Far North	253	23	239
VIC Central Highlands	175	32	256
VIC Loddon	163	35	259
VIC Ovens-Hume	98	37	265
QLD North	86	38	267
NSW Far and North West	8	58	n.a.
VIC West	8	58	n.a.
SA Murraylands	8	58	n.a.
VIC Mallee-Wimmera	7	62	n.a.
SA South East	7	62	n.a.

The creativity index is a measure combining the regions high-tech output, innovation, diversity and human capital. The higher the creativity index, the more likely the regions future growth and prosperity potential will be realised. The table above shows the top and bottom 5 rural regions in Australia (there are 23 rural regions in Australia). The majority of the lower ranked regions in Australia are categorised as rural. This is due to low high-tech output, less tertiary qualified people employed in high-tech industries, as well as low levels of innovation and diversity.

These regions rank near the bottom of the US comparative rank. Where the rank **n.a.** Is shown, the score for the index is below the lowest scored region in the USA.

Table 18.5   Composite Diversity Index

	US Rank	SOR Rank
QLD Far North	84	19
VIC Central Highlands	103	24
VIC Loddon	124	33
VIC Ovens-Hume	144	38
TAS North	158	42
VIC West	180	59
NSW Far and North West	182	60
SA South East	182	61
VIC Mallee-Wimmera	184	62
NSW North	185	63

The composite diversity index measures a region's diversity in terms of its human capital and cultural amenities. The higher the regions diversity, the more likely the region's potential growth and prosperity (Chapter 6 of this report documents this analysis in far more depth). The above table also shows the 5 top and bottom rural regions. With the exception of Far North Queensland and Victorian Central Highlands which boost vibrant tourist markets and share considerable cultural diversity, the other regions perform poorly. They rank low in terms of diversity comparative to the other Australian regions, yet rank well ahead of the lowest US regions. This is because despite the lower proportion of artistic and other diverse people, relative to the USA, all Australian regions have a high proportion of foreign-born people – one of the variables used to calculate the diversity index.

18.4   Issues

❑   The current drought and the associated decline in production levels. Some farmers estimate the production of grains will decrease by significantly more that 50 per cent. The ramifications for rural economies are massive. Declining farm income, depressed retail expenditures and sales for firms reliant on farm activity, such as fertilizer and machinery stores falling.

❑   Rural communities need to diversify (yes, diversification is more than just tourism)

❑   General uncertainty in the agricultural sector due to the onset of widespread drought conditions will drive a wide variety of outcomes for the rural based and remote regions.

❑   The low interest rates and the First Home Owner Scheme have resulted in the expansion of residential housing stock in many rural areas. In general, significant capital growth in housing in the rural areas is rare, so it is likely that the scheme has proved inflationary. However the increase in price has been more than offset by the increase in affordability.

❑   Deteriorating capital stock in terms of housing, retail floor-space, community and transport infrastructure.

❑   Population growth

❑   Leverage of the natural resource base. The Barossa Valley in SA provides an excellent example. The state has a $4 billion a year wine sector. The region has been successful in developing all facets of the value chain. Harvesting grapes, processing and the manufacturing of bottles are prime examples. World-class research and development is undertaken in the region, investigating grape varieties and blending techniques. The many firms in the region create clustering benefits that provide further economic activity.

❑   Salinity and environmental derogation needs to be addressed. Without an appropriate remedy deleterious impacts on productivity and availability of arable land will depress farm income.

❑   Deregulation and tariff reduction in key rural products

❑   Increase connectivity to the metro regions to ensure the rural areas can take advantage of developments in the ITC industries.

19.   Resource based regions

Resource-based regions evolved around our resource endowments in minerals and energy - including coal, oil and natural gas, iron ore, copper, uranium, alumina, lead and zinc, nickel and gold. Australia is a major player in global minerals and energy markets and this has resulted in some distinct patterns of regional development. We have some clearly recognisable resource based regions but often the boundaries get a bit hazy. Major areas include the Pilbara WA, Upper Hunter NSW, Central Queensland, Central South Australia, Northern Territory Top End and the La Trobe Valley in Victoria.

19.1   Income and Age Distribution

The analysis below looks at the age and income distribution of the regions. This is important so that the regions understand whether they attract young people, whether job opportunities exist and whether these jobs are high paying. If a region has a high proportion of young people in high paying jobs, the future prospects for the region are bright. The ensuing analysis also describes the prospects of the older part of the community (over 55) and whether high paying jobs are available. A progressive region will typically have a higher proportion of young people in high paying jobs relative to the older demographic.

The following tables show the proportion of 15-34 year olds and 55 and over earning less than $10,000, between 10K-30K, between 30K-50K and over 50K. The national average is shown on the bottom line of these tables to facilitate comparison.

Table 19.1 15-34 Year Old Earnings per annum – 2001	<10K	10-30K	30-50K	50K+
VIC Gippsland	36.2	39.3	18.6	5.9
QLD Fitzroy	32.4	36.4	21.9	9.3
QLD Mackay	28.1	39.4	21.6	10.9
QLD North West	23.1	33.2	22.7	21.0
WA Pilbara-Kimberly	26.6	28.0	22.9	22.5
WA Peel-South West	32.9	39.7	19.8	7.6
Darwin	21.3	31.3	37.2	10.3
NT Lingiari	47.7	24.4	19.4	8.6
National Average	29.6	35.2	25.1	10.1

There is no distinct trend when looking at these regions income distribution for 15 to 34 year olds. Most of the regions have a higher proportion of 15-34 year olds earning less than $10,000 than the national average. Also, other than Darwin, all the regions have less than the national average earning between 30K and 50K. Interestingly, the regions of North West Qld and Pilbara-Kimberly are more than double the national average when analysing those who earn over $50K. This is due to the fact that these are predominantly mining regions and occupations in this industry demands high wage rates.

Table 19.2 Over 55 Year Old Earnings per annum – 2001	<10K	10-30K	30-50K	50K+
VIC Gippsland	35.8	52.8	7.4	3.9
QLD Fitzroy	35.1	50.1	8.8	6.1
QLD Mackay	32.1	51.8	9.6	6.5
QLD North West	28.9	48.4	11.8	10.9
WA Pilbara-Kimberly	28.8	46.1	13.3	11.8
WA Peel-South West	36.0	50.6	8.6	4.8
Darwin	25.5	47.1	16.3	11.1
NT Lingiari	34.8	42.9	13.0	9.3
National Average	32.9	50.4	10.3	6.4

For the over 55 year olds, the trends for all the income distribution categories match closely to the national average. Darwin performs better than the national average in the higher earning categories as does Pilbara-Kimberly and North West for the same reasons discussed previously.

The table below shows the age distribution comparative to the national average. A score below 1 indicates that the region has less of that age demographic than the national average while a value greater than one implies more of that age demographic than the average. To understand how far the region is above or below the national average, the score below is subtracted from 1. (ie – VIC Gippsland for 15-34 is 14.9 per cent (1 – 0.851) below the national average for the 15-34 age demographic).

Table 19.3	Age Distribution – Compared to the national average		
Region	15-34	35-54	55+
VIC Gippsland	0.851	1.019	1.166
QLD Fitzroy	1.006	1.021	0.965
QLD Mackay	0.999	1.071	0.909
QLD North West	1.169	1.000	0.784
WA Pilbara-Kimberly	1.130	1.050	0.767
WA Peel-South West	0.910	1.057	1.040
Darwin	1.175	1.102	0.641

It is interesting that a number of these regions have far less over 55 year olds than the national average. Darwin, Pilbara-Kimberly and North West are the furthest from the national average with 35.9, 23.3 and 21.6 per cent less respectively. This is due to the relatively inhospitable nature of these regions, in terms of heat. Also, it is more difficult for this demographic to obtain work in these regions. These same 3 regions have a higher proportion of 15-34 year olds than the other resource based regions.

Overall, these regions typically have a higher than average proportion of young people who are employed in highly labour intensive jobs. There is a good opportunity to earn a high income in these regions due to the types of jobs available.

19.2   Unemployment
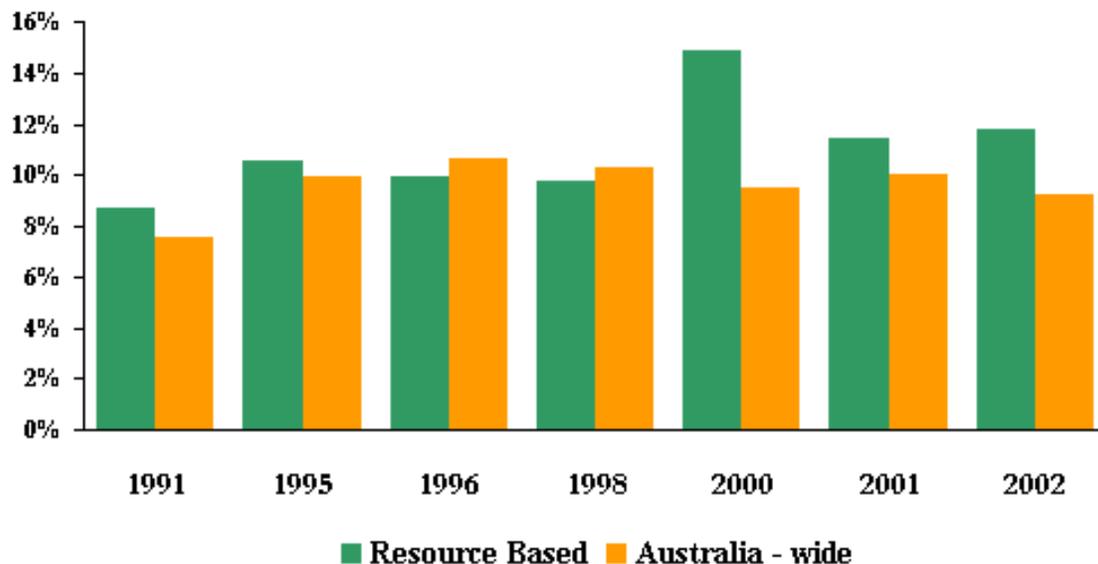
The unemployment rate of the resource based regions has matched relatively closely to the national average. Between 1991 and 1998, the unemployment rates were exceptionally close, with a difference of no more than 0.5 per cent over this time. In 2000 there was a massive jump in these regions unemployment rate but this fell down in 2001. Despite this, the gap between the resource based regions and the national average has widened again in 2002.

19.3   Creativity and Diversity

Table 19.4 Creativity Index	Score	SOR Rank	US Rank
NT Lingiari	238	27	243
WA Peel-South West	77	40	267
WA Gascoyne-Goldfields	75	41	267
WA Pilbara-Kimberly	51	44	n.a.
QLD Fitzroy	14	56	n.a.
QLD North West	8	58	n.a.
QLD Pastoral	7	62	n.a.

The creativity index is a measure combining the regions high-tech output, innovation, diversity and human capital.   The higher the creativity index, the more likely the regions future growth and prosperity potential. The highest ranked region is Lingiari, NT which despite being ranked 27th in Australia, is ranked lowly at 243rd in the USA. Despite the low rankings comparative to the USA, the US regions analysed were metropolitan regions. As such, these 'outback regions' naturally rank lower because the index is constructed using high-tech output and high-skilled human capital. Where the rank **n.a.** is shown, the score for the index is below the lowest scored region in the USA.

Table 19.5 Composite Diversity Index	US Rank	SOR Rank
NT Lingiari	78	16
WA Pilbara-Kimberly	130	35
WA Gascoyne-Goldfields	130	35
WA Peel-South West	153	40
QLD North West	158	41
QLD Fitzroy	168	50
QLD Pastoral	199	64

The composite diversity index measures a region's diversity in terms of its human capital and cultural amenities. The higher the regions diversity, the more likely the region's potential growth and prosperity (Chapter 6 of this report documents this analysis in far more depth). The resource based regions rank in the lower half of Australia in terms of diversity, except for Lingiari, NT.   The remoteness of these areas means that cultural amenities are not prevalent in these regions. Also, employment prospects for artists, sculptors and those employed in artistic occupations are lower than in regions closer to the main cities, and as such, these regions rank relatively low compared to the other regions. When comparing the ranks to the USA however, most of these regions rank between the 50th and 60th percentile.

19.4   Issues

❑   Developing infrastructure that encourages development. Pipelines, rail and road access to natural resources.

❑   Value adding of the resource base to create jobs and prosperity for the region.

❑   Alternative industry to decrease reliance on the natural resource base.

❑   Long-term planning to address the issue of commodity depletion.

❑   Look for alternative industries that build upon the regions endowment of natural resources. For regions such as Gippsland, Kimberley and NT, tourism based activity could be targeted.

❑   Create a situation where the region's population can increasingly share in the wealth created from the extraction of resources. Direct employment and structuring the regional economy by increasing the retail product being offering to resource-based employees are examples.

APPENDIX 1

INDEX OF LOCALITIES AND REGION MEMBERSHIP

A1.1   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
Aramac (S)	QLD Pastoral
Ararat (RC)	Central Highland
Armadale (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
Ballarat (C)	Central Highland
Ballina (A)	NSW Richond-Tweed
Balonne (S)	QLD Pastoral
Balranald (A)	NSW Murray
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
Belmont (C)	Perth Central
Belyando (S)	QLD Mackay
Bendemere (S)	QLD Pastoral
Berri and Barmera (DC)	SA Murraylands

Local Government Area	Region
Berrigan (A)	NSW Murray
Beverley (S)	WA Wheatbelt-Great Southern
Biggenden (S)	QLD Wide Bay-Burnett
Bingara (A)	NSW North
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
Bombala (A)	NSW South-East
Boonah (S)	QLD West Moreton
Booringa (S)	QLD Pastoral
Boorowa (A)	NSW South-East
Boroondara (C)	Melbourne East
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
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

Local Government Area	Region	Local Government Area	Region
Busselton (S)	WA Peel-South West	Concord (A)	Sydney Inner West
Byron (A)	NSW Richmond-Tweed	Coober Pedy (DC)	SA Eyre and Yorke
Cabonne (A)	NSW Central West	Cook (S)	QLD Far North
Caboolture (S)	Brisbane North	Coolah (A)	NSW Far and North West
Cairns (C)	QLD Far North	Coolamon (A)	NSW Murrumbidgee
Calliope (S)	QLD Fitzroy	Coolgardie (S)	WA Gascoyne-Goldfields
Caloundra (C)	QLD Sunshine Coast	Cooloola (S)	QLD Wide Bay-Burnett
Cambooya (S)	QLD Agricultural SW	Coomalie (CGC)	Darwin
Cambridge (T)	Perth Central	Cooma-Monaro (A)	NSW South-East
Camden (A)	Sydney Outer South West	Coonabarabran (A)	NSW Far and North West
Campaspe (S)	VC Goulburn	Coonamble (A)	NSW Far and North West
Campbelltown (C) NSW	Sydney Outer South West	Coorow (S)	WA Gascoyne-Goldfields
Campbelltown (C) SA	Adelaide Central	Cootamundra (A)	NSW Murrumbidgee
Canning (C)	Perth Outer South	Copmanhurst (A)	NSW Mid North Coast
Canterbury (C)	Sydney Mid West	Copper Coast (DC)	SA Eyre and Yorke
Capel (S)	WA Peel-South West	Corangamite (S)	VIC West
Cardinia (S)	Melbourne Westernport	Corowa (A)	NSW Murray
Cardwell (S)	QLD Far North	Corrigin (S)	WA Wheatbelt-Great Southern
Carnamah (S)	WA Gascoyne-Goldfields	Cottesloe (T)	Perth Central
Carnarvon (S)	WA Gascoyne-Goldfields	Cowra (A)	NSW Central West
Carpentaria (S)	QLD North West	Cranbrook (S)	WA Wheatbelt-Great Southern
Carrathool (A)	NSW Murrumbidgee	Crookwell (A)	NSW South-East
Casey (C)	Melbourne Westport	Crow's Nest (S)	QLD Agricultural SW
Ceduna (DC)	SA Eyre and Yorke	Croydon (S)	QLD Far North
Central Coast (M)	TAS North West	Cuballing (S)	WA Wheatbelt-Great Southern
Central Darling (A)	NSW Far and North West	Cue (S)	WA Gascoyne-Goldfields
Central Goldfields (S)	VIC Loddon	Culcairn (A)	NSW Murray
Central Highlands (M)	TAS Hobart-South	Cunderdin (S)	WA Wheatbelt-Great Southern
Cessnock (C)	NSW Hunter	Dalby (T)	QLD Agricultural SW
Chapman Valley (S)	WA Gascoyne-Goldfields	Dalrymple (S)	QLD North
Charles Sturt (C)	Adelaide Plains	Dalwallinu (S)	WA Wheatbelt-Great Southern
Charters Towers (C)	QLD North	Dandaragan (S)	WA Wheatbelt-Great Southern
Chinchilla (S)	QLD Agricultural SW	Dardanup (S)	WA Peel-South West
Chittering (S)	WA Wheatbelt-Great Southern	Darebin (C)	Melbourne North
Circular Head (M)	TAS North West	Darwin (C)	Darwin
Clare and Gilbert Valleys (DC)	SA Eyre and Yorke	Delatite (S)	VC Goulburn
Claremont (T)	Perth Central	Deniliquin (A)	NSW Murray
Clarence (C)	TAS Hobart-South	Denmark (S)	WA Wheatbelt-Great Southern
Cleve (DC)	SA Eyre and Yorke	Derby-West Kimberley (S)	WA Pilbara-Kimberly
Clifton (S)	QLD Agricultural SW	Derwent Valley (M)	TAS Hobart-South
Cloncurry (S)	QLD North West	Devonport (C)	TAS North West
Cobar (A)	NSW Far and North West	Diamantina (S)	QLD Pastoral
Cockburn (C)	Perth Outer South	Donnybrook-Balingup (S)	WA Peel-South West
Coffs Harbour (C)	NSW Mid North Coast	Dorset (M)	TAS North
Colac-Otway (S)	VIC Barwon	Douglas (S)	QLD Far North
Collie (S)	WA Peel-South West	Dowerin (S)	WA Wheatbelt-Great Southern
Conargo (A)	NSW Murray		

Local Government Area	Region
Drummoyne (A)	Sydney Inner West
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
Eidsvold (S)	QLD Wide Bay-Burnett
Elliston (DC)	SA Eyre and Yorke
Emerald (S)	QLD Fitzroy
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 (M)	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
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

Local Government Area	Region
Goondiwindi (T)	QLD Agricultural SW
Gosford (C)	NSW Central Coast
Gosnells (C)	Perth Outer South
Goulburn (C)	NSW South-East
Goyder (DC)	SA Eyre and Yorke
Grafton (C)	NSW Mid North Coast
Grant (DC)	SA South East
Great Lakes (A)	NSW Hunter
Greater Bendigo (C)	VIC Loddon
Greater Dandenong (C)	Melbourne Westport
Greater Geelong (C)	VIC Barwon
Greater Lithgow (C)	NSW Central West
Greater Shepparton (C)	VC 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
Gunning (A)	NSW South-East
Guyra (A)	NSW North
Halls Creek (S)	WA Pilbara-Kimberly
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)	Central Highland
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
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
Ilfracombe (S)	QLD Pastoral
Indigo (S)	VIC Ovens-Hume
Inglewood (S)	QLD Agricultural SW
Inverell (A)	NSW North
Ipswich (C)	QLD West Moreton

Local Government Area	Region	Local Government Area	Region
Irwin (S)	WA Gascoyne-Goldfields	Latrobe (S)	VIC Gippsland
Isis (S)	QLD Wide Bay-Burnett	Launceston (C)	TAS North
Isisford (S)	QLD Pastoral	Laverton (S)	WA Gascoyne-Goldfields
Jabiru (T)	NT Lingiari	Le Hunte (DC)	SA Eyre and Yorke
Jericho (S)	QLD Fitzroy	Leeton (A)	NSW Murrumbidgee
Jerilderie (A)	NSW Murray	Leichhardt (A)	Sydney Inner West
Jerramungup (S)	WA Wheatbelt-Great Southern	Leonora (S)	WA Gascoyne-Goldfields
Johnstone (S)	QLD Far North	Light (DC)	Adelaide Plains
Jondaryan (S)	QLD Agricultural SW	Lismore (C)	NSW Richond-Tweed
Joondalup (C)	Perth Outer North	Litchfield (S)	Darwin
Junee (A)	NSW Murrumbidgee	Liverpool (C)	Sydney Mid West
Kalamunda (S)	Perth Outer South	Livingstone (S)	QLD Fitzroy
Kalgoorlie/Boulder (C)	WA Gascoyne-Goldfields	Lockhart (A)	NSW Murrumbidgee
Kangaroo Island (DC)	SA Eyre and Yorke	Loddon (S)	VIC Loddon
Karoonda East Murray (DC)	SA Murraylands	Logan (C)	QLD Gold Coast
		Longreach (S)	QLD Pastoral
Katanning (S)	WA Wheatbelt-Great Southern	Lower Eyre Peninsula (DC)	SA Eyre and Yorke
Katherine (T)	NT Lingiari		
Kellerberrin (S)	WA Wheatbelt-Great Southern	Loxton Waikerie (DC)	SA Murraylands
Kempsey (A)	NSW Mid North Coast	Macedon Ranges (S)	VIC Loddon
Kent (S)	WA Wheatbelt-Great Southern	Mackay (C)	QLD Mackay
Kentish (M)	TAS North West	Maclean (A)	NSW Mid North Coast
Kiama (A)	NSW Illawarra	Maitland (C)	NSW Hunter
Kilcoy (S)	Brisbane North	Mallala (DC)	Adelaide Plains
Kilkivan (S)	QLD Wide Bay-Burnett	Mandurah (C)	WA Peel-South West
Kimba (DC)	SA Eyre and Yorke	Manilla (A)	NSW North
King Island (M)	TAS North West	Manjimup (S)	WA Peel-South West
Kingaroy (S)	QLD Wide Bay-Burnett	Manly (A)	Sydney Outer North
Kingborough (M)	TAS Hobart-South	Manningham (C)	Melbourne East
Kingston (C)	Melbourne South	Mareeba (S)	QLD Far North
Knox (C)	Melbourne East	Maribyrnong (C)	Melbourne West
Kogarah (A)	Sydney South	Marion (C)	Adelaide Central
Kojonup (S)	WA Wheatbelt-Great Southern	Maroochy (S)	QLD Sunshine Coast
Kolan (S)	QLD Wide Bay-Burnett	Maroondah (C)	Melbourne East
Kondinin (S)	WA Wheatbelt-Great Southern	Marrickville (A)	Sydney Mid West
Koorda (S)	WA Wheatbelt-Great Southern	Maryborough (C)	QLD Wide Bay-Burnett
Kulin (S)	WA Wheatbelt-Great Southern	McKinlay (S)	QLD North West
Ku-ring-gai (A)	Sydney Outer North	Meander Valley (M)	TAS North
Kwinana (T)	Perth Outer South	Meekatharra (S)	WA Gascoyne-Goldfields
Kyogle (A)	NSW Richond-Tweed	Melbourne (C)	Melbourne Inner
La Trobe (S)	VIC Gippsland	Melton (S)	Melbourne West
Lacepede (DC)	SA South East	Melville (C)	Perth Outer South
Lachlan (A)	NSW Central West	Menzies (S)	WA Gascoyne-Goldfields
Laidley (S)	QLD West Moreton	Merredin (S)	WA Wheatbelt-Great Southern
Lake Grace (S)	WA Wheatbelt-Great Southern	Merriwa (A)	NSW Hunter
Lake Macquarie (C)	NSW Hunter	Mid Murray (DC)	SA Murraylands
Lane Cove (A)	Global Sydney	Mildura (RC)	VIC Mallee-Wimmera
Latrobe (M)	TAS North West	Millmerran (S)	QLD Agricultural SW

Local Government Area	Region	Local Government Area	Region
Mingenew (S)	WA Gascoyne-Goldfields	Naracoorte and Lucindale (DC)	SA South East
Mirani (S)	QLD Mackay	Narembeen (S)	WA Wheatbelt-Great Southern
Miriam Vale (S)	QLD Wide Bay-Burnett	Narrabri (A)	NSW North
Mitcham (C)	Adelaide Central	Narrandera (A)	NSW Murrumbidgee
Mitchell (S)	VC Goulburn	Narrogin (S)	WA Wheatbelt-Great Southern
Moira (S)	VC Goulburn	Narrogin (T)	WA Wheatbelt-Great Southern
Monash (C)	Melbourne East	Narromine (A)	NSW Far and North West
Monto (S)	QLD Wide Bay-Burnett	Nebo (S)	QLD Mackay
Moonee Valley (C)	Melbourne West	Nedlands (C)	Perth Central
Moora (S)	WA Wheatbelt-Great Southern	Newcastle (C)	NSW Hunter
Moorabool (S)	VIC Central Highlands	Ngaanyatjarraku (S)	WA Gascoyne-Goldfields
Morawa (S)	WA Gascoyne-Goldfields	Nillumbik (S)	Melbourne North
Moree Plains (A)	NSW North	Noosa (S)	QLD Sunshine Coast
Moreland (C)	Melbourne North	North Sydney (A)	Global Sydney
Mornington (S)	QLD North West	Northam (S)	WA Wheatbelt-Great Southern
Mornington Peninsula (S)	Melbourne Westport	Northam (T)	WA Wheatbelt-Great Southern
		Northampton (S)	WA Gascoyne-Goldfields
Mosman (A)	Global Sydney	Northern Areas (DC)	SA Eyre and Yorke
Mosman Park (T)	Perth Central	Northern Grampians (S)	VIC Mallee-Wimmera
Mount Alexander (S)	VIC Loddon	Northern Midlands (M)	TAS North
Mount Barker (DC)	Adelaide Outer	Norwood Payneham St Peters (C)	Adelaide Central
Mount Gambier (C)	SA South East		
Mount Isa (C)	QLD North West	Nundle (A)	NSW North
Mount Magnet (S)	WA Gascoyne-Goldfields	Nungarin (S)	WA Wheatbelt-Great Southern
Mount Marshall (S)	WA Wheatbelt-Great Southern	Oberon (A)	NSW Central West
Mount Morgan (S)	QLD Fitzroy	Onkaparinga (C)	Adelaide Outer
Mount Remarkable (DC)	SA Eyre and Yorke	Orange (C)	NSW Central West
Moyne (S)	VIC West	Orroroo/Carrieton (DC)	SA Eyre and Yorke
Mudgee (A)	NSW Far and North West	Palmerston (C)	Darwin
Mukinbudin (S)	WA Wheatbelt-Great Southern	Parkes (A)	NSW Central West
Mullewa (S)	WA Gascoyne-Goldfields	Paroo (S)	QLD Pastoral
Mulwaree (A)	NSW South-East	Parramatta (C)	Sydney Mid West
Mundaring (S)	Perth Outer North	Parry (A)	NSW North
Mundubbera (S)	QLD Wide Bay-Burnett	Peak Downs (S)	QLD Fitzroy
Murchison (S)	WA Gascoyne-Goldfields	Penrith (C)	Sydney Outer West
Murgon (S)	QLD Wide Bay-Burnett	Peppermint Grove (S)	Perth Central
Murilla (S)	QLD Agricultural SW	Perenjori (S)	WA Gascoyne-Goldfields
Murray (A)	NSW Murray	Perry (S)	QLD Wide Bay-Burnett
Murray (S)	WA Peel-South West	Perth (C)	Perth Central
Murray Bridge (RC)	SA Murraylands	Peterborough (DC)	SA Eyre and Yorke
Murrindindi (S)	VC Goulburn	Pine Rivers (S)	Brisbane North
Murrumbidgee (A)	NSW Murrumbidgee	Pingelly (S)	WA Wheatbelt-Great Southern
Murrurundi (A)	NSW Hunter	Pittsworth (S)	QLD Agricultural SW
Murweh (S)	QLD Pastoral	Pittwater (A)	Sydney Outer North
Muswellbrook (A)	NSW Hunter	Plantagenet (S)	WA Wheatbelt-Great Southern
Nambucca (A)	NSW Mid North Coast	Playford (C)	Adelaide Plains
Nanango (S)	QLD Wide Bay-Burnett		
Nannup (S)	WA Peel-South West		

Local Government Area	Region
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 (C)	SA Eyre and Yorke
Port Pirie City and Dists (M)	SA Eyre and Yorke
Port Stephens (A)	NSW Hunter
Pristine Waters (A)	NSW Mid North Coast
Prospect (C)	Adelaide Central
Pyrenees (S)	VIC Central Highlands
Quairading (S)	WA Wheatbelt-Great Southern
Queanbeyan (C)	NSW South-East
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 Richond-Tweed
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
Salisbury (C)	Adelaide Plains
Sandstone (S)	WA Gascoyne-Goldfields
Sarina (S)	QLD Mackay
Scone (A)	NSW Hunter
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

Local Government Area	Region
South Gippsland (S)	VIC Gippsland
South Perth (C)	Perth Central
South Sydney (C)	Global Sydney
Southern Grampians (S)	VIC West
Southern Mallee (DC)	SA Murraylands
Southern Midlands (M)	TAS Hobart-South
Stanthorpe (S)	QLD Agricultural SW
Stirling (C)	Perth Central
Stonnington (C)	Melbourne Inner
Strathbogie (S)	VC 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
Tallaganda (A)	NSW South-East
Tambellup (S)	WA Wheatbelt-Great Southern
Tambo (S)	QLD Pastoral
Tammin (S)	WA Wheatbelt-Great Southern
Tamworth (C)	NSW North
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
The Coorong (DC)	SA Murraylands
Three Springs (S)	WA Gascoyne-Goldfields
Thuringowa (C)	QLD North
Tiaro (S)	QLD Wide Bay-Burnett
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 Murrumbidgee
Tweed (A)	NSW Richond-Tweed
Unincorporated ACT	ACT
Unincorporated NSW	NSW Far and North West
Unincorporated NT	NT Lingiari

Local Government Area	Region	Local Government Area	Region
Unincorporated SA	SA Eyre and Yorke	Willoughby (C)	Global Sydney
Unincorporated Vic	VIC Gippsland	Wiluna (S)	WA Gascoyne-Goldfields
Unincorporated WA	WA Pilbara-Kimberly	Windouran (A)	NSW Murray
Unley (C)	Adelaide Central	Wingecarribee (A)	NSW Illawarra
Upper Gascoyne (S)	WA Gascoyne-Goldfields	Winton (S)	QLD Pastoral
Uralla (A)	NSW North	Wodonga (RC)	VIC Ovens-Hume
Urana (A)	NSW Murray	Wollondilly (A)	Sydney Outer South West
Victor Harbor (DC)	Adelaide Outer	Wollongong (C)	NSW Illawarra
Victoria Park (T)	Perth Central	Wondai (S)	QLD Wide Bay-Burnett
Victoria Plains (S)	WA Wheatbelt-Great Southern	Wongan-Ballidu (S)	WA Wheatbelt-Great Southern
Vincent (T)	Perth Central	Woocoo (S)	QLD Wide Bay-Burnett
Wagga Wagga (C)	NSW Murrumbidgee	Woodanilling (S)	WA Wheatbelt-Great Southern
Waggamba (S)	QLD Agricultural SW	Woollahra (A)	Global Sydney
Wagin (S)	WA Wheatbelt-Great Southern	Wyalkatchem (S)	WA Wheatbelt-Great Southern
Wakefield (DC)	SA Eyre and Yorke	Wyndham (C)	Melbourne West
Wakool (A)	NSW Murray	Wyndham-East Kimberley (S)	WA Pilbara-Kimberly
Walcha (A)	NSW North		
Walgett (A)	NSW Far and North West	Wyong (A)	NSW Central Coast
Walkerville (M)	Adelaide Central	Yalgoo (S)	WA Gascoyne-Goldfields
Wambo (S)	QLD Agricultural SW	Yallaroi (A)	NSW North
Wandering (S)	WA Wheatbelt-Great Southern	Yankalilla (DC)	Adelaide Outer
Wangaratta (RC)	VIC Ovens-Hume	Yarra (C)	Melbourne Inner
Wanneroo (S)	Perth Outer North	Yarra Ranges (S)	Melbourne Westport
Waratah/Wynyard (M)	TAS North West	Yarriambiack (S)	VIC Mallee-Wimmera
Waroona (S)	WA Peel-South West	Yarrowlumla (A)	NSW South-East
Warren (A)	NSW Far and North West	Yass (A)	NSW South-East
Warringah (A)	Sydney Outer North	Yilgarn (S)	WA Wheatbelt-Great Southern
Warrnambool (C)	VIC West	York (S)	WA Wheatbelt-Great Southern
Warroo (S)	QLD Pastoral	Yorke Peninsula (DC)	SA Eyre and Yorke
Warwick (S)	QLD Agricultural SW	Young (A)	NSW South-East
Wattle Range (DC)	SA South East		
Waverley (A)	Global Sydney		
Weddin (A)	NSW Central West		
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		

A1.2 Index of region membership

Region	Local Government Area		Region	Local Government Area
ACT	Unincorporated ACT			Sydney (C)
Adelaide Central	Adelaide (C)			Waverley (A)
	Burnside (C)			Willoughby (C)
	Campbelltown (C) SA			Woollahra (A)
	Holdfast Bay (C)		Melbourne East	Boroondara (C)
	Marion (C)			Knox (C)
	Mitcham (C)			Manningham (C)
	Norwood Payneham St Peters (C)			Maroondah (C)
	Prospect (C)			Monash (C)
	Unley (C)			Whitehorse (C)
	Walkerville (M)		Melbourne Inner	Melbourne (C)
Adelaide Outer	Adelaide Hills (DC)			Port Phillip (C)
	Alexandrina (DC)			Stonnington (C)
	Barossa (DC)			Yarra (C)
	Mount Barker (DC)		Melbourne North	Banyule (C)
	Onkaparinga (C)			Darebin (C)
	Tea Tree Gully (C)			Hume (C)
	Victor Harbor (DC)			Moreland (C)
	Yankalilla (DC)			Nillumbik (S)
Adelaide Plains	Charles Sturt (C)			Whittlesea (C)
	Gawler (M)		Melbourne South	Bayside (C)
	Light (DC)			Glen Eira (C)
	Mallala (DC)			Kingston (C)
	Playford (C)		Melbourne West	Brimbank (C)
	Port Adelaide Enfield (C)			Hobsons Bay (C)
	Salisbury (C)			Maribyrnong (C)
	West Torrens (C)			Melton (S)
Brisbane City	Brisbane (C)			Moonee Valley (C)
Brisbane North	Caboolture (S)			Wyndham (C)
	Kilcoy (S)		Melbourne Westernport	Cardinia (S)
	Pine Rivers (S)			Casey (C)
	Redcliffe (C)			Frankston (C)
Darwin	Coomalie (CGC)			Greater Dandenong (C)
	Darwin (C)			Mornington Peninsula (S)
	Litchfield (S)			Yarra Ranges (S)
	Palmerston (C)		NSW Central Coast	Gosford (C)
Global Sydney	Botany Bay (C)			Wyong (A)
	Hunter's Hill (A)		NSW Central West	Bathurst (C)
	Lane Cove (A)			Bland (A)
	Mosman (A)			Blayney (A)
	North Sydney (A)			Cabonne (A)
	Randwick (C)			Cowra (A)
	Ryde (C)			Evans (A)
	South Sydney (C)			Forbes (A)
				Greater Lithgow (C)

Region	Local Government Area	Region	Local Government Area
	Lachlan (A)		Maclean (A)
	Oberon (A)		Nambucca (A)
	Orange (C)		Pristine Waters (A)
	Parkes (A)	NSW Murray	Albury (C)
	Rylstone (A)		Balranald (A)
	Weddin (A)		Berrigan (A)
NSW Far and North West	Bogan (A)		Conargo (A)
	Bourke (A)		Corowa (A)
	Brewarrina (A)		Culcairn (A)
	Broken Hill (C)		Deniliquin (A)
	Central Darling (A)		Holbrook (A)
	Cobar (A)		Hume (A)
	Coolah (A)		Jerilderie (A)
	Coonabarabran (A)		Murray (A)
	Coonamble (A)		Tumbarumba (A)
	Dubbo (C)		Urana (A)
	Gilgandra (A)		Wakool (A)
	Mudgee (A)		Wentworth (A)
	Narromine (A)		Windouran (A)
	Unincorporated NSW	NSW Murrumbidgee	Carrathool (A)
	Walgett (A)		Coolamon (A)
	Warren (A)		Cootamundra (A)
	Wellington (A)		Griffith (C)
NSW Hunter	Cessnock (C)		Gundagai (A)
	Dungog (A)		Hay (A)
	Gloucester (A)		Junee (A)
	Great Lakes (A)		Leeton (A)
	Lake Macquarie (C)		Lockhart (A)
	Maitland (C)		Murrumbidgee (A)
	Merriwa (A)		Narrandera (A)
	Murrurundi (A)		Temora (A)
	Muswellbrook (A)		Tumut (A)
	Newcastle (C)		Wagga Wagga (C)
	Port Stephens (A)	NSW North	Armidale Dumaresq (A)
	Scone (A)		Barraba (A)
	Singleton (A)		Bingara (A)
NSW Illawarra	Kiama (A)		Glen Innes (A)
	Shellharbour (C)		Gunnedah (A)
	Shoalhaven (C)		Guyra (A)
	Wingecarribee (A)		Inverell (A)
	Wollongong (C)		Manilla (A)
NSW Mid North Coast	Bellingen (A)		Moree Plains (A)
	Coffs Harbour (C)		Narrabri (A)
	Copmanhurst (A)		Nundle (A)
	Grafton (C)		Parry (A)
	Greater Taree (C)		Quirindi (A)
	Hastings (A)		Severn (A)
	Kempsey (A)		Tamworth (C)

Region	Local Government Area	Region	Local Government Area
	Tenterfield (A)		Bayswater (C)
	Uralla (A)		Joondalup (C)
	Walcha (A)		Mundaring (S)
	Yallaroi (A)		Swan (C)
NSW Richmond-Tweed	Ballina (A)		Wanneroo (S)
	Byron (A)	Perth Outer South	Armadale (C)
	Kyogle (A)		Canning (C)
	Lismore (C)		Cockburn (C)
	Tweed (A)		Gosnells (C)
	Richmond Valley (A)		Kalamunda (S)
NSW South-East	Bega Valley (A)		Kwinana (T)
	Bombala (A)		Melville (C)
	Boorowa (A)		Rockingham (C)
	Cooma-Monaro (A)	QLD Agricultural SW	Cambooya (S)
	Crookwell (A)		Chinchilla (S)
	Eurobodalla (A)		Clifton (S)
	Goulburn (C)		Crow's Nest (S)
	Gunning (A)		Dalby (T)
	Harden (A)		Goondiwindi (T)
	Mulwaree (A)		Inglewood (S)
	Queanbeyan (C)		Jondaryan (S)
	Snowy River (A)		Millmerran (S)
	Tallaganda (A)		Murilla (S)
	Yarrowlumla (A)		Pittsworth (S)
	Yass (A)		Rosalie (S)
	Young (A)		Stanthorpe (S)
NT Lingiari	Alice Springs (T)		Tara (S)
	Jabiru (T)		Taroom (S)
	Katherine (T)		Toowoomba (C)
	Tennant Creek (T)		Waggamba (S)
	Unincorporated NT		Wambo (S)
Perth Central	Belmont (C)		Warwick (S)
	Cambridge (T)	QLD Far North	Atherton (S)
	Claremont (T)		Aurukun (S)
	Cottesloe (T)		Cairns (C)
	East Fremantle (T)		Cardwell (S)
	Fremantle (C)		Cook (S)
	Mosman Park (T)		Croydon (S)
	Nedlands (C)		Douglas (S)
	Peppermint Grove (S)		Eacham (S)
	Perth (C)		Etheridge (S)
	South Perth (C)		Herberton (S)
	Stirling (C)		Johnstone (S)
	Subiaco (C)		Mareeba (S)
	Swan (C)		Torres (S)
	Victoria Park (T)	QLD Fitzroy	Banana (S)
	Vincent (T)		Bauhinia (S)
Perth Outer North	Bassendean (T)		Calliope (S)

Region	Local Government Area	Region	Local Government Area
	Duaringa (S)		Longreach (S)
	Emerald (S)		Murweh (S)
	Fitzroy (S)		Paroo (S)
	Gladstone (C)		Quilpie (S)
	Jericho (S)		Roma (T)
	Livingstone (S)		Tambo (S)
	Mount Morgan (S)		Warroo (S)
	Peak Downs (S)		Winton (S)
	Rockhampton (C)	QLD Sunshine Coast	Caloundra (C)
QLD Gold Coast	Beaudesert (S)		Maroochy (S)
	Gold Coast (C)		Noosa (S)
	Logan (C)	QLD West Moreton	Boonah (S)
	Redland (S)		Esk (S)
QLD Mackay	Belyando (S)		Gatton (S)
	Broadsound (S)		Ipswich (C)
	Mackay (C)		Laidley (S)
	Mirani (S)	QLD Wide Bay-Burnett	Biggenden (S)
	Nebo (S)		Bundaberg (C)
	Sarina (S)		Burnett (S)
	Whitsunday (S)		Cooloola (S)
QLD North	Bowen (S)		Eidsvold (S)
	Burdekin (S)		Gayndah (S)
	Charters Towers (C)		Hervey Bay (C)
	Dalrymple (S)		Isis (S)
	Hinchinbrook (S)		Kilkivan (S)
	Thuringowa (C)		Kingaroy (S)
	Townsville (C)		Kolan (S)
QLD North West	Burke (S)		Maryborough (C)
	Carpentaria (S)		Miriam Vale (S)
	Cloncurry (S)		Monto (S)
	Flinders (S)		Mundubbera (S)
	McKinlay (S)		Murgon (S)
	Mornington (S)		Nanango (S)
	Mount Isa (C)		Perry (S)
	Richmond (S)		Tiaro (S)
QLD Pastoral	Aramac (S)		Wondai (S)
	Balonne (S)		Woocoo (S)
	Barcaldine (S)	SA Eyre and Yorke	Barunga West (DC)
	Barcoo (S)		Ceduna (DC)
	Bendemere (S)		Clare and Gilbert Valleys (DC)
	Blackall (S)		Cleve (DC)
	Booringa (S)		Coober Pedy (DC)
	Boulia (S)		Copper Coast (DC)
	Bulloo (S)		Elliston (DC)
	Bungil (S)		Flinders Ranges (DC)
	Diamantina (S)		Franklin Harbor (DC)
	Ilfracombe (S)		Goyder (DC)
	Isisford (S)		Kangaroo Island (DC)

Region	Local Government Area	Region	Local Government Area
	Kimba (DC)	Sydney Outer North	Baulkham Hills (A)
	Le Hunte (DC)		Hornsby (A)
	Lower Eyre Peninsula (DC)		Ku-ring-gai (A)
	Mount Remarkable (DC)		Manly (A)
	Northern Areas (DC)		Pittwater (A)
	Orroroo/Carrieton (DC)		Warringah (A)
	Peterborough (DC)	Sydney Outer South West	Camden (A)
	Port Augusta (C)		Campbelltown (C) NSW
	Port Lincoln (C)		Wollondilly (A)
	Port Pirie City and Dists (C)	Sydney Outer West	Blue Mountains (C)
	Roxby Downs (M)		Hawkesbury (C)
	Streaky Bay (DC)		Penrith (C)
	Tumby Bay (DC)	Sydney South	Hurstville (C)
	Unincorporated SA		Kogarah (A)
	Wakefield (DC)		Rockdale (C)
	Whyalla (C)		Sutherland Shire (A)
	Yorke Peninsula (DC)	TAS Hobart-South	Brighton (M)
	Port Pirie City and Dists (M)		Central Highlands (M)
SA Murraylands	Berri and Barmera (DC)		Clarence (C)
	Karoonda East Murray (DC)		Derwent Valley (M)
	Loxton Waikerie (DC)		Glamorgan/Spring Bay (M)
	Mid Murray (DC)		Glenorchy (C)
	Murray Bridge (RC)		Hobart (C)
	Renmark Paringa (DC)		Huon Valley (M)
	Southern Mallee (DC)		Kingborough (M)
	The Coorong (DC)		Sorell (M)
SA South East	Grant (DC)		Southern Midlands (M)
	Lacepede (DC)		Tasman (M)
	Mount Gambier (C)	TAS North	Break O'Day (M)
	Naracoorte and Lucindale (DC)		Dorset (M)
	Robe (DC)		Flinders (M)
	Tatiara (DC)		George Town (M)
	Wattle Range (DC)		Launceston (C)
Sydney Inner West	Ashfield (A)		Meander Valley (M)
	Burwood (A)		Northern Midlands (M)
	Concord (A)		West Tamar (M)
	Drummoyne (A)	TAS North West	Burnie (C)
	Leichhardt (A)		Central Coast (M)
	Strathfield (A)		Circular Head (M)
Sydney Mid West	Auburn (A)		Devonport (C)
	Bankstown (C)		Kentish (M)
	Blacktown (C)		King Island (M)
	Canterbury (C)		Latrobe (M)
	Fairfield (C)		Waratah/Wynyard (M)
	Holroyd (C)		West Coast (M)
	Liverpool (C)	VC Goulburn	Campaspe (S)
	Marrickville (A)		Delatite (S)
	Parramatta (C)		Greater Shepparton (C)

Region	Local Government Area	Region	Local Government Area
	Mitchell (S)		Chapman Valley (S)
	Moira (S)		Coolgardie (S)
	Murrindindi (S)		Coorow (S)
	Strathbogie (S)		Cue (S)
VIC Barwon	Colac-Otway (S)		Dundas (S)
	Golden Plains (S)		Esperance (S)
	Greater Geelong (C)		Exmouth (S)
	Queenscliffe (B)		Geraldton (C)
	Surf Coast (S)		Greenough (S)
VIC Central Highlands	Ararat (RC)		Irwin (S)
	Ballarat (C)		Kalgoorlie/Boulder (C)
	Hepburn (S)		Laverton (S)
	Moorabool (S)		Leonora (S)
	Pyrenees (S)		Meekatharra (S)
VIC Gippsland	Bass Coast (S)		Menzies (S)
	Baw Baw (S)		Mingenew (S)
	East Gippsland (S)		Morawa (S)
	La Trobe (S)		Mount Magnet (S)
	South Gippsland (S)		Mullewa (S)
	Unincorporated Vic		Murchison (S)
	Wellington (S)		Ngaanyatjarraku (S)
	Latrobe (S)		Northampton (S)
VIC Loddon	Central Goldfields (S)		Perenjori (S)
	Greater Bendigo (C)		Ravensthorpe (S)
	Loddon (S)		Sandstone (S)
	Macedon Ranges (S)		Shark Bay (S)
	Mount Alexander (S)		Three Springs (S)
VIC Mallee-Wimmera	Buloke (S)		Upper Gascoyne (S)
	Gannawarra (S)		Wiluna (S)
	Hindmarsh (S)		Yalgoo (S)
	Horsham (RC)	WA Peel-South West	Augusta-Margaret River (S)
	Mildura (RC)		Boddington (S)
	Northern Grampians (S)		Boyup Brook (S)
	Swan Hill (RC)		Bridgetown-Greenbushes (S)
	West Wimmera (S)		Bunbury (C)
	Yarriambiack (S)		Busselton (S)
VIC Ovens-Hume	Alpine (S)		Capel (S)
	Indigo (S)		Collie (S)
	Towong (S)		Dardanup (S)
	Wangaratta (RC)		Donnybrook-Balingup (S)
	Wodonga (RC)		Harvey (S)
VIC West	Corangamite (S)		Mandurah (C)
	Glenelg (S)		Manjimup (S)
	Moyne (S)		Murray (S)
	Southern Grampians (S)		Nannup (S)
	Warrnambool (C)		Serpentine-Jarrahdale (S)
WA Gascoyne-Goldfields	Carnamah (S)		Waroona (S)
	Carnarvon (S)	WA Pilbara-Kimberly	Ashburton (S)

Region	Local Government Area
	Broome (S)
	Derby-West Kimberley (S)
	East Pilbara (S)
	Halls Creek (S)
	Port Hedland (T)
	Roebourne (S)
	Wyndham-East Kimberley (S)
	Unincorporated WA
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)
	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)

Region	Local Government Area
	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)

APPENDIX 2

NATIONAL ECONOMICS & YOURPLACE

NATIONAL ECONOMICS
BACKGROUND AND EXPERIENCE

The National Institute of Economic and Industry Research (NIEIR), trading as *National Economics*, was founded in 1984 as a private economic research, consulting and training group serving clients in the public and private sectors. Our clients include many of Australia's largest and most dynamic corporations as well as all levels of government. A wide variety of long term international projects have been undertaken as *National Economics* continues to develop an array of international capabilities in line with Australia's growing international economic focus.

The work of *National Economics* is divided into two streams, one financed by subscriptions and the other by commissioned consultancy advice, studies and reports. The streams are complementary in that much of the consultancy work uses as background the economic forecasts and projections prepared for subscribers while the detailed sectoral knowledge gained in consultancy work is fed back into the models, forecasts and projections.

With over 20 years applied economic and consultancy work behind it *National Economics* has built up a considerable body of intellectual capital, both in terms of the expertise of its staff and the data sets and econometric analyses available for application to clients needs. A major part of this capital is *National Economics'* IMP modelling suite, a range of powerful forecasting and analysis tools which give National Economics "leading edge" capability in national, state, regional and local area economic and business analysis. Other formal models include:

♦ national and state quarterly, medium and long term models producing forecasts from six quarters to 30 years ahead

♦ an energy sector model with greenhouse impact and electricity load curve projection capability

♦ economic activity "leading indicator" models, freight and transport & retail dynamics & models establishing equity performance indicators for industries

♦ detailed industry modelling with forecasting for 130 industry sectors and international trade assessments

♦ models for assessing household level economic activity and the consequences of short term policy changes, and local area consumer demands down to groups of 200 to 300 households, through our *PopInfo, SpendInfo* and *YourPlace* data services.

YourPlace (at LGA level with trend data and extensive local social and economic indices) is now accessible on line through group agreements So too is an advisory service for subscribers

♦ regional models and forecasting covering all regions in Australia down to the Statistical Division and local government area levels. An annual nationwide stocktake of regional trends, undertaken in collaboration with the Australian Local Government Association is published as the *State of the Regions* reports.

Purpose built models are developed for specific consulting projects, strategy analysis, infrastructure planning, catchment management, investment assessment and cost-benefit analysis, information support and training .

National Economics' staff have a strong belief in the need for an integrated approach to industry analysis and forecasting and to relevant consultations and bring an array of tools and expertise which ensures that all relevant parameters are accounted for in meeting the client's needs. Joint consortia arrangements are also possible. These capabilities will continue to be critical to the development of competitive advantage for *National Economics'* clients as increasing domestic and international competition together with deregulation and privatisation bring more and more of Australia's economic activity to the rigours of detailed analysis.

For further information about *National Economics'* services please contact us

Melbourne:
416 Queens Parade
Clifton Hill, VIC, 3068
Telephone: (03) 9488 8444
Facsimile: (03) 9482 3262
Email: admin@nieir.com.au

Canberra:
5 Swinden St
Downer ACT 2602
Tel/fax: 02 62412 302
Mobile: 0407 412 303
Email: geddem@ozemail.com.au

Sydney:
Suite GO2/Bay 9
Locomotive Workshop
Australian Technology Park
Eveleigh, NSW, 1430
Telephone: 0419 429198
Email: nieirsyd@nieir.com.au

National Economics

State of the Regions – previous reports

This national economic stocktake of Australian regions has become an annual report, which stresses major evolving themes each year, which reflect the current economic environments and progress in national policy and community initiative and experience.

Obviously not all issues are covered each year. The 3 years' previous reports have, together with the concurrent development of NIEIR's growing and extensive data bases and services, constituted a major record and resource for Australia's regional actors and investors.

They are accessible through National Economics (NIEIR) and the ALGA – see contacts at end of this report. Inquiries and comments of course are welcome on these reports and in the data services of NIEIR including the LGA level data services of YourPlace, YourPlace Input-Output, SpendInfo, PopInfo, Retail 200. Considerable components of these analyses may be accessible at smaller area levels down to collection districts, of around 200 households and postcodes, and they may be related to sectoral, corporate, and state and national pictures and modelling.

State of the Regions 1999 emphasised the unevenness of national economic recovery and its geographically concentrated benefits, especially in the global cities of Sydney and Melbourne, while rural regions remained vulnerable to 'shocks'. Aspects of micro economic and taxation reform had not reached numbers of regions.

Australia's territorial policies lagged those of the USA and the EU including in policies to develop industry clusters, ICT strengths, labour force skills enrichment, SME innovation and take up of essential technologies. The challenges of knowledge based economies and new learning approaches confronted us as did the need to accelerate the roles of local authorities in partnerships to build regional capacity and national economic and social coherence.

State of the Regions 2000 advanced the understanding of the challenges of global forces and the digital 'revolution', the patchiness of regional economic performance and viscous regional cycles of economic and social stagnation where we were not able to address them.

It advanced detailed examinations of the sustained real levels of persistent regional under utilisations of the workforce, patterns of population drift, lagging investment and patterns of households exposure to debt. International policy and program experience and challenges were set out as were approaches to support further innovation in agriculture related innovation.

A sober examination of the different impacts and challenges of ICT change in regions between B2B and B2 Household impacts underlined opportunities and efforts (in an international environment before the coming fall out in e-commerce giants.

Detailed networks (or clusters) of value adding chains of enterprises in regions provided a substantial support to guide hard working local economic development agents of all sorts including active councils. A broad national program of action was advanced building on those Australian experiences further documented in the report and that of other countries especially of Europe, including of Ireland nicknamed the Celtic Tiger.

State of the Regions 2001 identifies six major regional types (in the 67 regions used for Australia) and some of their features with numbers of Australian case studies underlining local strategic initiatives, sets out expanded cases studies of Australian as well as overseas initiative, this time drawing especially from the learning networked regions of Europe.

In its framework for knowledge based regional economies it called for a national commitment to Leaning Regions Program, a call endorsed by the ALGA Executive.

Its capacity as a source book advanced with the inclusion of an appendix of regional indicators for all regions, which can be supplemented by the NIEIR *YourPlace* data service from an LGA level upwards on CD-Rom and now on line.

APPENDIX 3

MITCHELL RESOURCE INTELLIGENCE

Mitchell Resource Intelligence

Proud Contributors to the State of the Regions Report
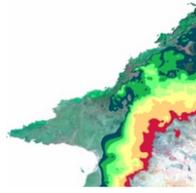
MRI CliMap
Climate mapping and analysis of rainfall, temperature and a range of other climatic factors.
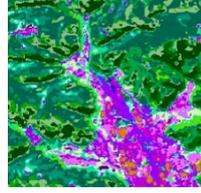
MRI VegeMap
Land cover, land use, native vegetation and forestry assessment and analysis.

MRI CropMap
Crop yield mapping and monitoring including crop type, vigour and condition variations
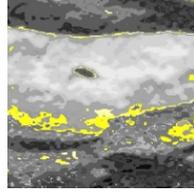
MRI SalinityMap
Detailed salinity (EC), hazard and risk maps, outlining salinity pathways and accession areas
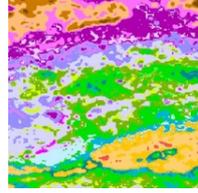
MRI SoilMap ™
Soil property mapping including profile descriptions for texture, thickness, depth, pH, Eh (pe), EC and dispersability.
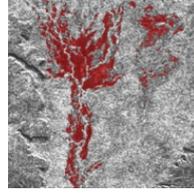
MRI HydroMap
Mapping of water resources, including surface drainage and saturation variations, water storages, and groundwater exploration.
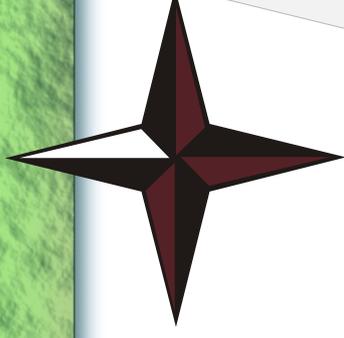
39 Geils Court Deakin ACT 2602
www.resourceintelligence.net

02 6285 9966

"Now employing ERIC Technology"

APPENDIX 4

INDICATOR EXPLANATIONS

A4.1   Regional indicators

This section provides an explanation and exposition into 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 terms 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 2002 population was derived from the household growth for 2001/2002 and constrained to 2002 state population growth. The 2002 household total was derived by increasing the 2001 household total by the number of dwelling approvals.

Households: The number of Households per region uses the *ABS Census* for 1998 and 2001. As the household data for 2002 will not be available until late 2002, an estimation procedure is necessary for the 2002 levels.

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 2001 an over estimation will occur. This is because of 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, Workplace Relations and Small Business* (DEWRSB). 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.

The average DEWRSB 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 (NE) measure of employment. It is the workforce as defined by NE, minus the estimated NE 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 (i.e. at a level greater than population growth), Youth allowance as a non student and an estimate of students on youth allowance who are unemployed and undertaking compulsory training etc. This latter measure is based on demographic trends and microsimulation.

Structural unemployment *(note redefinition since 2001): 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.

DEWRSB unemployment: This is the unemployment rate produced by the *Department of Employment, Workplace Relations and Small Business* (DEWRSB). 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 2002. In addition, a ranking of the growth in the net flow of funds between 2002 and 1999 is provided.

The individual components and their derivation are presented in the following sections. All per capita amounts are derived using ABS population estimates for 1999, 2001 and provisional estimates for 2002.

Wages, salaries and farm income

This measure is in part derived from the 1999/00 Taxation Statistics. The taxation statistics present a total income for a region as well as a number of the sub-components. The wages and salaries components are explicitly provided. In order to balance to national accounts these amounts are rescaled to state control totals. 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. The change in income between 1999/00 and 2002 is based on employment and income trends at the local levels, and further benchmarked to state control totals.

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. The upturn in the farm sector since 1999 has been captured using industry specific factors, state control totals and local employment trends.

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 2002 figure has been adjusted by state control totals.

There is a shortfall in the methodology because the regional differences in the impact of the tax cuts have not be adequately incorporated. As the incidence of the tax cut is disproportionately beneficial to higher income earners, in terms of the total tax cut received this will tend to underestimate the positive impacts of the cuts in the wealthier areas. The bias therefore tends to reduce the regional variation in year 2001. The order of the bias however, is likely to be less than 1% of the net flow of funds.

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. The changes in this value from 2001 to 2002 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 2002 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 2001 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 these expenditure estimates and details of GST excluded goods estimates of the total GST paid are derived. These amounts are balanced to state control totals.

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

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

Occupation/Creative Class

The analysis in this section draws on the work undertaken by Professor Richard Florida of Carnegie Mellon University, America in considering the importance of creative people and their role in regional economic development. National Economics has ranked each region in Australia based on its contribution to high-tech output and analysed the composition of the workforce in these regions. It has been found that those regions that attract creative, talented people rank higher in the output of high-tech industries such as electronics, telecommunications, computing & related occupations. Regions that are seen as accepting to alternative views and provide a diversity of lifestyle options are most likely to attract these creative people and hence enjoy relatively greater prosperity.

The following occupational definitions were used to classify the workforce and highlight those regions that have a high concentration of creative people. Global Sydney, Inner Melbourne and the ACT are the top 3 ranked regions in terms of creative occupations. The opportunity to find well-paid, stimulating employment that is balanced by attractive lifestyle choices ensures the main capital cities and suburban fringes rank higher than rural and country areas.

Super Creative Class	Creative Professionals
Computer and mathematical occupations	Management occupations
Architecture and engineering occupations	Business and financial operations occupations
Life, physical and social science occupations	Legal occupations
Education, training and library occupations	Healthcare practitioners and technical occupations
Arts, design, entertainment, sports and media occupations	High-end sales and sales management
Working Class	**Service Class**
Construction and extraction occupations	Health car support occupations
Installation, maintenance and repair occupations	Food preparation and food-service-related occupations
Production occupations	Building and grounds cleaning and maintenance occupations
Transportation and material moving occupations	Personal care and service occupations
	Low-end sales and related occupations
	Office and administrative support occupations
	Community and social services occupations
	Protective service occupations
Agriculture	
Farming, fishing and forestry occupations	

To determine the concentration of creative people in the various regions, the following indexes of creativity were used.

The Bohemian Index

Is used as a measure of artistically creative people. The index is calculated by obtaining the proportion of the workforce employed in occupations such as authors, designers, musicians, composers, actors, directors, painters, sculptors, artist printmakers, photographers, dancers, artists and performers and dividing it by the national average.

The Diversity Index

This index is the proportion of same-sex couples of all couples in Australia divided by the national average.

The Melting Pot Index

The melting pot index is the proportion of the population who are foreign born.

Composite Diversity Index

Combines the diversity index, the melting pot index and the bohemian index (equally weighted) and ranks them compared to regions in the USA.

High-Tech Index

Is a joint measure of the proportion of Australia's high-tech output contributed by the region, and the share total regional output that is considered high-tech.

Innovation Index (Patents)

The innovation index is a measure of the patent applications per 100,000 capita. The data is 2001 patent applications and is provided by the Australian patent office (IP Australia).

Creativity Index

This is a measure based on 4 of the previous indexes, the innovation index, the high-tech index, the diversity index and the creative class. The score is calculated by subtracting the individual rankings of each indicator from 1076.

The inner regions of metropolitan Sydney and Melbourne were found to rank the highest in terms of high-tech industries and consistently ranked in the top 5 in the alternative measures of a creative workforce. These regions provide the opportunity for creative thinkers to prosper while offering recreational facilities that are socially and culturally diverse.

Social

In an attempt to gain a greater understanding of the various household structures in which people in Australia live, National Economics has developed 43 different household definitions. These definitions include households such as those receiving different forms of Social Security, households occupied by singles or couples only, high income households, self-employed households and DINKS (Duel-Income No-Kids Couple). The 1998-99 Household Expenditure survey (HES) was used to provide the initial estimates of the number of households of a given type. Microsimulation was then

used to estimate the number of households during 2002 within a given geographical region. Of the 43 households analysed, the following 4 have been included in this years report.

Very Poor Households

This category attempts to capture those households that experience extreme financial hardship, experience cash flow problems and find it difficult to meet many of the daily expenses. These households do not receive any form of Vet Affairs Pension, Age Pension, Overseas Pension or Benefit and experienced at least 4 of the following;

❑   could not afford to have a night out once a fortnight, or

❑   could not afford brand new clothes, or

❑   spend more money than they receive, or

❑   could not afford to pay gas, electricity or telephone bills, or

❑   pawned or sold something, or

❑   went without meals, or

❑   was unable to heat the home due to a shortage of money

Unemployed Families

This category represents households that have dependent children where neither parent is gainfully employed or receive Vet Affairs Pension, Age Pension or Overseas Pension or Benefit. This is a very important measure in the evaluation of a region strength, as the Australia average is such that 1 in 6 children lives in a household without employment. The long-term detrimental consequences of such are very high, and as such this measure should be constantly updated.

Social Security Dependent households

Social Security dependent household are those households that rely on welfare payments as their principal source of income. These households have dependent children, their total weekly unearned income as a percentage of total gross Income exceeds 30% and they do not receive any form of Vet Affairs Pension, Age Pension, Overseas Pension or Benefit.

ICONS

These are households whose spending priority is focused on themselves. The spending patterns of these households is characterised by more than 25% of total expenditure being directed towards personal care, recreation and miscellaneous goods and services. These households are gainfully employed and often sacrifice spending on traditional items such as holidays and clothes in order to increase their consumption of personal activities.

The following tables show those regions that have the highest and lowest proportion of households as defined above.

Unemployed Families - Highest		Unemployed Families – Lowest	
Region	%	Region	%
Sydney Outer South West	16.7%	Global Sydney	5.9%
Sydney Mid West	14.5%	Melbourne Inner	6.0%
QLD West Moreton	13.1%	Sydney Outer North	6.3%
NT Lingiari	13.0%	Adelaide Central	6.5%
Brisbane North	12.6%	Melbourne South	7.0%
Melbourne West	12.6%	Perth Central	7.2%
NSW Mid North Coast	12.4%	Sydney Inner West	7.6%
NSW Richmond-Tweed	12.2%	Melbourne East	7.6%
Sydney Outer West	12.0%	Sydney South	7.9%
Adelaide Plains	11.9%	SA South East	8.3%

Very Poor Households – Highest		Very Poor Households – Lowest	
Region	%	Region	%
NT Lingiari	15.4%	Sydney Outer North	5.9%
Sydney Outer South West	15.3%	Global Sydney	7.0%
NSW Richmond-Tweed	14.5%	Melbourne East	7.3%
NSW Mid North Coast	14.3%	Sydney South	7.7%
QLD Wide Bay-Burnett	14.0%	Sydney Inner West	7.7%
QLD Sunshine Coast	13.9%	Melbourne South	8.0%
QLD West Moreton	13.8%	Melbourne Inner	8.6%
Brisbane North	13.7%	Adelaide Central	8.7%
QLD Far North	13.7%	Perth Central	9.5%
TAS North West	13.5%	ACT	9.7%

Social Security Dependent Households - Highest		Social Security Dependent Households – Lowest	
Region	%	Region	%
Sydney Outer South West	19.7%	Melbourne Inner	7.9%
NT Lingiari	17.2%	Global Sydney	8.4%
Sydney Mid West	17.2%	Adelaide Central	8.5%
QLD West Moreton	16.5%	Melbourne South	9.2%
NSW North	16.0%	Perth Central	9.3%
NSW Mid North Coast	15.6%	Sydney Outer North	9.6%
QLD Wide Bay-Burnett	15.5%	Sydney Inner West	9.9%
NSW Far and North West	15.4%	Melbourne East	10.2%
Brisbane North	15.4%	Sydney South	10.3%
NSW Richmond-Tweed	15.3%	Brisbane City	11.0%

ICONS – Highest		ICONS – Lowest	
Region	%	Region	%
Sydney Outer North	7.6%	Adelaide Plains	3.3%
Melbourne East	6.6%	NSW Mid North Coast	3.4%
ACT	6.6%	SA Murraylands	3.4%
Global Sydney	6.3%	QLD Wide Bay-Burnett	3.4%
Melbourne Inner	5.8%	NSW Richmond-Tweed	3.5%
Sydney Inner West	5.8%	SA Eyre and Yorke	3.6%
Sydney South	5.7%	TAS North West	3.7%
Brisbane City	5.7%	QLD Sunshine Coast	3.8%
Melbourne South	5.6%	NSW Central Coast	3.8%
WA Pilbara-Kimberly	5.5%	VIC Mallee-Wimmera	3.9%

The tables highlight the disparity of wealth throughout the regions of Australia and the strong association between unemployed, social security recipients & very poor households. As expected, those regions most heavily represented by unemployed families and social security dependent families are also the poorest regions and vice versa. NT Lingiari, which covers Alice Springs, Katherine and Tennant Creek has a high concentration of Aboriginal Communities while Sydney Outer South West is characterised by an uneven distribution of industries and a relatively low skills base. The Richmond-Tweed and mid north coast areas appeal to both young people and retirees who are attracted by the climate, lifestyle, and improved housing affordability. With the decline in industries such as manufacturing, mining, forestry, logging and dairy, there is often not the job growth to match the population increase in these areas. A similar scenario exists for QLD West Moreton, QLD Sunshine Coast & QLD Wide Bay-Burnett regions which have higher than average participation rates and labour force growth but insufficient industry and employment growth.

The major capital cities and immediate surrounds are characterised by low levels of unemployment and hence low levels of poverty. Melbourne, and in particular Sydney have been major beneficiaries of globalisation and the increase in knowledge based employment.

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.

Construction

Building approvals per capita: This measures the increase in dwelling approvals by region over the period 1998-2001. The approvals data is for the number of new dwellings and excludes additions and alterations. The data is collected for the years 1998, 1999, 2000, 2001 and 2002 and summed. So the value is a cumulative sum. This is divided by the residential population in the base year 1998 to produce a value per person.

Commercial floor space stock per capita: This measures the average level of commercial floor space over the period 1998-2002. Commercial construction includes, offices, shops, factories, entertainment and recreation facilities, health care and educational facilities..

The data is collected for the years 1998, 1999, 2000 and 2001 and summed. So the value is a cumulative sum. This is divided by the residential population in the base year 1998 to produce a value per person. The measure is designed to highlight area with strong local capacity.

Environment

Annual Rainfall

The value applied to rainfall represents the most common value recorded across a region. For example, if the rainfall across most of the region is 600 mm then the entire region will be recorded as having had 600 mm.

Seasonality

Shows which season delivers the majority of a region's rain. The general classifications are summer, winter and uniform. Summer dominance in rainfall reflects a tropical effect and includes monsoonal rain. Winter dominance is typical of temperate areas. Rainfall tends to be uniformly distributed across seasons in regions located between the tropical and temperate influences.

The significant difference between summer and winter dominance relates to the effectiveness of rainfall for soil water recharge and plant growth. Rainfall in northern areas falls in summer during periods of high potential evaporation and this reduces the water use efficiency by plants compared with winter dominant regions.

The potential negative aspect of winter dominance, or a Mediterranean climate, is illustrated by the winter dominated areas of mainland Australia. These areas are most susceptible to dryland salinity. Tasmania is not as affected due to the higher rainfall.

Variability

Effectively identifies the level of variation between dry and wet years. Areas with low variability tend to be less effected by drought. High variability areas are those that experience large changes in annual rainfall and are prone to become drought effected.

The regions with low variability tend to be located in the south-east and south-west and reflect a combination of coastal influence and the reliability of the winter rainfall influences over southern Australia. The regions with highest variability are located away from the coast between regions with winter and summer rainfall dominance.

Days below Zero

Represents the degree of frost risk in each region. This risk is based on the total number of days annually where the minimum temperature drops below zero. High-risk areas experience many days where temperatures drop below zero, while low risk areas experience very few.

The highest risk areas are Tasmania and the regions located along the southern end of the Great Dividing Range. The medium risk areas are the plains regions, which on the mainland are the main cropping areas. The reasons for the medium risk relate to topography and the weather pattern. Winter winds tend from the south-west and are cold. Still nights that occur over winter are highly conducive to radiation frosting. The flat terrain limits the drainage of cold air hence large areas are subject to frost risk.

It should be noted that patterns of cold air drainage within frost prone regions strongly influence the realised risk. Upper slopes have lower risk while the risk is greatly enhanced in gullies and on flats.

Evapotranspiration

Evapotranspiration is the combination of water that is evaporated and transpired by plants as a part of their metabolic processes. Trees have great potential to cool cities by shading and by "evapotranspiration." Evapotranspiration occurs when plants secrete or "transpire" water through

pores in their leaves--in a way, plants sweat like people do. The water draws heat as it evaporates, cooling the air in the process. A single mature, properly watered tree with a crown of 30 feet can "evapotranspire" up to 40 gallons of water in a day, which is like removing all the heat produced in four hours by a small electric space heater. In the regional summaries each region is defined in terms of the percentage of land area than can be classified as having low, moderate or high levels of evapotranspiration.

Age and Income Distribution

The measures presented in this section are derived form the 2001 Census first release. They are therefore based on the place of enumeration statistics. This is an inferior measure to the set of data based on the place of usual residence, which is yet to be released. The SOR Rank provided is based on the "ratio to national average".

Housing

Average mortgage ($/M)

These figures are derived from those households reporting a mortgage payment in the 1996 or 2001 Census. It is measured in terms of dollars per month in nominal terms. The information is presented in a grouped classification and the average used is the expected value based o the midpoint of each class. Additional analysis based on the relative value of each is region is used to determine the mean of the unbounded upper class. The 1996 value corresponds to the 1996 Census (place of usual residence) and the 2002 value is the value derived from the 2001 Census Release 1 (place of enumeration) and an historical growth rate by region, benchmarked to state controls.

Implied price (IP) ($)

Using the average mortgage payment for each of the two years, 1996 and 2002, the implied price is derived using a standard present value formulation assuming that the average mortgaged value is used for a 20 twenty period at the prevailing interest rate (1996 = 9.5 per cent, 2002 = 6.8 per cent). Additionally it is assumed that a 20 per cent deposit is also provided. This amount is the amount of loan that someone paying the average repayment could receive at current circumstances.

Valuer General (VG) prices

Sourced from each state body this a measure of the median house price by local government area. In many cases this will be based on original postcode information. In Tasmania, NT and a small number of remote parts of Australia the median price for a region will be replaced by the median price of the major city or town within the region.

Excess price growth (% p.a.)

The rate of growth by which the house price grew faster than the implied housing price based on mortgage payments.

Change in implied yield

This is the change the yield an investor would be considered to have experience based on the changes in expected rent received versus the change in the value of the median house. If the number is negative it implies that the value of the rental income as a function of the price of the house has fallen.

VG implied mortgage ($/m)

The monthly payment that would be required if one was to purchase the median house with a 20 per cent deposit and a loan term of 20 years, based on the interest rate appropriate to the period.

Per cent who cannot afford

Based on the VG median house price and distribution of mortgage payments in a region, this measure relates to the percentage of people currently paying a mortgage for whom this amount is greater than their current payment. Based on the assumption that on average the amount paid by the community represents a level of affordability inherent in their circumstances, this percentage provides us with a degree to which the current mortgage population couldn't afford to re-enter the market they currently have a mortgage in.

If this amount is too high it is our contention that demand will dry up, allowing the price mechanism to restore affordability by falling prices. The difference presented is an indication of this likelihood. A negative value implies capacity to fall whilst a positive value implies that the reduction in interest rates since 1996 have more than offset any rises in the value of the VG price.

Scenario 1 – Interest Rates

We are aware that a reduction in affordability removes people from the viable property market. The greater the capacity for a small rise in interest rates to restrict a large number of people from buying housing the greater the potential that prices will fall. The value reported is the number of households affected. (moving from affording to not be able to afford)

Scenario 2 – Affordability

National Economics maintains that the levels of non-affordability in many areas is unsustainable. This scenario shows the percentage fall in house prices that would be consistent with a movement back towards the 1996 levels of affordability. The measure is constructed by assuming that the percentage o people that cannot afford moves to an average of the 1996 and 2002 values. In an environment of fixed distribution of mortgage payments and interest rates the only way to

APPENDIX 5

REGIONAL INDICATORS

Global Sydney
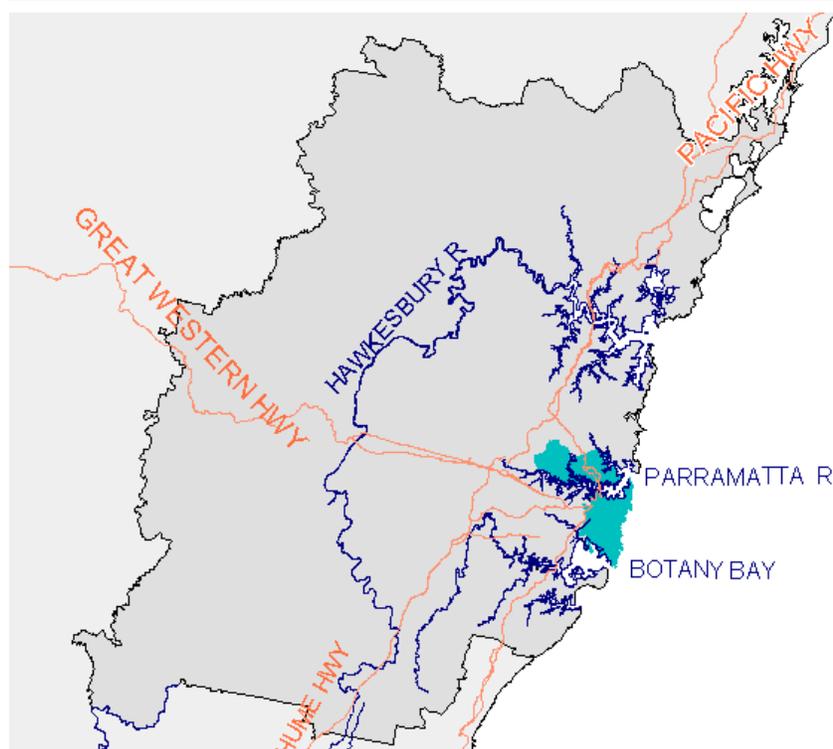
Global Sydney comprises the CBD, the inner North Shore (parts of which have long been high-status suburbs, parts of which were once low-status suburbs but have gentrified, and all of which has been invaded by city centre functions), the eastern suburbs (of which much the same can be said) and the inner southern suburbs (parts of which 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	669,747		695,791		699,328		1.1
No. households	277,527		294,555		301,070		2.1
Workforce	372,241	55.6	363,113	52.3	366,586	52.4	1.5
Employment	350,376	–	349,660	–	353,450	–	
Unemployment	21,866	5.9	13,454	3.7	13,135	3.6	-11.6
DEWRSB U/E	16,277	4.4	12,740	3.5	14,874	4.0	-2.4
Structural U/E, % population	30,135	6.7	26,446	5.6	26,300	5.6	3.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	15,828	23,291	19,785	28,435	22,253	31,982	11.1
Taxes paid	4,811	7,079	5,994	8,615	6,691	9,616	10.7
GST paid	830	1,222	1,303	1,873	1,582	2,273	n.a.
Benefits	954	1,404	986	1,417	1,010	1,452	1.1
Business income	2,241	3,298	2,520	3,622	2,980	4,283	9.1
Interest/dividends	1,479	2,176	1,682	2,418	1,708	2,455	4.1
Interest paid	1,085	1,596	1,550	2,228	1,503	2,161	10.6
Net property income	155	228	184	264	198	284	7.5
Net flow of funds	13,932	20,500	16,309	23,440	18,373	26,406	8.8
Rank		2		1		1	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.1	63
2. Creative professionals	16.3	25.4	1
3. Service class	47.8	47.3	27
4. Super creative class	8.9	12.5	2
5. Working class	23.6	14.6	62
6. Creative class (2 + 4)	25.2	37.9	1

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	36.20	2	54
High tech		1	24
Diversity index (S)	5.90	2	1
Bohemian Index (S)	2.00	1	5
Foreign born (%)	0.34	3	1
Composite diversity		1	1
Creativity Index	992	1	6
U.S. region most like	Raleigh-Durham		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	17,645	5.9	1
Very poor households	21,024	7.0	2
Social Security dependent families	25,320	8.4	2
ICONS	18,946	6.3	4
Total households	301,070		
Social benefits as a % of net flow of funds	1999 (%) 6.8	2001 (%) 6.0	2002 (%) 5.5

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	1,227	1,739	1.42
Implied price (IP) ($K)	165	282	1.72
Valuer General (VG) price ($K)	384	686	1.79
Ratio of IP/VG	0.43	0.41	0.96
Excess price growth (% p.a.)			3.9
Change in implied yield (%)			-21
VG implied mortgage ($/m)	1,932	4,002	2.07
Per cent who cannot afford VG	79	92	-13
Scenario 1 – Interest rates			1,163
Scenario 2 – Affordability (%)			-21.5

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	29.4	13
Building approvals per '000 pop. – 2001-02	15.7	16
Commercial floor stock m^2/capita – 1998-02	2.5	4

ENVIRONMENT

Annual rainfall (mm)	1,208.5		
Seasonality	Unifrom rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	33.8	27.9	20.9
National average	27.9	28.7	21.8
Ratio of region to national	1.21	0.97	0.96
SOR rank	2	49	41

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	15.9	23.8	31.7	28.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	23.6	45.6	15.1	15.7
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
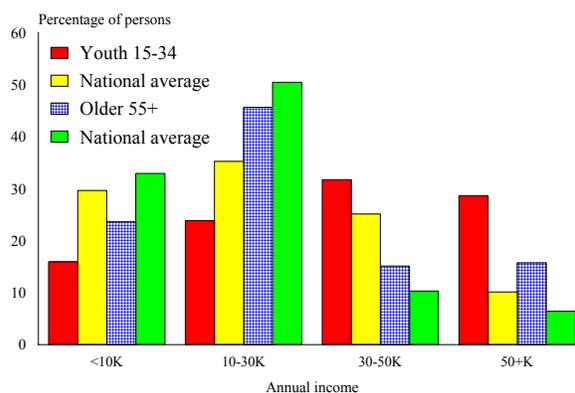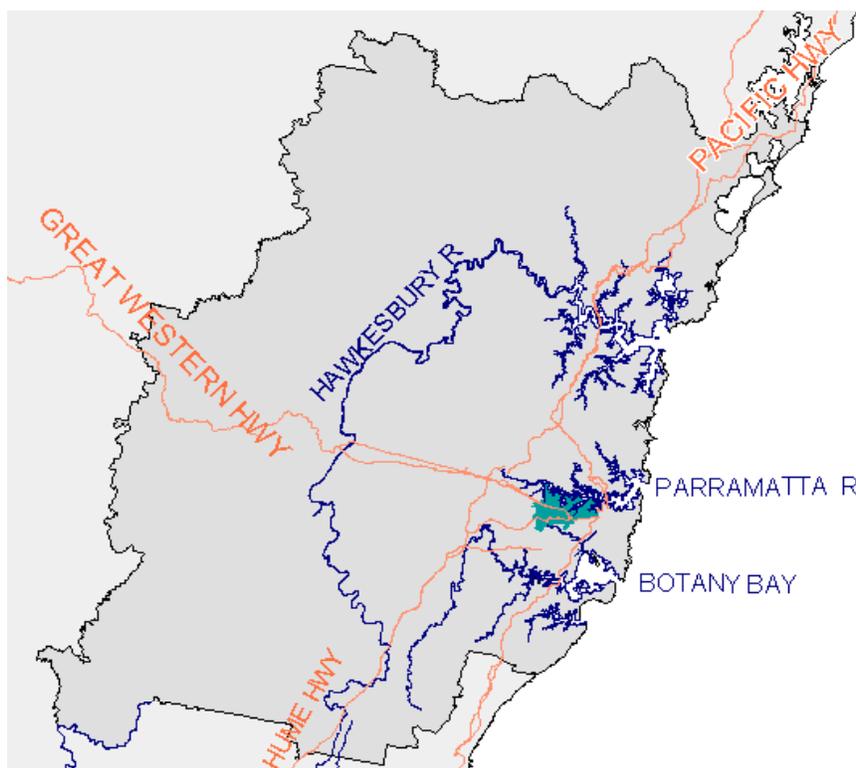
Sydney Inner West

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. Traditionally lower to middle in socio-economic status (with Strathfield a bit more pretentious in the days of servants and mansions), it 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	220,061		227,647		228,682		1.0
No. households	85,478		90,123		91,736		1.8
Workforce	116,878	53.0	135,056	59.3	136,735	59.5	4.0
Employment	110,487	–	130,359	–	132,286	–	4.6
Unemployment	6,392	5.5	4,696	3.5	4,449	3.3	-8.7
DEWRSB U/E	3,312	2.8	3,780	2.8	4,252	3.1	6.4
Structural U/E, % population	10,943	7.5	10,059	6.6	9,683	6.3	4.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	4,352	19,586	5,203	22,857	5,654	24,837	8.2
Taxes paid	1,207	5,430	1,437	6,312	1,545	6,788	7.7
GST paid	204	920	371	1,629	435	1,911	n.a.
Benefits	385	1,734	402	1,766	411	1,804	1.3
Business income	5.90	2,655	630	2,767	748	3,285	7.4
Interest/dividends	204	916	234	1,028	244	1,071	5.3
Interest paid	330	1,485	459	2,016	443	1,948	9.5
Net property income	31	140	37	162	40	175	7.5
Net flow of funds	3,821	17,197	4,239	18,622	4,672	20,524	6.1
Rank		6		7		5	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.2	61
2. Creative professionals	16.3	17.6	8
3. Service class	47.8	48.6	20
4. Super creative class	8.9	11.4	5
5. Working class	23.6	22.2	55
6. Creative class (2 + 4)	25.2	29.0	7

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	16.43	6	164
High tech		10	86
Diversity index (S)	4.88	3	1
Bohemian Index (S)	1.58	3	6
Foreign born (%)	0.36	2	1
Composite diversity		2	2
Creativity Index	733	6	58
U.S. region most like	Pittsburgh		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	6,950	7.6	7
Very poor households	7,075	7.7	5
Social Security dependent families	9,114	9.9	7
ICONS	5,299	5.8	6
Total households	91,736		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	10.1	9.5	8.8

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	1,212	1,698	1.40
Implied price (IP) ($K)	163	275	1.69
Valuer General (VG) price ($K)	299	540	1.81
Ratio of IP/VG	0.54	0.51	0.94
Excess price growth (% p.a.)			4.4
Change in implied yield (%)			-23
VG implied mortgage ($/m)	1,294	2,804	2.17
Per cent who cannot afford VG	63	83	-20
Scenario 1 – Interest rates			284
Scenario 2 – Affordability (%)			-14.9

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	26.4	19
Building approvals per '000 pop. – 2001-02	12.6	33
Commercial floor stock m²/capita – 1998-02	1.3	50

ENVIRONMENT

Annual rainfall (mm)	1,108.2
Seasonality	Uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	31.7	29.6	21.8
National average	27.9	28.7	21.8
Ratio of region to national	1.14	1.03	1.00
SOR rank	5	12	37

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	17.9	24.9	31.7	25.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	31.5	47.2	11.6	9.7
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
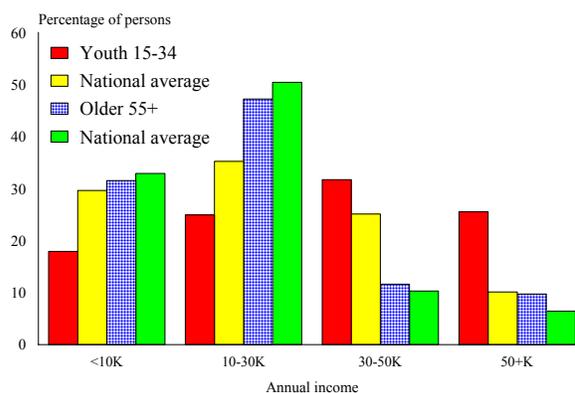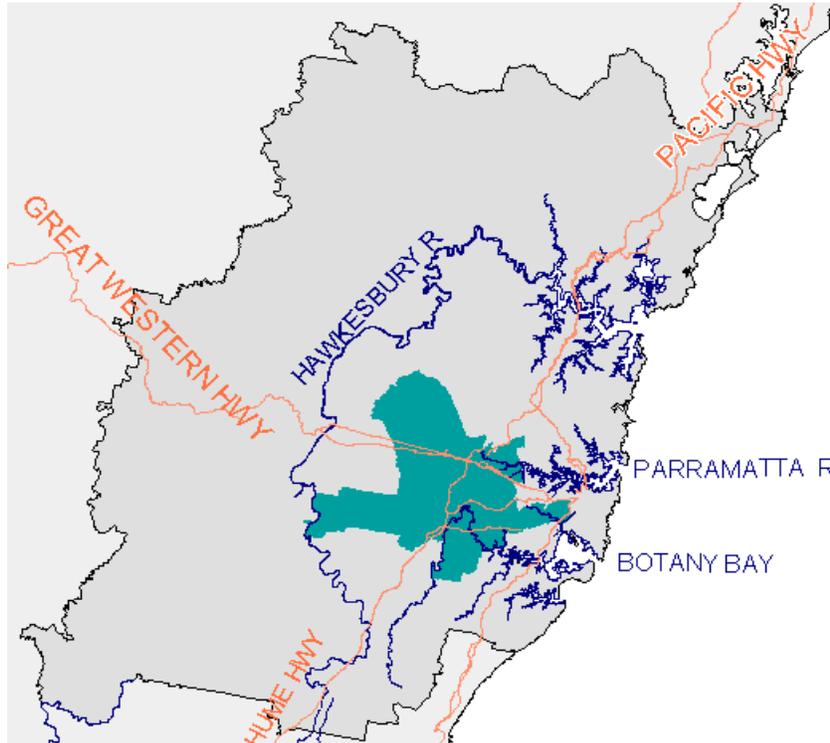
Sydney Mid West

The Mid West of Sydney is a large region, stretching west from Marrickville, and including several important urban centres: Bankstown, Parramatta, Liverpool and Blacktown. These are important centres of retailing, and 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

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	1,248,053		1,299,827		1,305,918		1.1
No. households	407,518		432,361		440,593		2.0
Workforce	597,890	47.8	625,379	48.1	626,718	47.8	1.2
Employment	533,497	–	561,808	–	569,077	–	1.6
Unemployment	64,393	10.8	63,570	10.2	57,641	9.2	-2.7
DEWRSB U/E	53,579	9.3	41,279	6.7	41,539	6.7	-6.2
Structural U/E, % population	95,010	12.1	99,492	12.2	95,635	11.6	3.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	17,947	14,191	19,749	15,194	20,545	15,806	3.7
Taxes paid	4,234	3,348	4,641	3,571	4,769	3,669	3.1
GST paid	1,054	834	1,590	1,224	1,786	1,374	n.a.
Benefits	2,726	2,156	3,003	2,310	3,044	2,342	2.8
Business income	2,003	1,584	2,075	1,596	2,308	1,776	3.9
Interest/dividends	348	275	368	283	357	275	-0.1
Interest paid	1,532	1,211	2,050	1,578	1,937	1,490	7.2
Net property income	10	8	11	9	12	9	7.4
Net flow of funds	16,214	12,821	16,924	13,020	17,775	13,675	2.2
Rank		48		47		48	

OCCUPATION

	Class	National average	% of workforce	SOR rank
1.	Agriculture	3.4	0.4	55
2.	Creative professionals	16.3	14.6	17
3.	Service class	47.8	48.6	21
4.	Super creative class	8.9	7.9	23
5.	Working class	23.6	28.4	16
6.	Creative class (2 + 4)	25.2	22.5	16

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	9.06	22	238
High tech		4	53
Diversity index (S)	1.02	14	46
Bohemian Index (S)	0.90	13	133
Foreign born (%)	0.40	1	1
Composite diversity		11	59
Creativity Index	518	11	138
U.S. region most like	Lancaster, PA		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	63,980	14.5	63
Very poor households	54,556	12.4	40
Social Security dependent families	75,649	17.2	62
ICONS	18,394	4.2	42
Total households	440,593		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	16.8	17.7	17.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	978	1,281	1.31
Implied price (IP) ($K)	131	206	1.57
Valuer General (VG) price ($K)	160	284	1.78
Ratio of IP/VG	0.82	0.73	0.88
Excess price growth (% p.a.)			5.2
Change in implied yield (%)			-26
VG implied mortgage ($/m)	1,190	1,871	1.57
Per cent who cannot afford VG	68	82	-14
Scenario 1 – Interest rates			3,591
Scenario 2 – Affordability (%)			-19.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	23.1	30
Building approvals per '000 pop. – 2001-02	11.3	38
Commercial floor stock m^2/capita – 1998-02	1.1	59

ENVIRONMENT

Annual rainfall (mm)	931.7
Seasonality	Uniform rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	56	44	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	30.5	28.3	18.5
National average	27.9	28.7	21.8
Ratio of region to national	1.09	0.99	0.85
SOR rank	11	42	55

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	27.7	33.7	28.5	10.0
– National average	29.6	35.2	25.1	10.1
Older – 55+	42.1	44.8	9.2	4.0
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
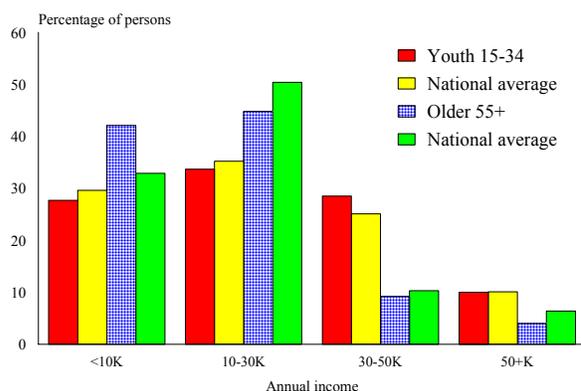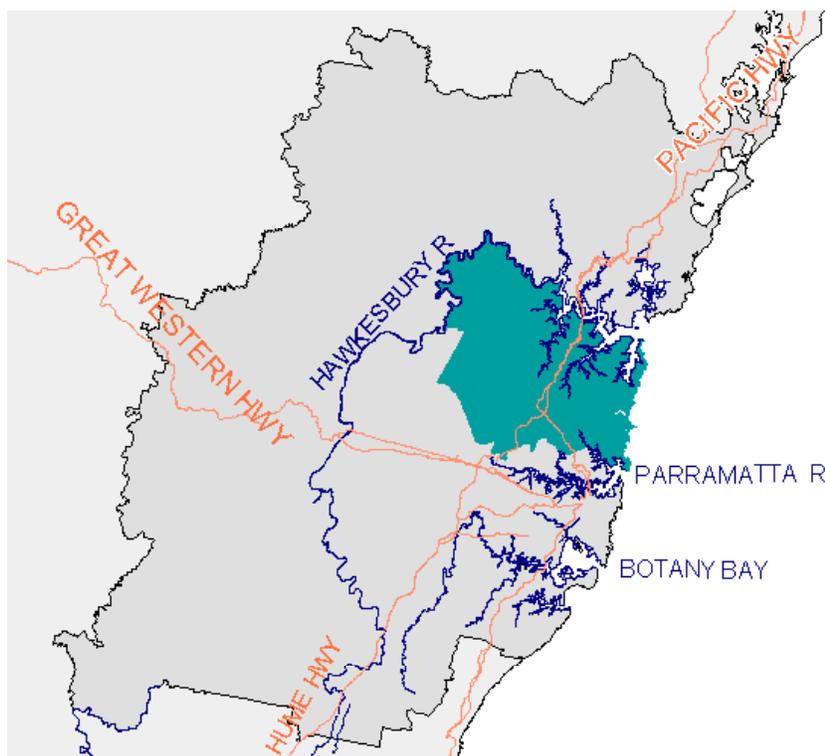
Sydney Outer North

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	610,786		636,442		642,169		1.3
No. households	207,346		219,026		224,997		2.1
Workforce	329,683	53.9	346,873	54.9	358,361	55.3	2.1
Employment	318,494	–	339,380	–	351,161	–	2.5
Unemployment	11,189	3.4	7,494	2.2	7,201	2.0	-10.4
DEWRSB U/E	7,345	2.3	9,011	2.6	10,731	3.0	9.9
Structural U/E, % population	13,438	3.6	12,291	3.1	12,160	3.0	3.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	14,194	22,992	15,989	25,122	18,117	28,467	7.4
Taxes paid	4,110	6,657	4,617	7,254	5,181	8,140	6.9
GST paid	612	992	1,030	1,619	1,260	1,979	n.a.
Benefits	661	1,070	706	1,110	732	1,151	2.4
Business income	1,952	3,162	2,139	3,361	2,437	3,830	6.6
Interest/dividends	1,146	1,856	1,307	2,053	1,335	2,098	4.2
Interest paid	1,117	1,809	1,543	2,425	1,493	2,346	9.0
Net property income	55	89	65	102	70	110	7.3
Net flow of funds	12,169	19,712	13,015	20,450	14,759	23,189	5.6
Rank		4		4		3	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.8	51
2. Creative professionals	16.3	18.8	6
3. Service class	47.8	50.2	10
4. Super creative class	8.9	11.4	4
5. Working class	23.6	18.9	60
6. Creative class (2 + 4)	25.2	30.1	5

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	15.86	10	164
High tech		5	56
Diversity index (S)	0.49	38	253
Bohemian Index (S)	1.24	5	57
Foreign born (%)	0.28	11	2
Composite diversity		25	103
Creativity Index	535	9	130
U.S. region most like	Bakersfield, CA		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	14,257	6.3	3
Very poor households	13,284	5.9	1
Social Security dependent families	21,629	9.6	6
ICONS	17,131	7.6	1
Total households	224,997		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	5.4	5.4	5.0

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	1,197	1,684	1.41
Implied price (IP) ($K)	161	273	1.70
Valuer General (VG) price ($K)	300	544	1.81
Ratio of IP/VG	0.54	0.50	0.94
Excess price growth (% p.a.)			4.3
Change in implied yield (%)			-22
VG implied mortgage ($/m)	1,304	2,831	2.17
Per cent who cannot afford VG	55	84	-29
Scenario 1 – Interest rates			965
Scenario 2 – Affordability (%)			-20.2

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	21.7	37
Building approvals per '000 pop. – 2001-02	14.4	20
Commercial floor stock m^2/capita – 1998-02	1.2	56

ENVIRONMENT

Annual rainfall (mm)	1,139.8
Seasonality	Uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	92	8	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.2	30.1	22.7
National average	27.9	28.7	21.8
Ratio of region to national	0.94	1.05	1.04
SOR rank	36	4	30

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	25.5	25.6	29.7	19.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	19.2	46.6	17.9	16.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
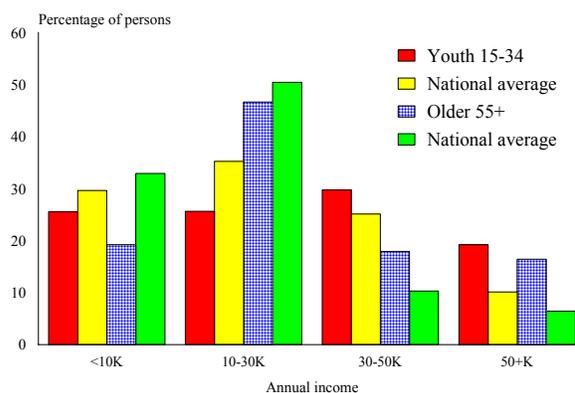
Sydney Outer South West
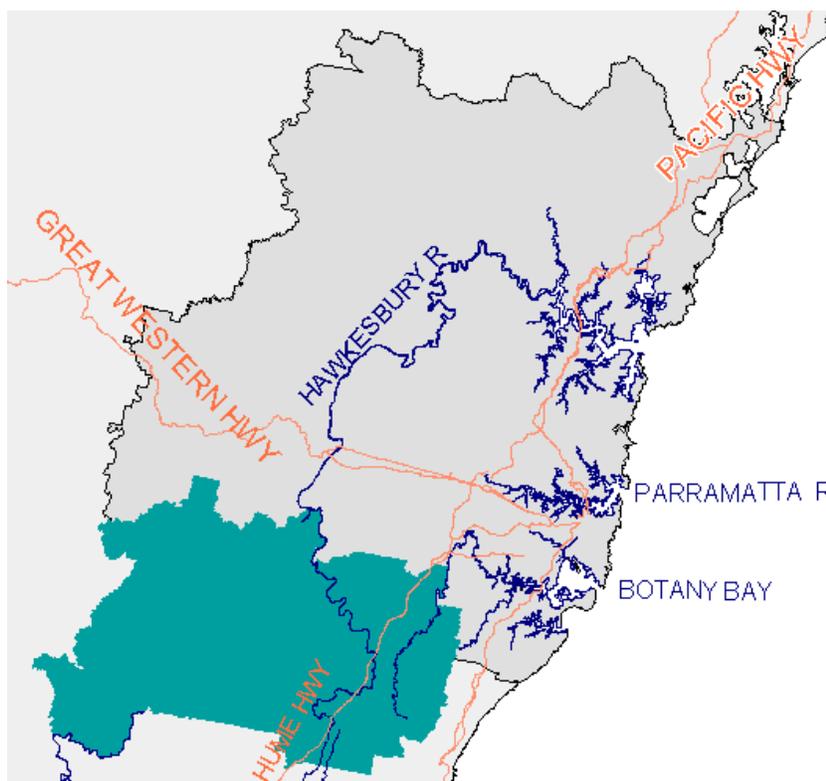
The Sydney Outer South West, centred on Campbelltown/Macarthur, began its suburban life as a planned and balanced development of housing and manufacturing, and still bears some of the marks of this origin. However, it is also a commuter and hobby farm area, and is bounded on two sides by water supply reserves.

Major centres:

Campbelltown

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	222,342		231,942		233,287		1.2
No. households	71,114		76,005		77,642		2.2
Workforce	120,859	54.3	129,728	55.8	131,549	56.1	2.1
Employment	111,111	–	119,282	–	121,863	–	2.3
Unemployment	9,747	8.1	10,446	8.1	9,686	7.4	-0.2
DEWRSB U/E	9,232	8.7	8,985	7.1	10,754	8.3	3.9
Structural U/E, % population	12,715	9.3	14,032	9.8	13,849	9.6	5.2

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	3,630	16,075	4,142	17,856	4,306	18,564	4.9
Taxes paid	860	3,806	977	4,212	1,002	4,322	4.3
GST paid	184	814	288	1,241	323	1,391	n.a.
Benefits	394	1,745	432	1,864	440	1,896	2.8
Business income	373	1,650	388	1,671	442	1,907	4.9
Interest/dividends	63	278	66	286	63	272	-0.7
Interest paid	364	1,613	476	2,052	442	1,904	5.7
Net property income	-8	-36	-10	-42	-10	-45	7.4
Net flow of funds	3,044	13,479	3,278	14,131	3,474	14,977	3.6
Rank		36		29		27	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	2.2	42
2. Creative professionals	16.3	11.5	47
3. Service class	47.8	49.0	17
4. Super creative class	8.9	9.3	11
5. Working class	23.6	27.9	19
6. Creative class (2 + 4)	25.2	20.9	28

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.55	37	259
High tech		25	246
Diversity index (S)	0.43	40	261
Bohemian Index (S)	0.55	51	210
Foreign born (%)	0.21	20	8
Composite diversity		43	159
Creativity Index	77	39	268
U.S. region most like	Enid, OK		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	12,934	16.7	64
Very poor households	11,842	15.3	63
Social Security dependent families	15,286	19.7	64
ICONS	3,643	4.7	21
Total households	77,642		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	12.9	13.2	12.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	965	1,199	1.24
Implied price (IP) ($K)	129	192	1.49
Valuer General (VG) price ($K)	128	213	1.66
Ratio of IP/VG	1.01	0.90	0.89
Excess price growth (% p.a.)			5.0
Change in implied yield (%)			-25
VG implied mortgage ($/m)	955	1,404	1.47
Per cent who cannot afford VG	51	67	-16
Scenario 1 – Interest rates			1,511
Scenario 2 – Affordability (%)			-17.2

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	24.4	27
Building approvals per '000 pop. – 2001-02	13.0	28
Commercial floor stock m^2/capita – 1998-02	0.9	64

ENVIRONMENT

Annual rainfall (mm)	944.9
Seasonality	Uniform rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	7	27	66

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	29.9	29.6	14.1
National average	27.9	28.7	21.8
Ratio of region to national	1.07	1.03	0.65
SOR rank	14	8	62

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	27.6	36.0	27.5	8.9
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.4	46.6	12.6	6.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
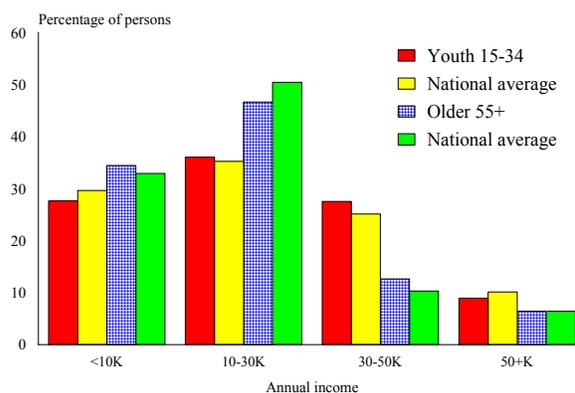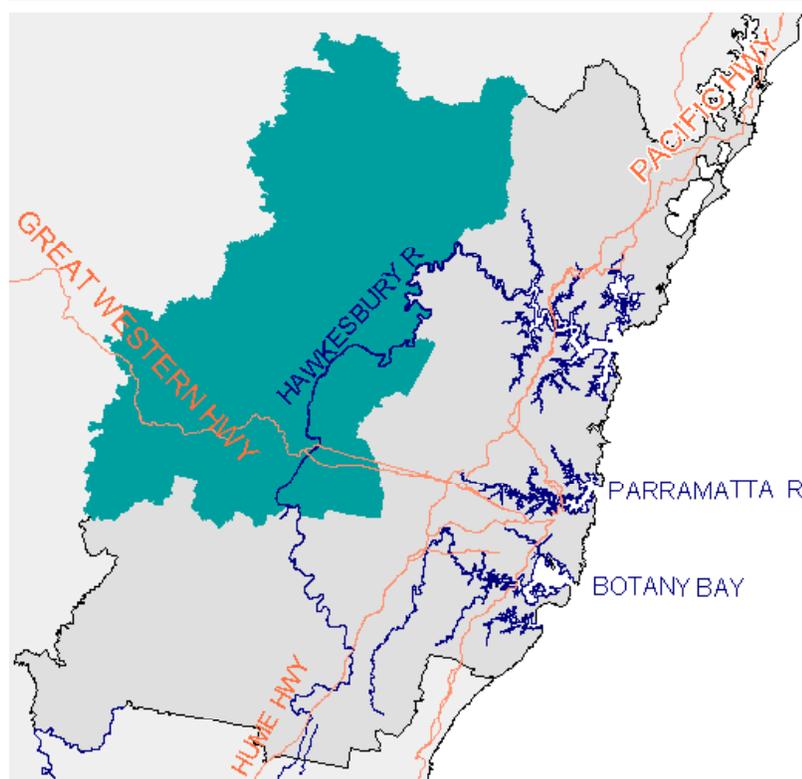
Sydney Outer West

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.

Major centres:

Penrith, Katoomba

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	307,940		315,947		316,602		0.7
No. households	104,297		109,838		111,347		1.6
Workforce	160,061	51,9	177,121	56.0	177,813	56.0	2.7
Employment	147,177	–	164,219	–	165,844	–	3.0
Unemployment	12,884	8.0	12,903	7.3	11,969	6.7	-1.8
DEWRSB U/E	11,351	7.3	7,906	4.6	7,663	4.4	-9.4
Structural U/E, % population	15,928	8.3	16,930	8.6	16,906	8.5	4.8

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	5,077	16,322	5,563	17,606	5,771	18,266	3.8
Taxes paid	1,221	3,924	1,329	4,207	1,361	4,306	3.1
GST paid	257	825	415	1,314	465	1,470	n.a.
Benefits	526	1,691	573	1,812	581	1,839	2.8
Business income	565	1,818	588	1,862	619	1,959	2.5
Interest/dividends	117	375	126	399	124	392	1.4
Interest paid	514	1,653	676	2,141	634	2,006	6.7
Net property income	-7	-23	-9	-27	-9	-29	7.8
Net flow of funds	4,286	13,779	4,420	13,991	4,627	14,644	2.1
Rank		31		34		31	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	2.0	43
2. Creative professionals	16.3	12.6	36
3. Service class	47.8	51.3	6
4. Super creative class	8.9	8.5	19
5. Working class	23.6	25.5	36
6. Creative class (2 + 4)	25.2	21.1	25

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.43	30	243
High tech		21	225
Diversity index (S)	1.05	12	43
Bohemian Index (S)	0.76	30	166
Foreign born (%)	0.19	23	12
Composite diversity		15	73
Creativity Index	332	17	209
U.S. region most like	Punta Gorda, FL		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	13,366	12.0	56
Very poor households	13,899	12.5	41
Social Security dependent families	16,493	14.8	52
ICONS	5,687	5.1	15
Total households	111,347		
	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	12.3	13.0	12.6

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	925	1,183	1.28
Implied price (IP) ($K)	124	189	1.53
Valuer General (VG) price ($K)	136	247	1.81
Ratio of IP/VG	0.91	0.77	0.84
Excess price growth (% p.a.)			6.0
Change in implied yield (%)			-29
VG implied mortgage ($/m)	1,017	1,626	1.60
Per cent who cannot afford VG	60	80	-19
Scenario 1 – Interest rates			1,463
Scenario 2 – Affordability (%)			-21.3

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	21.1	39
Building approvals per '000 pop. – 2001-02	8.6	54
Commercial floor stock m^2/capita – 1998-02	1.3	49

ENVIRONMENT

Annual rainfall (mm)	1,080.5
Seasonality	Uniform rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	6	54	40

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	29.4	29.8	16.5
National average	27.9	28.7	21.8
Ratio of region to national	1.06	1.04	0.76
SOR rank	16	7	58

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	26.1	34.6	29.6	9.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	30.4	49.8	12.8	6.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
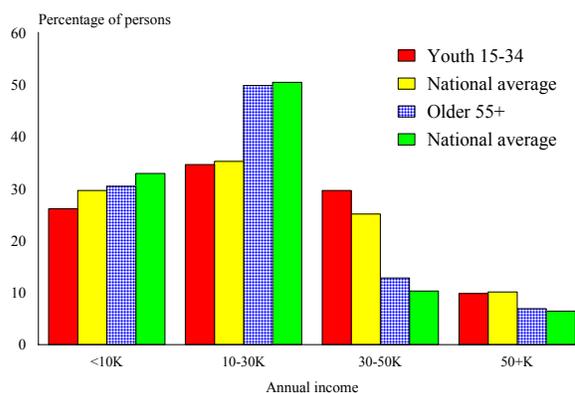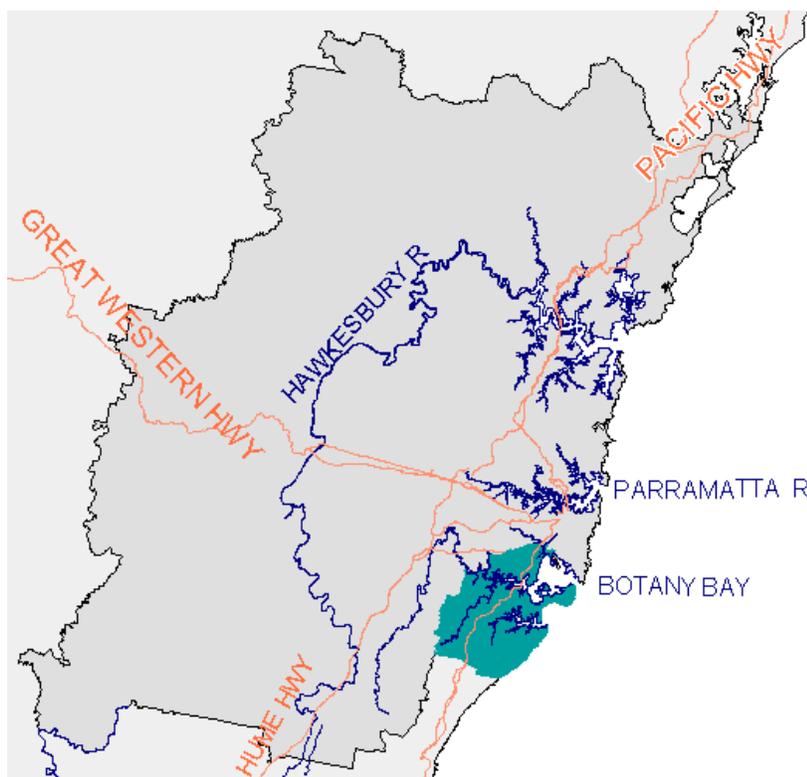
Sydney South

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.

Major centres:

Hurstville, Miranda

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	419,979		435,632		436,819		1.0
No. households	147,571		156,805		159,184		1.9
Workforce	217,496	51.7	224,150	51.6	227,659	52.0	1.1
Employment	206,269	–	214,371	–	218,463	–	1.4
Unemployment	11,227	5.2	9,778	4.4	9,196	4.0	-4.9
DEWRSB U/E	9,320	4.3	7,380	3.3	8,403	3.7	-2.6
Structural U/E, % population	15,985	6.1	15,788	5.8	15,542	5.7	4.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	7,981	18,803	9,087	20,859	9,675	22,210	5.7
Taxes paid	2,055	4,841	2,330	5,349	2,450	5,624	5.1
GST paid	417	982	646	1,484	743	1,705	n.a.
Benefits	687	1,618	742	1,703	756	1,735	2.4
Business income	1,020	2,403	1,075	2,467	1,205	2,765	4.8
Interest/dividends	376	885	412	946	410	942	2.1
Interest paid	628	1,478	858	1,969	820	1,883	8.4
Net property income	22	51	25	58	27	63	7.4
Net flow of funds	6,986	16,459	7,507	17,231	8,060	18,503	4.0
Rank		11		12		11	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.2	59
2. Creative professionals	16.3	15.9	14
3. Service class	47.8	52.6	3
4. Super creative class	8.9	8.6	16
5. Working class	23.6	22.7	54
6. Creative class (2 + 4)	25.2	24.5	13

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	12.52	13	201
High tech		16	160
Diversity index (S)	0.65	31	193
Bohemian Index (S)	0.77	28	162
Foreign born (%)	0.27	13	3
Composite diversity		31	118
Creativity Index	325	18	212
U.S. region most like	Waco, TX		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	12,557	7.9	9
Very poor households	12,245	7.7	4
Social Security dependent families	16,453	10.3	9
ICONS	9,083	5.7	7
Total households	159,184		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	9.8	9.9	9.4

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	1,103	1,496	1.36
Implied price (IP) ($K)	148	242	1.64
Valuer General (VG) price ($K)	281	450	1.60
Ratio of IP/VG	0.53	0.54	1.02
Excess price growth (% p.a.)			2.8
Change in implied yield (%)			-15
VG implied mortgage ($/m)	1,166	2,060	1.77
Per cent who cannot afford VG	56	76	-20
Scenario 1 – Interest rates			953
Scenario 2 – Affordability (%)			-12.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	26.3	21
Building approvals per '000 pop. – 2001-02	10.6	42
Commercial floor stock m²/capita – 1998-02	1.1	60

ENVIRONMENT

Annual rainfall (mm)	1,179.6
Seasonality	Uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	28.1	28.8	23.2
National average	27.9	28.7	21.8
Ratio of region to national	1.01	1.01	1.07
SOR rank	21	29	28

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	22.4	28.6	33.1	15.9
– National average	29.6	35.2	25.1	10.1
Older – 55+	28.8	50.2	12.8	8.2
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
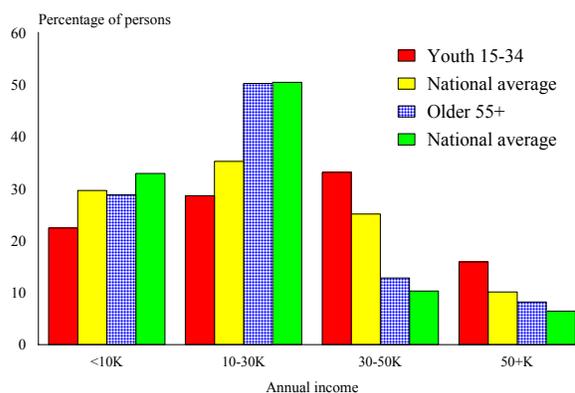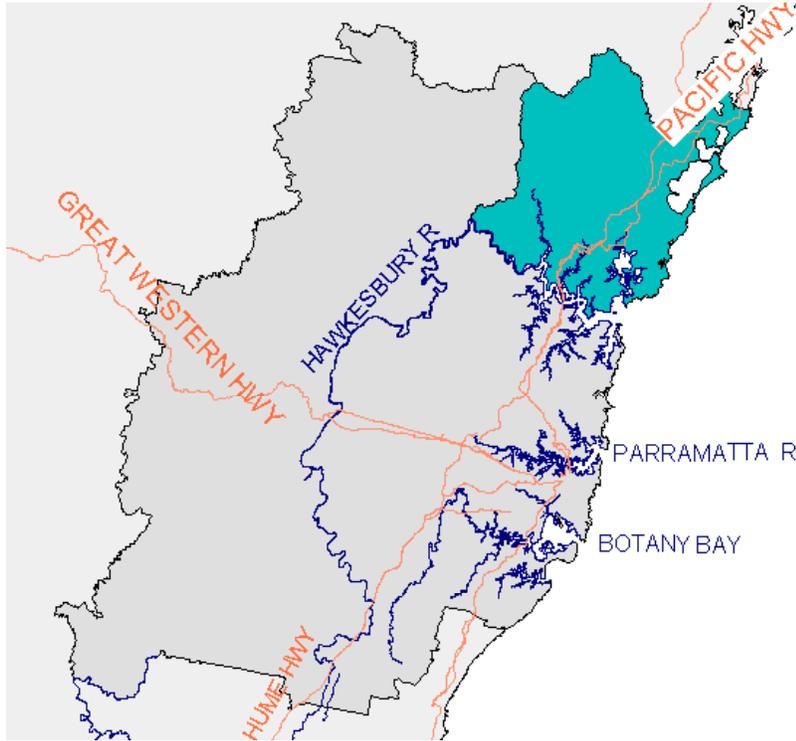
NSW Central Coast

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.

Major centres:

Gosford, Wyong, The Entrance

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	281,230		297,592		299,174		1.6
No. households	106,397		114,945		117,295		2.5
Workforce	119,777	42.6	122,890	41.4	132,473	44.0	2.6
Employment	106,798	–	108,487	–	119,525	–	2.9
Unemployment	12,978	10.8	14,402	11.7	12,947	9.8	-0.1
DEWRSB U/E	9,629	8.1	8,980	7.4	9,985	7.7	0.9
Structural U/E, % population	19,321	12.2	21,249	12.7	21,150	12.5	5.0

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	3,939	13,733	4,218	14,175	4,832	16,237	5.7
Taxes paid	931	3,247	994	3,341	1,124	3,778	5.2
GST paid	277	965	403	1,354	498	1,673	n.a.
Benefits	727	2,535	800	2,688	811	2,724	2.4
Business income	436	1,519	451	1,517	505	1,698	3.8
Interest/dividends	150	524	174	586	184	618	5.6
Interest paid	349	1,217	465	1,562	433	1,456	6.2
Net property income	5	17	6	19	6	20	7.1
Net flow of funds	3,699	12,899	3,788	12,727	4,283	14,391	3.7
Rank		45		51		38	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	1.3	47
2. Creative professionals	16.3	13.4	24
3. Service class	47.8	54.1	2
4. Super creative class	8.9	7.2	34
5. Working class	23.6	24.0	45
6. Creative class (2 + 4)	25.2	20.6	32

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.77	34	259
High tech		19	218
Diversity index (S)	0.88	19	76
Bohemian Index (S)	0.73	31	170
Foreign born (%)	0.13	33	20
Composite diversity		20	88
Creativity Index	284	21	227
U.S. region most like	Waterloo – Cedar Falls, IA		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	12,818	10.9	39
Very poor households	14,438	12.3	33
Social Security dependent families	15,653	13.3	28
ICONS	4,455	3.8	56
Total households	117,295		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	19.7	21.1	18.9

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	916	1,154	1.26
Implied price (IP) ($K)	123	185	1.50
Valuer General (VG) price ($K)	131	237	1.81
Ratio of IP/VG	0.94	0.78	0.83
Excess price growth (% p.a.)			6.2
Change in implied yield (%)			-30
VG implied mortgage ($/m)	977	1,563	1.60
Per cent who cannot afford VG	58	78	-20
Scenario 1 – Interest rates			1,317
Scenario 2 – Affordability (%)			-21.5

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	34.2	7
Building approvals per '000 pop. – 2001-02	14.4	21
Commercial floor stock m²/capita – 1998-02	1.5	28

ENVIRONMENT

Annual rainfall (mm)	1,213.8
Seasonality	Uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.4	27.4	27.0
National average	27.9	28.7	21.8
Ratio of region to national	0.84	0.96	1.24
SOR rank	58	59	6

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	29.7	38.2	23.9	8.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	33.4	54.7	8.0	3.8
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
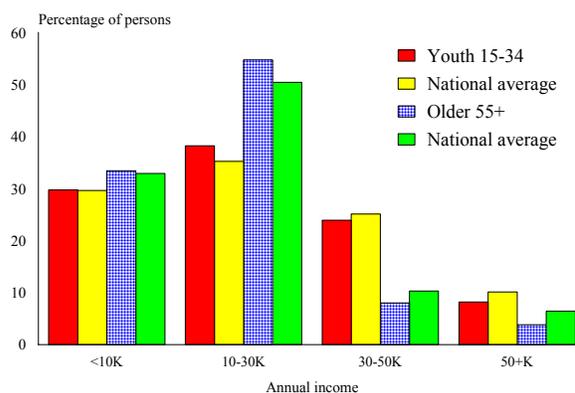
NSW Central West

The Central West of NSW consists mainly of hilly country, beginning just past the Blue Mountains and ending with the last of the slopes in Lachlan Shire. 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 in Lachlan Shire. 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.

Major centres:

Lithgow, Bathurst, Orange

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	172,795		173,248		173,663		0.1
No. households	63,225		65,809		66,758		1.4
Workforce	84,810	49.1	82,540	47.4	79,243	45.5	-1.7
Employment	76,376	–	72,799	–	69,875	–	-2.2
Unemployment	8,434	9.9	9,741	11.8	9,367	11.8	2.7
DEWRSB U/E	4,747	5.8	3,609	4.5	3,159	4.2	-9.7
Structural U/E, % population	11,396	11.3	13,031	12.8	12,958	12.7	5.8

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,362	13,657	2,510	14,487	2,637	15,219	3.7
Taxes paid	521	3,012	535	3,087	540	3,116	1.1
GST paid	165	956	224	1,292	247	1,426	n.a.
Benefits	390	2,253	425	2,456	435	2,509	3.7
Business income	293	1,694	302	1,745	310	1,789	1.8
Interest/dividends	80	465	82	474	76	438	-2.0
Interest paid	216	1,251	297	1,717	270	1,558	7.6
Net property income	5	28	6	33	6	35	8.3
Net flow of funds	2,227	12,878	2,269	13,099	2,406	13,889	2.5
Rank		46		45		46	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	10.3	17
2. Creative professionals	16.3	11.4	49
3. Service class	47.8	45.5	41
4. Super creative class	8.9	7.2	36
5. Working class	23.6	25.7	34
6. Creative class (2 + 4)	25.2	18.6	47

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	5.13	47	265
High tech		33	260
Diversity index (S)	0.36	49	268
Bohemian Index (S)	0.57	49	208
Foreign born (%)	0.07	60	48
Composite diversity		54	174
Creativity Index	26	51	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	7,038	10.5	32
Very poor households	8,236	12.3	37
Social Security dependent families	9,361	14.0	41
ICONS	2,884	4.3	30
Total households	66,758		
Social benefits as a % of net flow of funds	1999 (%) 17.5	2001 (%) 18.7	2002 (%) 18.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	796	925	1.16
Implied price (IP) ($K)	107	148	1.39
Valuer General (VG) price ($K)	90	117	1.29
Ratio of IP/VG	1.18	1.27	1.08
Excess price growth (% p.a.)			1.8
Change in implied yield (%)			-10
VG implied mortgage ($/m)	673	768	1.14
Per cent who cannot afford VG	42	40	3
Scenario 1 – Interest rates			809
Scenario 2 – Affordability (%)			-5.1

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	16.7	48
Building approvals per '000 pop. – 2001-02	9.7	48
Commercial floor stock m^2/capita – 1998-02	1.3	47

ENVIRONMENT

Annual rainfall (mm)	638.4		
Seasonality	Uniform rainfall		

| Area based analysis | Percentage of area classified as | | |
	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	43	57	–
Days below zero	–	43	57

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	25.6	27.8	23.6
National average	27.9	28.7	21.8
Ratio of region to national	0.92	0.97	1.08
SOR rank	43	51	23

| INCOME | Percentage of persons | | | |
	<10K	10-30K	30-50K	50+K
Youth 15-34	31.5	44.1	17.6	6.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.0	52.3	8.8	4.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.

NSW Far and North West

White Cliffs
Broken Hill
Cobar
Dubbo
Sydney

The Far and North West puts together two NSW planning regions, mainly because the Far West does not have sufficient population to stand on its own for current purposes. 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 to the north and immediate west of Dubbo are mostly under the plough, with wheat still important but other crops such as cotton also grown.

❑ 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, at Cobar and Broken Hill.

Major centres:

Dubbo, Broken Hill

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	142,137		139,989		139,897		-0.4
No. households	53,627		55,065		55,509		0.9
Workforce	68,328	48.1	66,561	47.1	64,893	46.4	-1.3
Employment	58,812	–	57,353	–	55,992	–	-1.2
Unemployment	9,515	13.9	9,208	13.8	8,900	13.7	-1.7
DEWRSB U/E	4,844	7.3	3,940	6.1	3,578	5.7	-7.3
Structural U/E, % population	12,673	15.4	13,562	16.7	13,162	16.2	6.0

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,769	12,580	2,005	14,442	2,100	15,123	6.3
Taxes paid	376	2,675	403	2,899	402	2,896	2.7
GST paid	128	908	174	1,250	190	1,366	n.a.
Benefits	367	2,608	421	3,033	423	3,043	5.3
Business income	236	1,676	243	1,747	270	1,943	5.0
Interest/dividends	60	428	61	436	55	395	-2.6
Interest paid	165	1,176	229	1,646	207	1,489	8.2
Net property income	5	35	6	42	6	45	8.8
Net flow of funds	1,767	12,569	1,931	13,905	2,055	14,799	5.6
Rank		50		35		28	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	13.2	11
2. Creative professionals	16.3	11.1	56
3. Service class	47.8	42.7	49
4. Super creative class	8.9	6.7	49
5. Working class	23.6	26.4	28
6. Creative class (2 + 4)	25.2	17.8	55
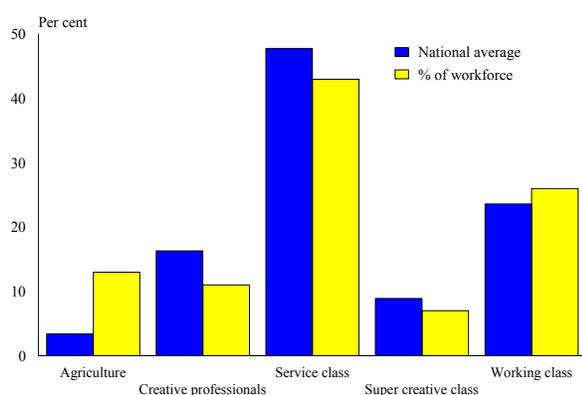
HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	736	845	1.15
Implied price (IP) ($K)	99	136	1.37
Valuer General (VG) price ($K)	84	89	1.06
Ratio of IP/VG	1.17	1.52	1.30
Excess price growth (% p.a.)			-1.4
Change in implied yield (%)			9
VG implied mortgage ($/m)	627	587	0.94
Per cent who cannot afford VG	45	30	15
Scenario 1 – Interest rates			449
Scenario 2 – Affordability (%)			8.2

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	24.4	27.9	23.9
National average	27.9	28.7	21.8
Ratio of region to national	0.88	0.97	1.10
SOR rank	51	50	18

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	32.0	39.8	21.1	7.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	36.2	51.2	8.1	4.5
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	3.72	59	265
High tech		57	267
Diversity index (S)	0.36	50	268
Bohemian Index (S)	0.52	56	219
Foreign born (%)	0.05	63	61
Composite diversity		60	182
Creativity Index	8	58	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	6,432	11.6	49
Very poor households	7,449	13.4	54
Social Security dependent families	8,569	15.4	57
ICONS	2,205	4.0	52
Total households	55,509		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	20.7	21.8	20.6

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	12.0	58
Building approvals per '000 pop. – 2001-02	5.5	61
Commercial floor stock m²/capita – 1998-02	1.6	24

ENVIRONMENT

Annual rainfall (mm)	371.9
Seasonality	Arid, mostly uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	73	27
Evapotranspiration	88	12	–
Days below zero	49	44	7
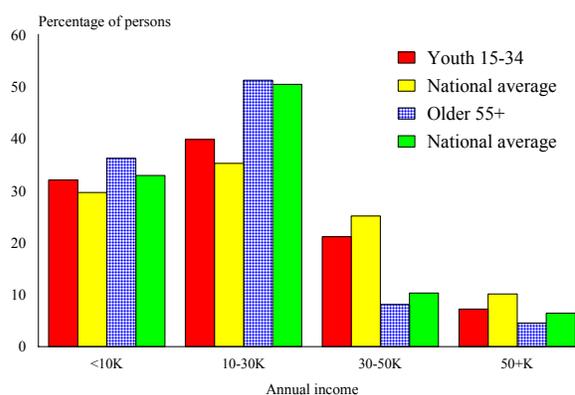
NSW Hunter
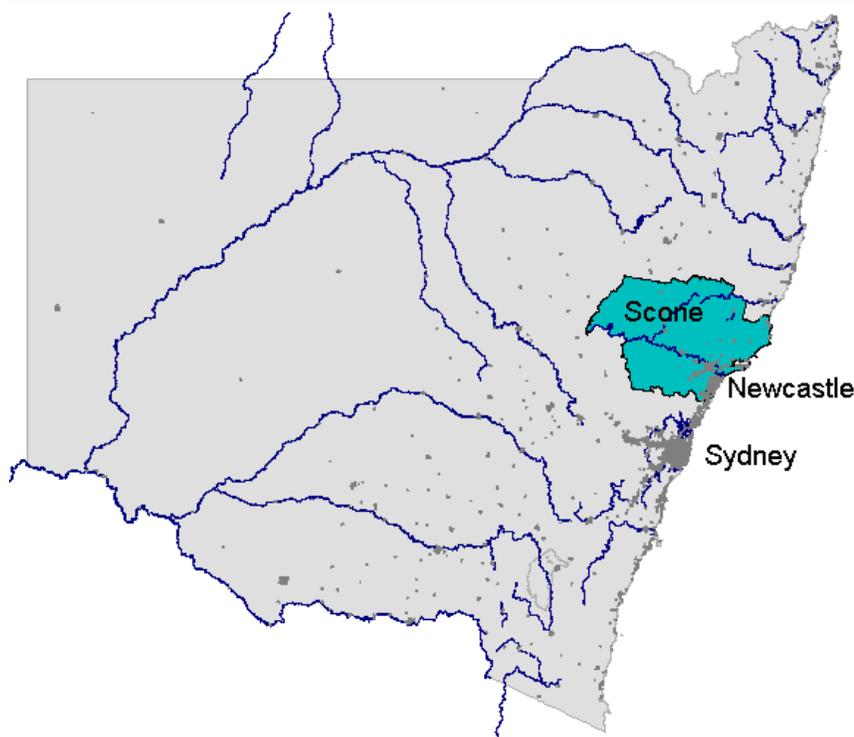
The Hunter region centres on the City of Newcastle, though the peripheral location of the city centre means that retail and other city centre functions have been considerably decentralised. For the best part of two centuries the region has been known for coal mining, and this continues to feed a vigorous export trade through the Port of Newcastle. However, with the closure of the steelworks the region's identity as a centre of manufacturing is less secure, and parts of the region like Port Stephens and Pokolbin are perhaps best thought of as extensions of the North Coast; hobby farm and retirement areas related directly to Sydney.

Major centres:

Newcastle, Maitland, Singleton

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	565,950		581,972		584,701		0.8
No. households	213,412		225,652		230,005		1.9
Workforce	265,843	46.9	288,185	49.4	292,345	50.0	2.4
Employment	231,861	–	248,762	–	264,936	–	3.4
Unemployment	33,981	12.8	39,423	13.7	37,409	12.7	2.4
DEWRSB U/E	24,485	9.4	24,496	8.8	18,213	9.8	-7.1
Structural U/E, % population	43,866	13.0	51,558	14.9	51,605	14.8	4.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	8,348	14,608	8,853	15,212	9,018	15,495	2.0
Taxes paid	2,016	3,528	2,124	3,649	2,128	3,657	1.2
GST paid	516	904	796	1,368	873	1,499	n.a.
Benefits	1,493	2,612	1,683	2,893	1,713	2,943	4.1
Business income	924	1,617	964	1,657	1,030	1,769	3.0
Interest/dividends	284	497	307	527	300	515	1.2
Interest paid	685	1,198	920	1,580	844	1,450	6.6
Net property income	8	14	10	16	10	18	7.7
Net flow of funds	7,839	13,717	7,978	13,708	8,225	14,134	1.0
Rank		34		40		43	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	2.8	39
2. Creative professionals	16.3	12.3	39
3. Service class	47.8	48.8	19
4. Super creative class	8.9	7.5	28
5. Working class	23.6	28.6	14
6. Creative class (2 + 4)	25.2	19.8	39

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	10.20	17	222
High tech		18	211
Diversity index (S)	0.73	25	156
Bohemian Index (S)	0.69	37	179
Foreign born (%)	0.09	48	33
Composite diversity		32	122
Creativity Index	242	26	242
U.S. region most like	Cheyenne, WY		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	25,252	11.0	40
Very poor households	28,777	12.5	42
Social Security dependent families	30,951	13.5	30
ICONS	9,600	4.2	43
Total households	230,005		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	19.0	21.1	20.8

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	828	995	1.20
Implied price (IP) ($K)	111	159	1.43
Valuer General (VG) price ($K)	114	163	1.42
Ratio of IP/VG	0.97	0.98	1.01
Excess price growth (% p.a.)			2.9
Change in implied yield (%)			-16
VG implied mortgage ($/m)	851	1,071	1.26
Per cent who cannot afford VG	57	61	-3
Scenario 1 – Interest rates			3,557
Scenario 2 – Affordability (%)			-9.9

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	24.3	28
Building approvals per '000 pop. – 2001-02	12.7	31
Commercial floor stock m²/capita – 1998-02	1.3	48

ENVIRONMENT

Annual rainfall (mm)	950.9		
Seasonality	Mostly summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	32	29	39

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	25.7	28.0	25.0
National average	27.9	28.7	21.8
Ratio of region to national	0.92	0.98	1.15
SOR rank	41	47	15

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	34.1	38.8	20.3	6.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	36.2	51.9	7.4	4.5
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
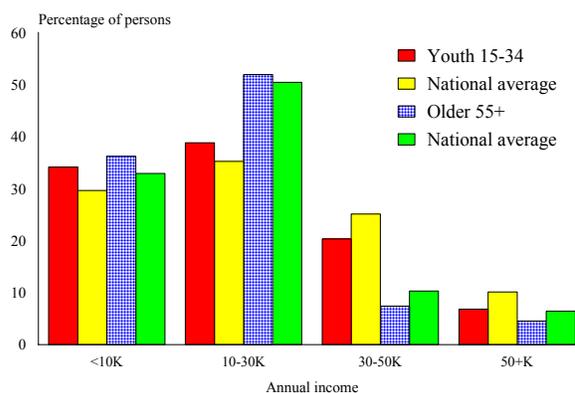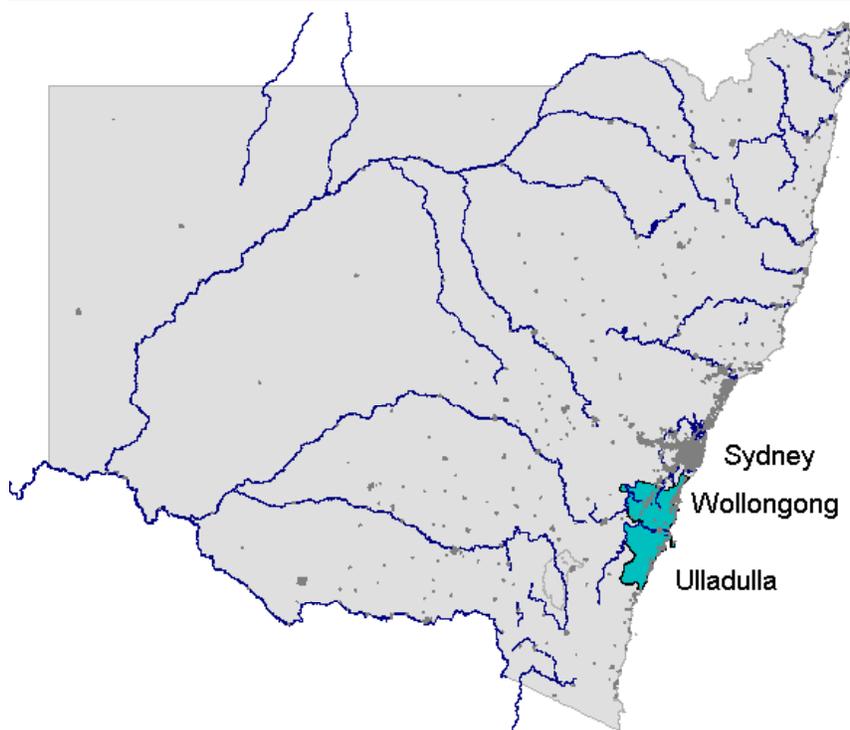
NSW Illawarra

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 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 a long-established hobby farm area.

Major centres:

Wollongong, Nowra

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	380,626		393,274		396,473		1.0
No. households	140,741		149,740		153,665		2.2
Workforce	181,584	47.7	191,923	48.7	197,155	49.3	2.1
Employment	160,490	–	168,456	–	175,607	–	2.3
Unemployment	21,095	11.6	23,468	12.2	21,548	10.9	0.5
DEWRSB U/E	19,558	11.6	13,003	6.9	12,293	6.4	-11.0
Structural U/E, % population	28,946	13.0	31,312	13.6	30,808	13.1	4.6

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	5,516	14,343	6,337	16,113	6,636	16,874	5.6
Taxes paid	1,328	3,454	1,517	3,857	1,568	3,987	4.9
GST paid	343	891	521	1,324	588	1,495	n.a.
Benefits	954	2,480	1,054	2,681	1,070	2,720	3.1
Business income	625	1,625	651	1,656	769	1,954	6.3
Interest/dividends	209	544	222	564	213	541	-0.2
Interest paid	458	1,192	617	1,569	572	1,453	6.8
Net property income	7	19	9	23	10	24	7.6
Net flow of funds	5,182	13,474	5,618	14,285	5,969	15,177	4.0
Rank		37		28		26	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	1.7	44
2. Creative professionals	16.3	13.1	32
3. Service class	47.8	47.9	25
4. Super creative class	8.9	9.1	12
5. Working class	23.6	28.3	18
6. Creative class (2 + 4)	25.2	22.1	19

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.97	25	238
High tech		20	225
Diversity index (S)	0.68	30	181
Bohemian Index (S)	0.80	25	157
Foreign born (%)	0.19	22	12
Composite diversity		29	116
Creativity Index	211	28	250
U.S. region most like	Yuma, AZ		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	17,966	11.7	50
Very poor households	18,931	12.3	36
Social Security dependent families	21,604	14.1	44
ICONS	6,429	4.2	41
Total households	153,665		
Social benefits as a % of net flow of funds	1999 (%) 18.4	2001 (%) 18.8	2002 (%) 17.9

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	904	1,115	1.23
Implied price (IP) ($K)	121	179	1.47
Valuer General (VG) price ($K)	144	213	1.48
Ratio of IP/VG	0.84	0.84	0.99
Excess price growth (% p.a.)			3.1
Change in implied yield (%)			-17
VG implied mortgage ($/m)	1,072	1,404	1.31
Per cent who cannot afford VG	68	73	-5
Scenario 1 – Interest rates			1,550
Scenario 2 – Affordability (%)			-10.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	26.0	22
Building approvals per '000 pop. – 2001-02	15.8	14
Commercial floor stock m^2/capita – 1998-02	1.2	54

ENVIRONMENT

Annual rainfall (mm)	1,203.0		
Seasonality	Uniform rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	32	23	45

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	25.2	27.7	25.1
National average	27.9	28.7	21.8
Ratio of region to national	0.90	0.97	1.15
SOR rank	44	54	11
	Percentage of persons		
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	33.0	36.8	21.8	8.4
– National average	29.6	35.2	25.1	10.1
Older – 55+	37.3	50.0	7.9	4.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
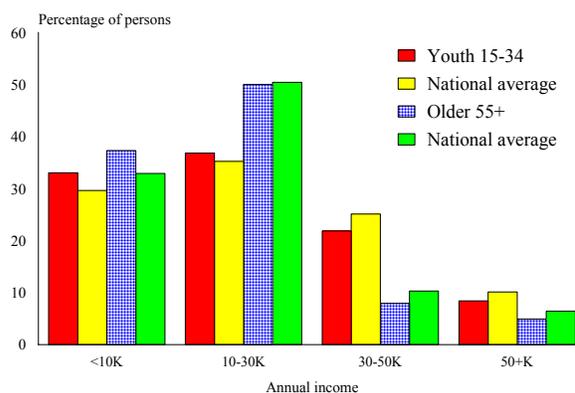
NSW Mid North Coast

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	267,548		274,742		276,372		0.8
No. households	105,747		112,178		114,610		2.0
Workforce	114,431	42,6	113,689	41.2	116,298	41.8	0.4
Employment	92,963	–	89,524	–	93,688	–	0.2
Unemployment	21,468	18.8	24,167	21.3	22,610	19.4	1.3
DEWRSB U/E	13,594	12.2	11,788	10.8	11,232	10.1	-4.7
Structural U/E, % population	26,016	17.6	30,289	20.0	30,023	19.6	5.2

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,636	9,749	2,835	10,318	3,060	11,137	4.5
Taxes paid	553	2,046	587	2,137	622	2,264	3.4
GST paid	252	933	336	1,222	389	1,415	n.a.
Benefits	832	3,079	934	3,401	947	3,446	3.8
Business income	342	1,265	349	1,272	420	1,528	6.5
Interest/dividends	118	437	125	455	122	442	0.4
Interest paid	259	958	366	1,331	333	1,211	8.1
Net property income	12	46	15	53	16	57	7.8
Net flow of funds	2,876	10,639	2,970	10,809	3,220	11,721	3.3
Rank		64		64		61	

OCCUPATION

	Class	National average	% of workforce	SOR rank
1.	Agriculture	3.4	6.1	29
2.	Creative professionals	16.3	13.1	30
3.	Service class	47.8	49.5	14
4.	Super creative class	8.9	6.9	43
5.	Working class	23.6	24.4	40
6.	Creative class (2 + 4)	25.2	20.0	36
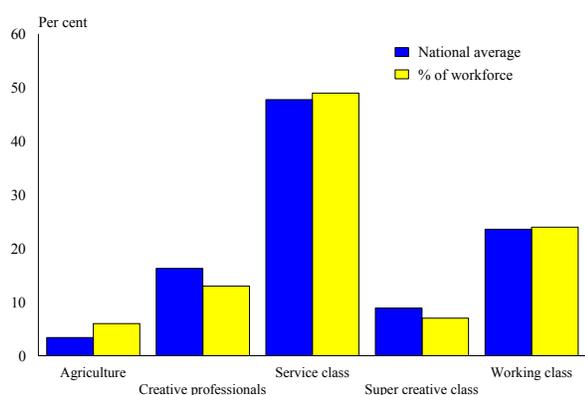
HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	755	883	1.17
Implied price (IP) ($K)	101	142	1.40
Valuer General (VG) price ($K)	110	134	1.22
Ratio of IP/VG	0.92	1.05	1.15
Excess price growth (% p.a.)			0.7
Change in implied yield (%)			-4
VG implied mortgage ($/m)	823	885	1.08
Per cent who cannot afford VG	62	54	8
Scenario 1 – Interest rates			1,457
Scenario 2 – Affordability (%)			-1.5

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	19.9	28.2	30.2
National average	27.9	28.7	21.8
Ratio of region to national	0.71	0.98	1.39
SOR rank	64	44	1

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	40.1	42.7	13.7	3.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	36.6	54.0	6.5	2.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.64	27	243
High tech		36	260
Diversity index (S)	0.60	34	217
Bohemian Index (S)	0.67	40	184
Foreign born (%)	0.09	51	34
Composite diversity		38	144
Creativity Index	111	36	262
U.S. region most like	Victoria, TX		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	14,184	12.4	58
Very poor households	16,396	14.3	61
Social Security dependent families	17,838	15.6	59
ICONS	3,854	3.4	63
Total households	114,610		
Social benefits as a % of net flow of funds	1999 (%) 28.9	2001 (%) 31.5	2002 (%) 29.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	26.7	17
Building approvals per '000 pop. – 2001-02	15.1	18
Commercial floor stock m²/capita – 1998-02	1.4	38

ENVIRONMENT

Annual rainfall (mm)	1,415.2		
Seasonality	Mostly summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	61	30	8
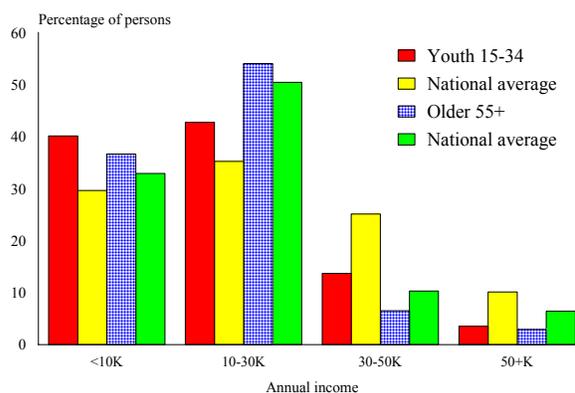
NSW Murray
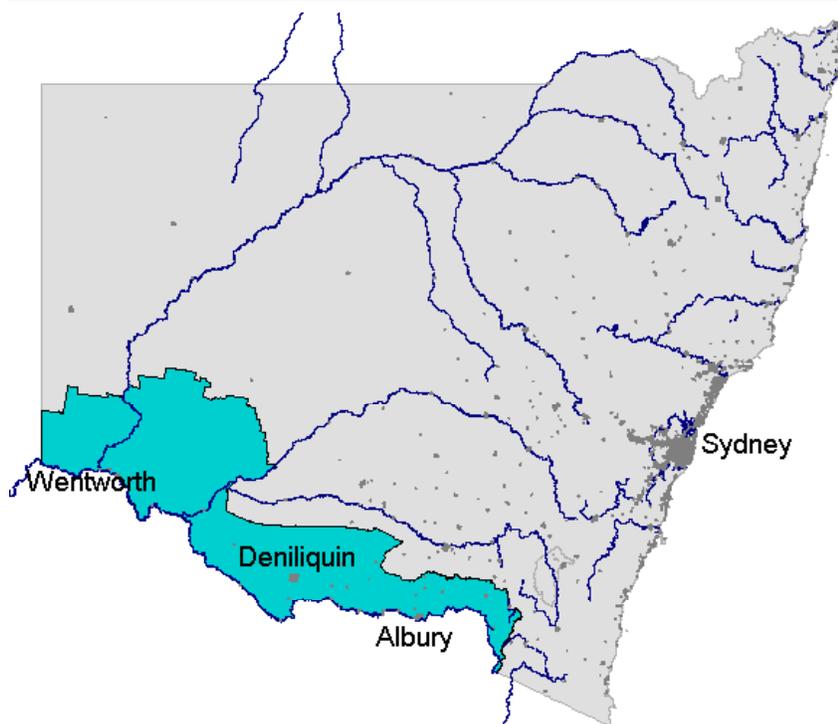
The Murray planning region of NSW comprises a strip running from the edge of the Snowy Mountains to the SA border, with steadily diminishing rainfall as one travels west. The hilly area east of Albury is high-rainfall pastoral country (beef and fat lambs rather than dairy) with gradually expanding timber plantations. Between Albury and the Shire of Murray the strip comprises classic wheat/sheep country, now diversifying. In the Western part of the strip there are several irrigation areas – Coleambally and Wakool are known their rice, but the NSW districts 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	110,596		110.127		110,365		-0.1
No. households	42,130		43,860		44,478		1.4
Workforce	57,042	51.2	58,822	53.2	61,037	55.2	1.7
Employment	51,038	–	53,069	–	55,549	–	2.1
Unemployment	6,005	10.5	5,752	9.8	5,488	9.0	-2.2
DEWRSB U/E	4,214	7.4	3,567	6.2	3,464	5.9	-4.8
Structural U/E, % population	6,888	10.6	7,665	11.9	7,447	11.5	6.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,528	13,836	1,723	15,649	1,943	17,645	8.4
Taxes paid	316	2,861	338	3,071	360	3,272	4.6
GST paid	96	865	140	1,267	162	1,475	n.a.
Benefits	250	2,267	281	2,550	286	2,598	4.6
Business income	194	1,758	199	1,809	216	1,957	3.6
Interest/dividends	57	514	58	530	54	492	-1.5
Interest paid	144	1,301	199	1,809	181	1,643	8.1
Net property income	6	50	7	59	7	64	8.5
Net flow of funds	1,480	13,397	1,591	14,450	1,802	16,364	6.9
Rank		39		24		19	

OCCUPATION

	Class	National average	% of workforce	SOR rank
1.	Agriculture	3.4	13.8	10
2.	Creative professionals	16.3	12.8	34
3.	Service class	47.8	41.7	51
4.	Super creative class	8.9	6.1	57
5.	Working class	23.6	25.5	35
6.	Creative class (2 + 4)	25.2	19.0	40

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.12	42	264
High tech		56	267
Diversity index (S)	0.42	41	264
Bohemian Index (S)	0.62	45	195
Foreign born (%)	0.07	58	43
Composite diversity		49	166
Creativity Index	24	53	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	4,164	9.4	18
Very poor households	5,292	11.9	28
Social Security dependent families	5,674	12.8	18
ICONS	1,871	4.2	39
Total households	44,478		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	16.9	17.6	15.9

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	742	865	1.17
Implied price (IP) ($K)	100	138	1.39
Valuer General (VG) price ($K)	88	110	1.24
Ratio of IP/VG	1.13	1.26	1.12
Excess price growth (% p.a.)			1.1
Change in implied yield (%)			-6
VG implied mortgage ($/m)	659	725	1.10
Per cent who cannot afford VG	46	42	5
Scenario 1 – Interest rates			562
Scenario 2 – Affordability (%)			-3.6

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	17.6	46
Building approvals per '000 pop. – 2001-02	9.3	50
Commercial floor stock m^2/capita – 1998-02	1.6	25

ENVIRONMENT

Annual rainfall (mm)	414.0		
Seasonality	Mostly winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	87	13	–
Days below zero	13	74	14

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	24.2	28.5	25.0
National average	27.9	28.7	21.8
Ratio of region to national	0.87	0.99	1.15
SOR rank	52	37	14

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	32.0	41.2	21.0	5.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.7	53.0	9.8	4.5
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
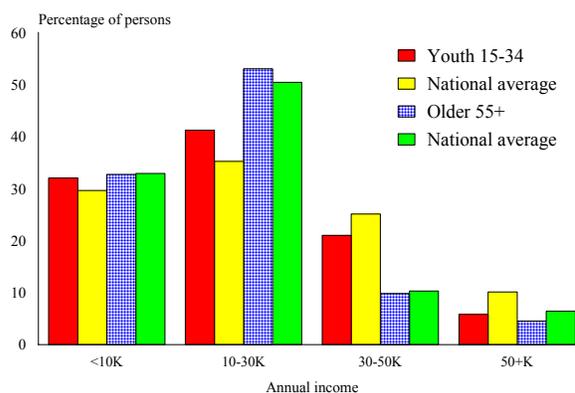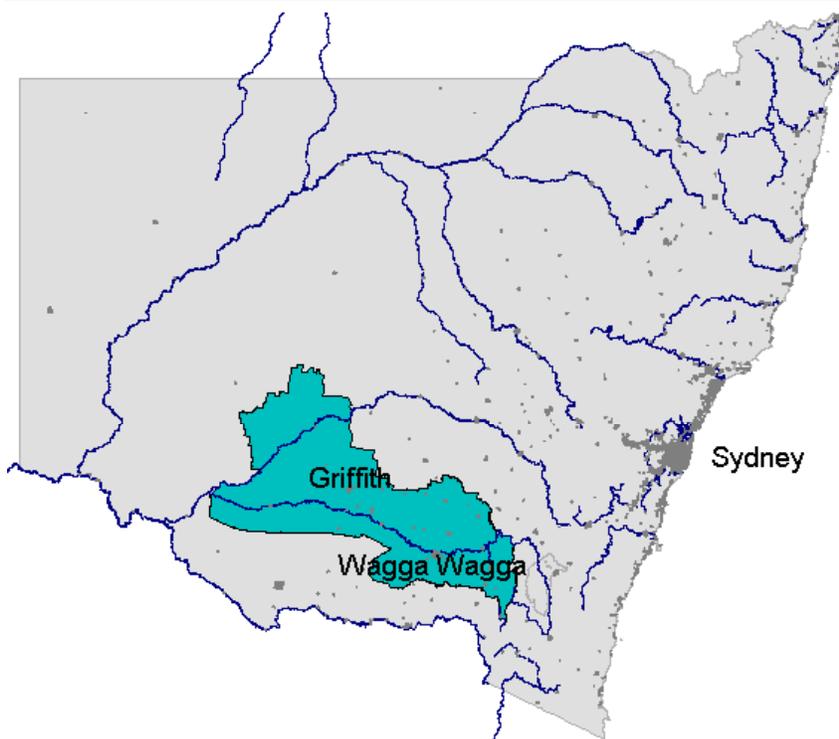
NSW Murrumbidgee

The Murrumbidgee planning region of NSW is similar to the Murray region: it comprises a strip of LGAs running east-west more or less along its namesake river from the ACT border to Hay. 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. East of Wagga lies high rainfall pastoral country with expanding 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	148,784		148,810		148,974		0.0
No. households	53,747		55,719		56,378		1.2
Workforce	74,350	49.9	77,644	51.9	80,449	53.9	2.0
Employment	68,297	–	70,922	–	74,108	–	2.1
Unemployment	6,053	8.1	6,723	8.7	6.341	7.9	1.2
DEWRSB U/E	4,950	6.7	4,377	5.8	4,311	5.5	-3.4
Structural U/E, % population	8,782	10.0	9,479	10.8	9,370	10.7	5.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,165	14,570	2,311	15,527	2,610	17,539	6.4
Taxes paid	454	3,055	460	3,088	488	3,277	2.4
GST paid	126	848	185	1,241	214	1,440	n.a.
Benefits	304	2,044	329	2,213	335	2,253	3.3
Business income	247	1,665	255	1,711	294	1,974	5.8
Interest/dividends	79	535	82	553	77	519	-1.0
Interest paid	183	1,233	253	1,697	233	1,565	8.3
Net property income	9	57	10	68	11	73	8.3
Net flow of funds	2,041	13,736	2,090	14,045	2,392	16,076	5.4
Rank		33		33		20	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	11.3	14
2. Creative professionals	16.3	11.2	54
3. Service class	47.8	44.9	43
4. Super creative class	8.9	6.5	53
5. Working class	23.6	26.2	29
6. Creative class (2 + 4)	25.2	17.6	56

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	5.74	45	264
High tech		51	267
Diversity index (S)	0.30	53	268
Bohemian Index (S)	0.52	57	219
Foreign born (%)	0.08	56	40
Composite diversity		55	175
Creativity Index	9	57	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	5,858	10.4	29
Very poor households	6,964	12.4	38
Social Security dependent families	7,886	14.0	40
ICONS	2,376	4.2	37
Total households	56,378		

Social benefits as a % of net flow of funds	1999 (%) 14.9	2001 (%) 15.8	2002 (%) 14.0

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	743	904	1.22
Implied price (IP) ($K)	100	144	1.45
Valuer General (VG) price ($K)	91	123	1.36
Ratio of IP/VG	1.10	1.17	1.07
Excess price growth (% p.a.)			1.8
Change in implied yield (%)			-10
VG implied mortgage ($/m)	677	813	1.20
Per cent who cannot afford VG	48	46	2
Scenario 1 – Interest rates			710
Scenario 2 – Affordability (%)			-6.1

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	14.7	53
Building approvals per '000 pop. – 2001-02	7.5	57
Commercial floor stock m^2/capita – 1998-02	1.4	39

ENVIRONMENT

Annual rainfall (mm)	514.7
Seasonality	Mostly winter rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	72	28	–
Days below zero	–	70	30

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	27.2	27.3	21.8
National average	27.9	28.7	21.8
Ratio of region to national	0.98	0.95	1.00
SOR rank	26	61	38

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	30.6	41.9	21.8	5.7
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.8	52.0	9.8	5.5
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
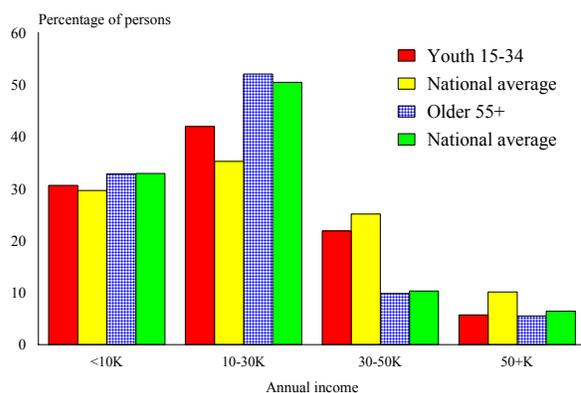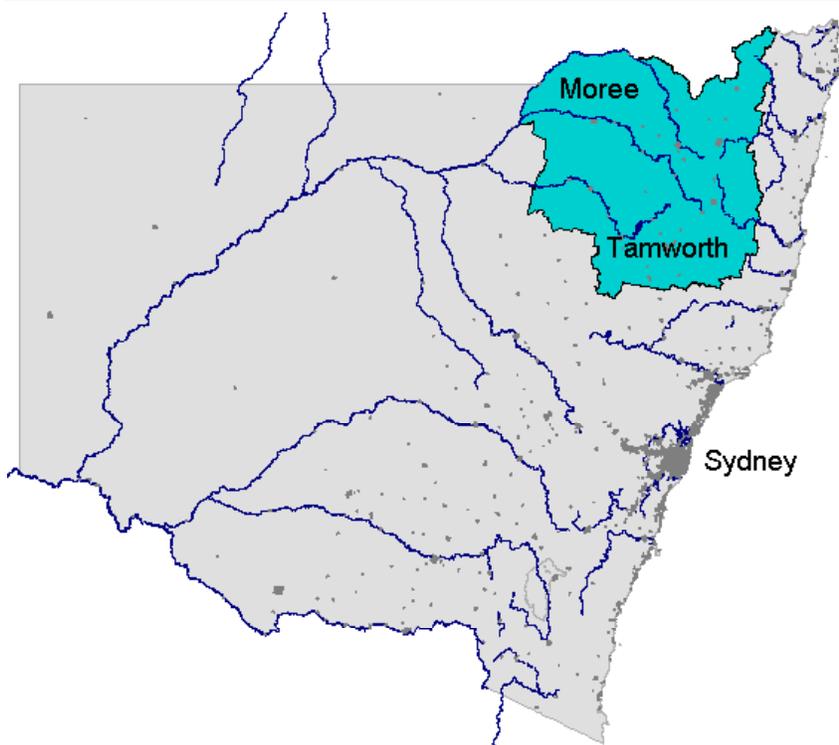
NSW North

The NSW North comprises three distinct sub-regions.

❑ Tamworth is the centre for a mixed farming area.

❑ The New England sub-region is a high plateau, devoted mainly to pasture for beef and wool. Armidale stands out as an academic centre.

❑ Narrabri and Moree Plains Shires comprise black-soil country which is farmed quite intensively. Crops include wheat, sorghum and cotton.

Major centres:

Tamworth, Armidale, Moree

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	175,873		172,234		172,090		-0.5
No. households	66,166		67,734		68,274		0.8
Workforce	87,962	50.0	86,109	49.5	82,950	48.2	-1.5
Employment	78,478	–	72,709	–	72,002	–	-2.1
Unemployment	11,471	13.0	11,337	13.2	10.947	13.2	-1.2
DEWRSB U/E	5,720	6.7	4,775	5.9	4,330	5.4	-6.7
Structural U/E, % population	13,132	12.7	14,371	14.2	14,031	13.9	5.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,274	13,029	2,429	14,105	2,625	15,240	5.4
Taxes paid	473	2,710	464	2,693	475	2,756	0.6
GST paid	161	922	215	1,248	240	1,396	n.a.
Benefits	418	2,392	457	2,655	463	2,686	3.9
Business income	284	1,629	282	1,697	310	1,799	3.4
Interest/dividends	95	546	96	558	87	507	-2.4
Interest paid	182	1,044	291	1,692	263	1,528	13.5
Net property income	11	62	13	75	14	81	8.9
Net flow of funds	2,266	12,983	2,318	13,456	2,520	14,633	4.1
Rank		44		43		32	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	13.9	9
2. Creative professionals	16.3	11.5	48
3. Service class	47.8	43.2	48
4. Super creative class	8.9	7.3	32
5. Working class	23.6	24.1	43
6. Creative class (2 + 4)	25.2	18.8	45

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.72	35	259
High tech		49	267
Diversity index (S)	0.37	48	268
Bohemian Index (S)	0.47	59	230
Foreign born (%)	0.06	62	60
Composite diversity		63	185
Creativity Index	25	52	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	7,531	11.0	41
Very poor households	9,143	13.4	53
Social Security dependent families	10,891	16.0	60
ICONS	3,036	4.4	25
Total households	68,274		
Social benefits as a % of net flow of funds	1999 (%) 18.4	2001 (%) 19.7	2002 (%) 18.4

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	746	855	1.15
Implied price (IP) ($K)	100	137	1.37
Valuer General (VG) price ($K)	89	98	1.10
Ratio of IP/VG	1.12	1.40	1.25
Excess price growth (% p.a.)			-0.7
Change in implied yield (%)			4
VG implied mortgage ($/m)	666	646	0.97
Per cent who cannot afford VG	47	34	13
Scenario 1 – Interest rates			656
Scenario 2 – Affordability (%)			4.6

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	9.6	61
Building approvals per '000 pop. – 2001-02	5.5	60
Commercial floor stock m²/capita – 1998-02	1.4	41

ENVIRONMENT

Annual rainfall (mm)	766.6		
Seasonality	Mostly summer rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	7	93	–
Days below zero	2	45	52

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	25.1	27.7	24.2
National average	27.9	28.7	21.8
Ratio of region to national	0.90	0.97	1.11
SOR rank	45	53	17

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	36.4	40.9	17.8	4.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.3	51.6	9.0	5.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
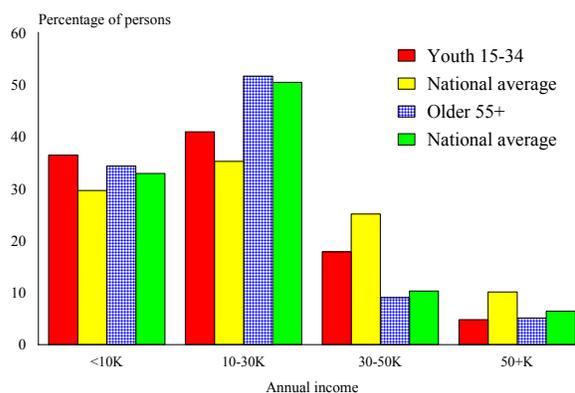
NSW Richmond-Tweed

Until its discovery by 1960s dropouts, tourists and retirement developers, Richmond/Tweed consisted of pockets of fertile agricultural land interspersed between scrubby hills. Its chief centre was and remains Lismore, which is located inland, but most recent development has been along the coast and in the nearby high-rainfall hills. Its economic base remains a mixture of retirement and agriculture; it is beyond commuting range of any major job centre.

Major centres:

Lismore, Tweed Heads

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	205,974		212,805		213,815		0.9
No. households	83,134		87,480		89,190		1.8
Workforce	91,750	44.4	91,161	42.8	93,496	43.5	0.5
Employment	72,795	–	71,727	–	75,007	–	0.8
Unemployment	18,954	20.7	19,432	21.3	18,489	19.8	-0.6
DEWRSB U/E	12,484	14.0	10,536	12.1	9,748	11.0	-6.0
Structural U/E, % population	21,086	18.2	23,267	19.5	23,383	19.4	5.5

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,059	9,861	2,336	10,979	2,528	11,880	6.4
Taxes paid	436	2,088	487	2,290	518	2,433	5.2
GST paid	196	937	267	1,253	309	1,454	n.a.
Benefits	615	2,947	675	3,173	687	3,230	3.1
Business income	274	1,312	280	1,315	322	1,515	4.9
Interest/dividends	100	481	107	502	104	490	0.6
Interest paid	200	957	299	1,407	272	1,277	10.1
Net property income	10	46	11	53	12	57	7.7
Net flow of funds	2,227	10,665	2,356	11,072	2,555	12,008	4.0
Rank		63		62		59	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	6.8	25
2. Creative professionals	16.3	13.0	33
3. Service class	47.8	49.1	16
4. Super creative class	8.9	7.5	30
5. Working class	23.6	23.7	48
6. Creative class (2 + 4)	25.2	20.4	33

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	11.65	16	206
High tech		37	260
Diversity index (S)	1.14	10	31
Bohemian Index (S)	0.86	20	144
Foreign born (%)	0.12	36	25
Composite diversity		12	66
Creativity Index	340	16	207
U.S. region most like		Decatur, AL	

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	10,917	12.2	57
Very poor households	12,972	14.5	62
Social Security dependent families	13,657	15.3	55
ICONS	3,114	3.5	60
Total households	89,190		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	27.6	28.7	26.9

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	804	933	1.16
Implied price (IP) ($K)	108	150	1.39
Valuer General (VG) price ($K)	126	166	1.32
Ratio of IP/VG	0.86	0.90	1.05
Excess price growth (% p.a.)			2.2
Change in implied yield (%)			-12
VG implied mortgage ($/m)	936	1,095	1.17
Per cent who cannot afford VG	67	66	1
Scenario 1 – Interest rates			1,077
Scenario 2 – Affordability (%)			-6.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	27.0	16
Building approvals per '000 pop. – 2001-02	12.6	32
Commercial floor stock m^2/capita – 1998-02	1.4	36

ENVIRONMENT

Annual rainfall (mm)	1,500.2
Seasonality	Mostly summer rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	97	3	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	21.5	28.9	27.9
National average	27.9	28.7	21.8
Ratio of region to national	0.77	1.01	1.28
SOR rank	63	28	4

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	40.3	43.3	13.2	3.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.6	55.2	7.2	3.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
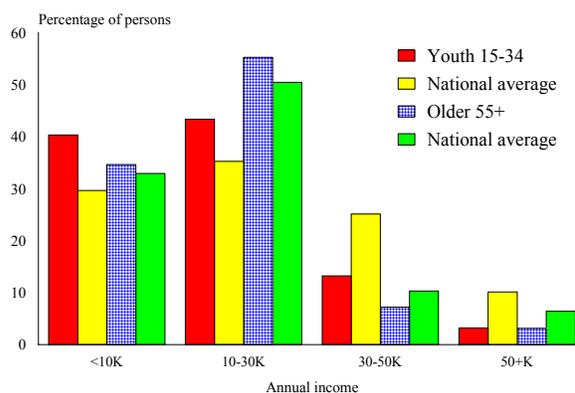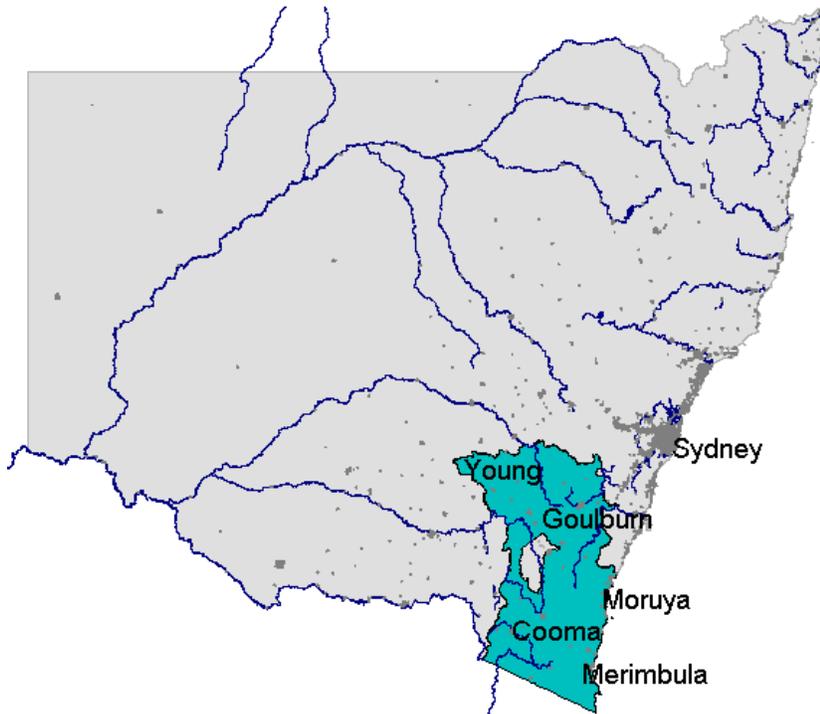
NSW South-East

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, but now it divides between the Canberra hobby-farm belt and Sydney's winter playground in Snowy River Shire.

❑ An area of 'slopes' country in Boorowa, Harden and Young Shires. 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	180,412		184,438		185,917		0.8
No. households	72,213		76,817		78,804		2.2
Workforce	96,934	53.7	88,097	47.5	85,564	45.7	-3.1
Employment	89,381	–	76,793	–	75,175	–	-4.2
Unemployment	7,553	7.8	11,303	12.8	10,389	12.1	8.3
DEWRSB U/E	7,937	8.4	6,364	7.5	5,558	6.8	-8.5
Structural U/E, % population	10,580	10.0	14,491	13.4	14,154	12.8	5.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,401	13,254	2,861	15,512	2,971	16,110	6.7
Taxes paid	533	2,939	624	3,385	632	3,427	5.3
GST paid	205	1,132	248	1,347	275	1,492	n.a.
Benefits	395	2,182	469	2,542	476	2,578	5.7
Business income	304	1,676	313	1,697	361	1,960	5.4
Interest/dividends	100	554	106	577	102	555	0.1
Interest paid	241	1,331	329	1,785	299	1,620	6.7
Net property income	8	43	9	50	10	53	7.7
Net flow of funds	2,229	12,304	2,556	13,859	2,715	14,718	6.2
Rank		52		37		29	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	8.2	18
2. Creative professionals	16.3	14.8	16
3. Service class	47.8	45.6	40
4. Super creative class	8.9	7.2	35
5. Working class	23.6	24.2	42
6. Creative class (2 + 4)	25.2	21.9	20

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.47	29	243
High tech		34	260
Diversity index (S)	0.88	20	76
Bohemian Index (S)	0.68	39	184
Foreign born (%)	0.12	35	25
Composite diversity		22	94
Creativity Index	270	22	235
U.S. region most like	Laredo, TX		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	7,313	9.3	15
Very poor households	9,263	11.8	24
Social Security dependent families	9,815	12.5	13
ICONS	3,394	4.3	31
Total households	78,804		
Social benefits as a % of net flow of funds	1999 (%) 17.7	2001 (%) 18.3	2002 (%) 17.5

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	835	968	1.16
Implied price (IP) ($K)	112	155	1.39
Valuer General (VG) price ($K)	82	120	1.46
Ratio of IP/VG	1.36	1.30	0.95
Excess price growth (% p.a.)			3.9
Change in implied yield (%)			-21
VG implied mortgage ($/m)	612	790	1.29
Per cent who cannot afford VG	35	40	-6
Scenario 1 – Interest rates			886
Scenario 2 – Affordability (%)			-12.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	24.6	26
Building approvals per '000 pop. – 2001-02	18.3	10
Commercial floor stock m^2/capita – 1998-02	1.5	30

ENVIRONMENT

Annual rainfall (mm)	855.1		
Seasonality	Uniform rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	4	5	91

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.9	29.0	25.1
National average	27.9	28.7	21.8
Ratio of region to national	0.86	1.01	1.15
SOR rank	53	23	12

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	29.9	40.4	22.0	7.7
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.6	51.6	10.1	5.8
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.

Melbourne Inner

Since the second world war, 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	281,873		305,694		308,764		2.3
No. households	125,868		140,288		145,168		3.6
Workforce	169,206	59.9	163,474	53.7	173,916	55.8	0.7
Employment	147,051	–	151,600	–	162,839	–	2.6
Unemployment	22,156	13.1	11,874	7.3	11,076	6.4	-15.9
DEWRSB U/E	10,927	6.5	8,808	5.3	9,961	5.7	-2.3
Structural U/E, % population	24,790	12.2	19,129	8.6	18,741	8.3	4.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	6,261	21,788	7,947	25,997	9,117	29,825	11.0
Taxes paid	1,815	6,316	2,292	7,497	2,667	8,725	11.4
GST paid	330	1,147	545	1,783	675	2,207	n.a.
Benefits	619	2,153	516	1,687	526	1,720	-7.2
Business income	1,051	3,658	1,160	3,794	1,391	4,551	7.5
Interest/dividends	515	1,792	616	2,016	636	2,081	5.1
Interest paid	411	1,431	565	1,847	558	1,824	8.4
Net property income	56	195	66	216	71	233	6.2
Net flow of funds	5,946	20,692	6,904	22,584	7,842	25,653	7.4
Rank		1		2		2	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.1	64
2. Creative professionals	16.3	24.9	2
3. Service class	47.8	48.4	22
4. Super creative class	8.9	12.5	3
5. Working class	23.6	14.1	64
6. Creative class (2 + 4)	25.2	37.4	3

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	46.00	1	49
High tech		2	33
Diversity index (S)	8.77	1	1
Bohemian Index (S)	1.85	2	5
Foreign born (%)	0.28	8	2
Composite diversity		2	2
Creativity Index	985	2	7
U.S. region most like	Houston, TX		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	8,644	6.0	2
Very poor households	12,412	8.6	7
Social Security dependent families	11,531	7.9	1
ICONS	8,468	5.8	5
Total households	145,168		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	10.4	7.5	6.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	1,074	1,612	1.50
Implied price (IP) ($K)	144	264	1.83
Valuer General (VG) price ($K)	227	454	2.00
Ratio of IP/VG	0.64	0.58	0.92
Excess price growth (% p.a.)			4.9
Change in implied yield (%)			-25
VG implied mortgage ($/m)	1,691	2,992	1.77
Per cent who cannot afford VG	80	93	-13
Scenario 1 – Interest rates			1,357
Scenario 2 – Affordability (%)			-13.1

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	45.8	3
Building approvals per '000 pop. – 2001-02	32.4	1
Commercial floor stock m^2/capita – 1998-02	3.8	1

ENVIRONMENT

Annual rainfall (mm)	649.2
Seasonality	Uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	2	98	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	40.3	26.5	18.6
National average	27.9	28.7	21.8
Ratio of region to national	1.45	0.93	0.86
SOR rank	1	63	54

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	18.6	26.9	31.0	23.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	26.6	43.2	13.4	16.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
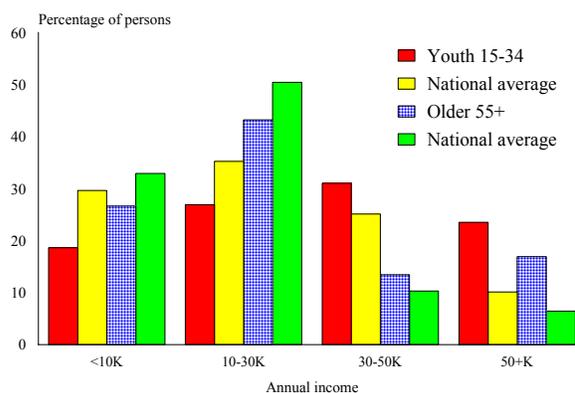
Melbourne East

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	815,485		838,085		838,225		0.7
No. households	289,099		304,703		309,397		1.7
Workforce	439,859	53.9	465,525	55.7	475,243	56.7	2.0
Employment	414,201	–	442,321	–	453,393	–	2.3
Unemployment	25,658	5.8	23,204	5.0	21,850	4.6	-3.9
DEWRSB U/E	28,901	6.7	21,915	4.8	21,357	4.6	-7.3
Structural U/E, % population	32,522	6.3	31,652	6.0	30,605	5.8	3.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	15,455	18,780	18,099	21,595	18,896	22,547	6.3
Taxes paid	3,937	4,783	4,609	5,500	4,885	5,828	6.8
GST paid	764	929	1,231	1,468	1,387	1,655	n.a.
Benefits	1,316	1,599	1,432	1,708	1,448	1,728	2.6
Business income	2,290	2,782	2,442	2,914	2,735	3,263	5.5
Interest/dividends	858	1,043	1,001	1,194	1,020	1,217	5.3
Interest paid	1,179	1,432	1,568	1,871	1,521	1,815	8.2
Net property income	103	126	122	146	132	157	7.7
Net flow of funds	14,143	17,185	15,688	18,719	16,438	19,614	4.5
Rank		7		6		8	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.2	62
2. Creative professionals	16.3	17.3	10
3. Service class	47.8	49.7	12
4. Super creative class	8.9	10.8	6
5. Working class	23.6	22.1	56
6. Creative class (2 + 4)	25.2	28.0	8
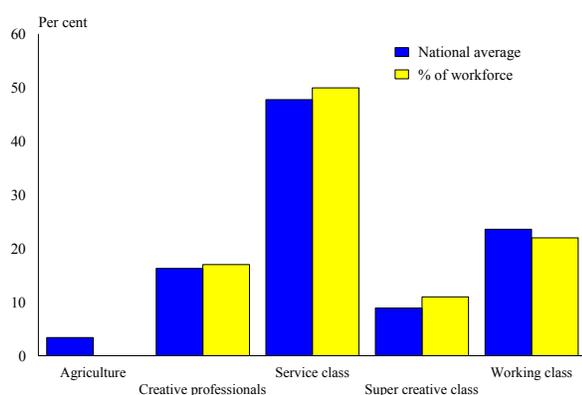
HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	894	1,275	1.43
Implied price (IP) ($K)	120	209	1.74
Valuer General (VG) price ($K)	156	315	2.02
Ratio of IP/VG	0.77	0.66	0.86
Excess price growth (% p.a.)			6.0
Change in implied yield (%)			-29
VG implied mortgage ($/m)	1,162	2,075	1.79
Per cent who cannot afford VG	74	88	-15
Scenario 1 – Interest rates			1,088
Scenario 2 – Affordability (%)			-24.0

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	28.5	28.8	23.3
National average	27.9	28.7	21.8
Ratio of region to national	1.02	1.00	1.07
SOR rank	18	30	27

INCOME	<10K	10-30K	30-50K	50+K
		Percentage of persons		
Youth 15-34	28.9	29.2	28.7	13.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	27.4	49.4	13.9	9.3
– National average	32.9	50.4	10.3	6.4

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	13.73	11	196
High tech		3	45
Diversity index (S)	0.61	32	208
Bohemian Index (S)	1.09	7	91
Foreign born (%)	0.28	12	2
Composite diversity		23	99
Creativity Index	519	10	136
U.S. region most like	Fort Pierce – Port St Lucie, FL		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	23,513	7.6	8
Very poor households	22,503	7.3	3
Social Security dependent families	31,520	10.2	8
ICONS	20,367	6.6	2
Total households	309,397		
Social benefits as a % of net flow of funds	1999 (%) 9.3	2001 (%) 9.1	2002 (%) 8.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	22.0	35
Building approvals per '000 pop. – 2001-02	10.0	44
Commercial floor stock m^2/capita – 1998-02	1.3	43

ENVIRONMENT

Annual rainfall (mm)	812.9		
Seasonality	Uniform rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	59	41	–
Evapotranspiration	–	100	–
Days below zero	98	2	–

Note: SOR rank out of 64; U.S. rank out of 268.
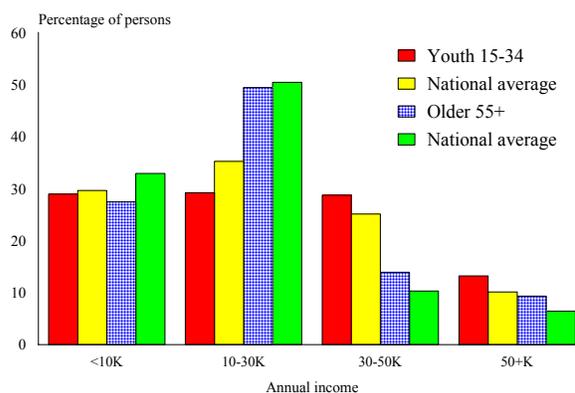
Melbourne North

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, particularly textiles clothing and footwear, the region is becoming more of a commuter zone for Central Melbourne. By and large socio-economic status is low to middling, but there has been some gentrification, and in Heidelburg-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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	680,960		704,579		707,712		1.0
No. households	236,033		250,922		256,761		2.1
Workforce	343,454	50.4	348,668	49.6	357,788	50.3	1.0
Employment	306,237	–	311,970	–	323,564	–	1.4
Unemployment	37,218	10.8	36,700	10.5	34,224	9.6	-2.1
DEWRSB U/E	28,392	8.4	26,213	7.7	26,035	7.4	-2.1
Structural U/E, % population	50,074	11.6	51,619	11.6	50,551	11.2	3.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	10,346	15,027	11,938	16,944	12,227	17,353	4.9
Taxes paid	2,394	3,478	2,750	3,903	2,851	4,047	5.2
GST paid	579	840	854	1,212	943	1,339	n.a.
Benefits	1,503	2,183	1,637	2,323	1,667	2,366	2.7
Business income	1,359	1,973	1,414	2,007	1,564	2,220	4.0
Interest/dividends	258	374	290	412	290	412	3.3
Interest paid	863	1,253	1,132	1,606	1,074	1,524	6.7
Net property income	48	69	56	80	61	86	7.6
Net flow of funds	9,677	14,056	10,599	15,044	10,941	15,528	3.4
Rank		26		22		22	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.4	54
2. Creative professionals	16.3	13.5	22
3. Service class	47.8	47.2	29
4. Super creative class	8.9	8.6	17
5. Working class	23.6	30.2	10
6. Creative class (2 + 4)	25.2	22.2	18

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	7.57	33	248
High tech		6	71
Diversity index (S)	1.12	11	33
Bohemian Index (S)	0.94	11	126
Foreign born (%)	0.28	9	2
Composite diversity		9	53
Creativity Index	503	12	144
U.S. region most like	Amarillo, TX		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	29,383	11.4	47
Very poor households	28,000	10.9	14
Social Security dependent families	35,663	13.9	37
ICONS	11,042	4.3	32
Total households	256,761		

Social benefits as a % of net flow of funds	1999 (%)	2001 (%)	2002 (%)
	15.5	15.4	15.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	820	1,091	1.33
Implied price (IP) ($K)	110	179	1.63
Valuer General (VG) price ($K)	125	266	2.13
Ratio of IP/VG	0.88	0.67	0.76
Excess price growth (% p.a.)			8.2
Change in implied yield (%)			-38
VG implied mortgage ($/m)	929	1,751	1.89
Per cent who cannot afford VG	63	88	-25
Scenario 1 – Interest rates			1,585
Scenario 2 – Affordability (%)			-27.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	22.6	32
Building approvals per '000 pop. – 2001-02	14.3	23
Commercial floor stock m^2/capita – 1998-02	1.6	22

ENVIRONMENT

Annual rainfall (mm)	737.7
Seasonality	Uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	1	99	–
Evapotranspiration	–	100	–
Days below zero	39	61	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	30.4	28.4	20.1
National average	27.9	28.7	21.8
Ratio of region to national	1.09	0.99	0.92
SOR rank	12	38	46

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	29.7	34.1	27.2	9.0
– National average	29.6	35.2	25.1	10.1
Older – 55+	41.1	46.4	8.5	4.0
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
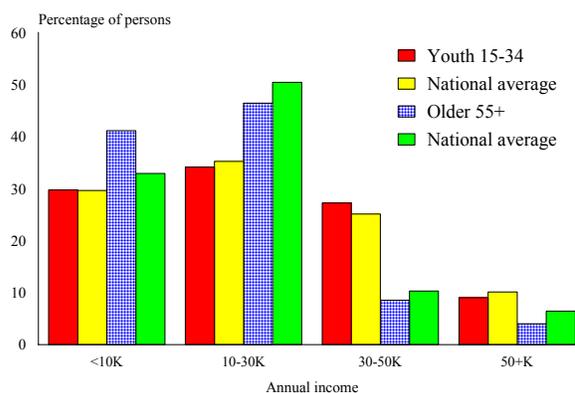
Melbourne South

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	343,346		354,048		354,217		0.8
No. households	131,497		138,597		140,846		1.7
Workforce	177,353	51.6	175,578	49.6	177,547	50.1	0.0
Employment	164,452	–	164,712	–	167,285	–	0.4
Unemployment	12,900	7.3	10.865	6.2	10,262	5.8	-5.6
DEWRSB U/E	10,651	6.1	7,902	4.6	8,902	5.1	-4.4
Structural U/E, % population	16,618	7.8	15,900	7.3	15,359	7.0	4.5

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	6,343	18,284	7,258	20,500	7,609	21,492	5.5
Taxes paid	1,647	4,748	1,885	5,323	2,006	5,667	6.1
GST paid	351	1,013	535	1,511	605	1,710	n.a.
Benefits	634	1,826	675	1,907	684	1,931	1.9
Business income	966	2,784	1,031	2,911	1,111	3,139	4.1
Interest/dividends	392	1,129	443	1,251	440	1,241	3.2
Interest paid	482	1,390	636	1,796	618	1,746	7.9
Net property income	64	183	75	212	81	229	7.7
Net flow of funds	5,917	17,057	6,426	18,151	6,695	18,909	3.5
Rank		8		8		9	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.3	57
2. Creative professionals	16.3	16.7	11
3. Service class	47.8	47.1	30
4. Super creative class	8.9	8.7	15
5. Working class	23.6	27.1	23
6. Creative class (2 + 4)	25.2	25.4	11

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	15.96	9	164
High tech		11	91
Diversity index (S)	1.25	7	18
Bohemian Index (S)	1.30	4	44
Foreign born (%)	0.28	10	2
Composite diversity		4	20
Creativity Index	606	8	105
U.S. region most like	Reno, NV		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	9,881	7.0	5
Very poor households	11,206	8.0	6
Social Security dependent families	12,937	9.2	4
ICONS	7,841	5.6	9
Total households	140,846		
Social benefits as a % of net flow of funds	1999 (%) 10.7	2001 (%) 10.5	2002 (%) 10.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	920	1,319	1.43
Implied price (IP) ($K)	123	216	1.75
Valuer General (VG) price ($K)	180	375	2.09
Ratio of IP/VG	0.69	0.58	0.84
Excess price growth (% p.a.)			6.5
Change in implied yield (%)			-31
VG implied mortgage ($/m)	1,339	2,475	1.85
Per cent who cannot afford VG	80	89	-9
Scenario 1 – Interest rates			2,442
Scenario 2 – Affordability (%)			-22.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	22.5	33
Building approvals per '000 pop. – 2001-02	12.3	36
Commercial floor stock m^2/capita – 1998-02	1.2	57

ENVIRONMENT

Annual rainfall (mm)	684.8		
Seasonality	Mostly winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	81	19	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.5	29.6	25.0
National average	27.9	28.7	21.8
Ratio of region to national	0.95	1.03	1.15
SOR rank	33	9	13

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	27.1	28.8	29.5	14.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	27.3	51.6	12.8	8.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
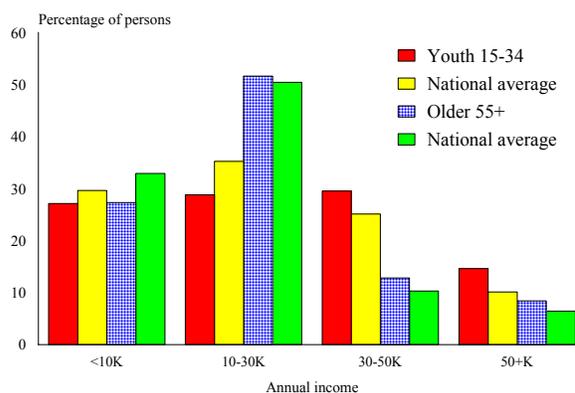
Melbourne West

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 postwar immigrants. The decline of manufacturing as an employer has led to an increase in commuting to Central Melbourne, which is conveniently close.

Major centres:

Footscray, Werribee, Sunshine

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	538,892		568,562		576,683		1.7
No. households	185,033		202,978		211,507		3.4
Workforce	266,748	49.4	283,629	49.8	282,501	48.3	1.4
Employment	234,653	–	250,543	–	251,695	–	1.8
Unemployment	32,095	12.0	33,086	11.7	30,805	10.9	-1.0
DEWRSB U/E	25,260	9.6	22,182	8.0	21,641	7.8	-3.8
Structural U/E, % population	42,565	12.3	45,878	12.6	44,734	12.0	4.1

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	8,421	15,370	9,782	17,205	9,665	17,000	3.4
Taxes paid	1,939	3,540	2,244	3,946	2,242	3,944	3.7
GST paid	443	808	685	1,205	729	1,282	n.a.
Benefits	1,213	2,213	1,338	2,354	1,372	2,413	2.9
Business income	1,045	1,908	1,088	1,913	1,235	2,173	4.4
Interest/dividends	161	293	183	322	187	329	3.9
Interest paid	663	1,210	872	1,534	828	1,456	6.4
Net property income	21	39	25	44	27	48	7.1
Net flow of funds	7,816	14,266	8,615	15,152	8,688	15,280	2.3
Rank		23		19		25	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.7	52
2. Creative professionals	16.3	13.4	27
3. Service class	47.8	46.4	37
4. Super creative class	8.9	8.8	14
5. Working class	23.6	30.7	9
6. Creative class (2 + 4)	25.2	22.2	17

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.62	36	259
High tech		7	71
Diversity index (S)	0.82	22	105
Bohemian Index (S)	0.89	15	137
Foreign born (%)	0.32	5	2
Composite diversity		18	80
Creativity Index	420	14	178
U.S. region most like		Modesto, CA	

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	26,625	12.6	59
Very poor households	23,375	11.1	17
Social Security dependent families	31,851	15.1	54
ICONS	8,685	4.1	45
Total households	211,507		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	15.5	15.5	15.8

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	799	1,065	1.33
Implied price (IP) ($K)	107	174	1.63
Valuer General (VG) price ($K)	112	226	2.02
Ratio of IP/VG	0.96	0.77	0.81
Excess price growth (% p.a.)			7.2
Change in implied yield (%)			-34
VG implied mortgage ($/m)	835	1,489	1.78
Per cent who cannot afford VG	57	82	-25
Scenario 1 – Interest rates			2,065
Scenario 2 – Affordability (%)			-23.3

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	34.3	6
Building approvals per '000 pop. – 2001-02	24.0	4
Commercial floor stock m²/capita – 1998-02	1.2	52

ENVIRONMENT

Annual rainfall (mm)	551.3
Seasonality	Uniform rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	4	96	–
Evapotranspiration	–	100	–
Days below zero	30	70	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	30.6	29.4	18.4
National average	27.9	28.7	21.8
Ratio of region to national	1.10	1.02	0.85
SOR rank	10	15	56

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	29.8	32.8	28.1	9.3
– National average	29.6	35.2	25.1	10.1
Older – 55+	42.2	45.7	8.5	3.6
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
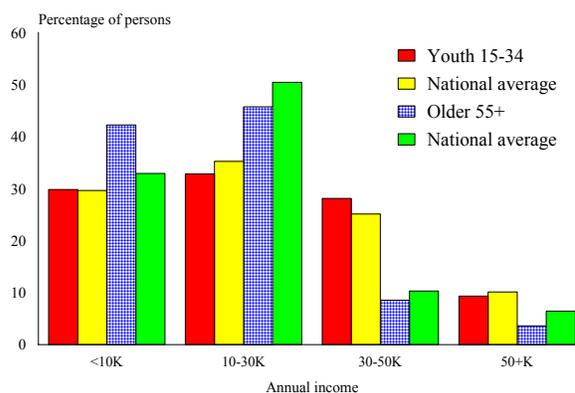
Melbourne Westernport
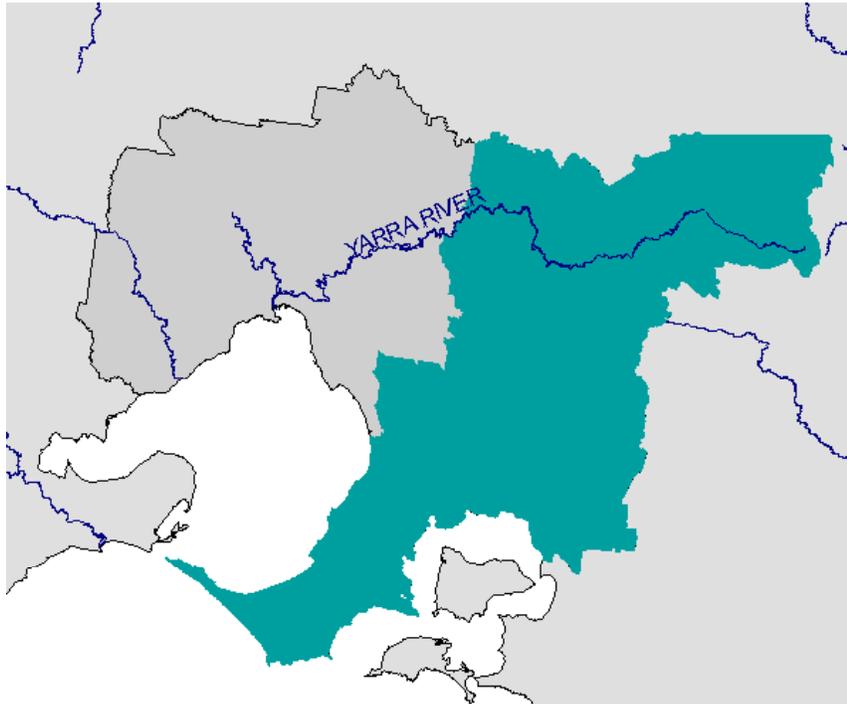
The Westernport region lies more than 25 km from Melbourne CBD, and is accordingly outer suburban. It includes three distinct segments:

❑ 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

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	709,562		751,697		759,309		1.7
No. households	245,973		268,536		278,097		3.1
Workforce	353,038	49.8	386,563	51.6	393,249	51.3	2.7
Employment	321,294	–	349,302	–	359,274	–	2.8
Unemployment	31,744	9.0	37,260	9.6	33,975	8.6	1.7
DEWRSB U/E	30,599	8.8	24,889	6.6	25,375	6.6	-4.6
Structural U/E, % population	41,238	9.5	48,000	10.4	47,118	10.0	3.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	10,693	14,832	12,169	16,188	12,447	16,559	3.7
Taxes paid	2,386	3,309	2,692	3,581	2,768	3,682	3.6
GST paid	595	825	927	1,233	1,015	1,350	n.a.
Benefits	1,227	1,702	1,608	2,139	1,641	2,184	8.7
Business income	1,326	1,839	1,374	1,828	1,512	2,012	3.0
Interest/dividends	326	453	362	482	351	467	1.1
Interest paid	1,014	1,406	1,324	1,761	1,221	1,625	4.9
Net property income	36	50	43	57	46	62	6.9
Net flow of funds	9,615	13,336	10,613	14,119	10,995	14,627	3.1
Rank		41		30		33	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	2.6	40
2. Creative professionals	16.3	13.8	19
3. Service class	47.8	48.3	23
4. Super creative class	8.9	8.1	20
5. Working class	23.6	27.2	22
6. Creative class (2 + 4)	25.2	21.8	21
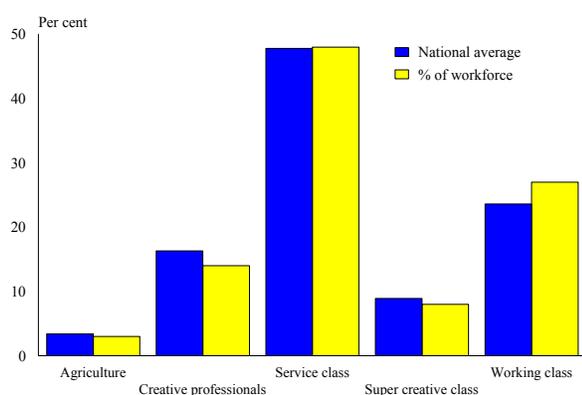
HOME PRICES

	1996	2002	Ratio/Change
Average mortgage ($/m)	778	954	1.23
Implied price (IP) ($K)	104	156	1.50
Valuer General (VG) price ($K)	104	188	1.81
Ratio of IP/VG	1.01	0.83	0.83
Excess price growth (% p.a.)			6.7
Change in implied yield (%)			-32
VG implied mortgage ($/m)	772	1,238	1.60
Per cent who cannot afford VG	52	77	-25
Scenario 1 – Interest rates			4,280
Scenario 2 – Affordability (%)			-20.5

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	27.7	29.3	19.8
National average	27.9	28.7	21.8
Ratio of region to national	0.99	1.02	0.91
SOR rank	24	16	47

INCOME	<10K	10-30K	30-50K	50+K
		Percentage of persons		
Youth 15-34	31.2	37.3	25.0	6.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	33.9	50.5	10.7	4.9
– National average	32.9	50.4	10.3	6.4

CREATIVE CLASS

Index	Value (V)/Score (S)	SOR rank	U.S. rank
Patents (V)	9.21	21	238
High tech		12	96
Diversity index (S)	0.45	39	262
Bohemian Index (S)	0.82	24	150
Foreign born (%)	0.26	14	3
Composite diversity		37	137
Creativity Index	253	23	239
U.S. region most like		Sharon, PA	

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	31,885	11.5	48
Very poor households	32,463	11.7	23
Social Security dependent families	39,173	14.1	45
ICONS	12,502	4.5	24
Total households	278,097		
Social benefits as a % of net flow of funds	1999 (%) 12.8	2001 (%) 15.2	2002 (%) 14.9

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	32.1	8
Building approvals per '000 pop. – 2001-02	21.3	5
Commercial floor stock m^2/capita – 1998-02	1.1	58

ENVIRONMENT

Annual rainfall (mm)	1,083.1
Seasonality	Mostly winter rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	100	–	–
Evapotranspiration	–	100	–
Days below zero	27	50	23

Note: SOR rank out of 64; U.S. rank out of 268.
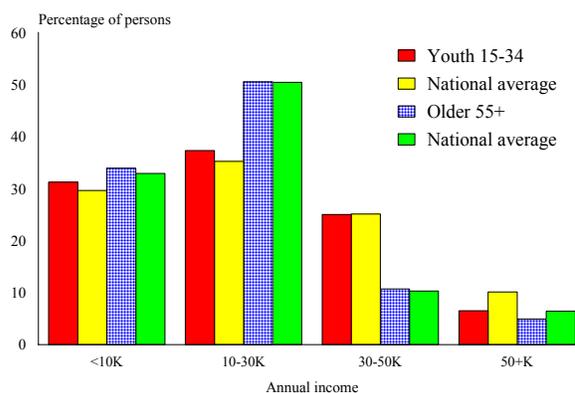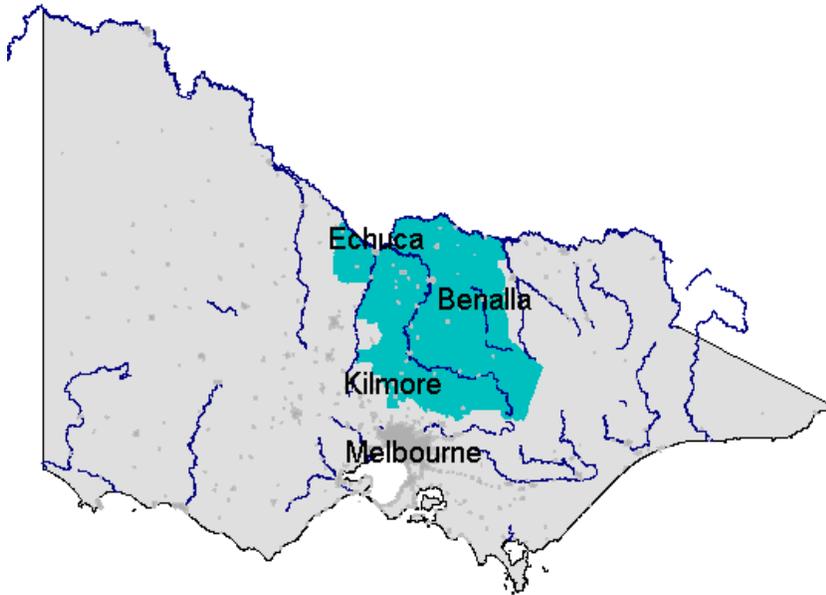
VIC Goulburn

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 between Seymour, where the river leaves the hills, and the Murray River. 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.

Major centres:

Shepparton

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	185,207		189,394		190,397		0.7
No. households	68,789		73,034		74,916		2.2
Workforce	93,237	50.2	96,761	51.0	94,056	49.1	0.2
Employment	82,997	–	86,402	–	84,453	–	0.4
Unemployment	10,238	11.0	10,358	10.7	9,603	10.2	-1.6
DEWRSB U/E	6,584	7.3	6,455	6.9	5,659	6.2	-3.7
Structural U/E, % population	12,341	11.5	13,217	12.0	13,043	11.7	5.6

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,654	14,233	2,580	13,622	2,665	14,073	-0.4
Taxes paid	482	2,586	442	2,333	437	2,307	-3.7
GST paid	152	813	221	1,168	233	1,231	n.a.
Benefits	417	2,238	455	2,400	464	2,449	3.0
Business income	399	2,141	410	2,162	414	2,186	0.7
Interest/dividends	90	484	96	505	90	476	-0.6
Interest paid	231	1,240	307	1,622	286	1,510	6.8
Net property income	11	57	12	66	13	71	7.9
Net flow of funds	2,707	14,513	2,582	13,633	2,691	14,206	-0.7
Rank		21		42		41	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	14.7	8
2. Creative professionals	16.3	12.1	42
3. Service class	47.8	41.4	52
4. Super creative class	8.9	6.5	52
5. Working class	23.6	25.4	38
6. Creative class (2 + 4)	25.2	18.5	48

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.96	48	265
High tech		43	267
Diversity index (S)	0.38	46	268
Bohemian Index (S)	0.56	50	210
Foreign born (%)	0.09	50	34
Composite diversity		52	170
Creativity Index	19	54	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	7,541	10.1	25
Very poor households	8,884	11.9	27
Social Security dependent families	10,084	13.5	31
ICONS	3,016	4.0	51
Total households	74,916		

Social benefits as a % of net flow of funds	1999 (%)	2001 (%)	2002 (%)
	15.4	17.6	17.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	696	877	1.26
Implied price (IP) ($K)	93	144	1.54
Valuer General (VG) price ($K)	90	118	1.30
Ratio of IP/VG	1.03	1.22	1.18
Excess price growth (% p.a.)			0.6
Change in implied yield (%)			-3
VG implied mortgage ($/m)	675	777	1.15
Per cent who cannot afford VG	52	48	5
Scenario 1 – Interest rates			1,062
Scenario 2 – Affordability (%)			-5.1

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	22.7	31
Building approvals per '000 pop. – 2001-02	15.6	17
Commercial floor stock m²/capita – 1998-02	1.5	29

ENVIRONMENT

Annual rainfall (mm)	758.1
Seasonality	Uniform rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	9	91	–
Evapotranspiration	38	62	–
Days below zero	–	66	34

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	24.5	28.6	23.4
National average	27.9	28.7	21.8
Ratio of region to national	0.88	1.00	1.08
SOR rank	50	34	26

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	32.3	39.8	22.6	5.3
– National average	29.6	35.2	25.1	10.1
Older – 55+	33.6	54.2	8.4	3.8
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
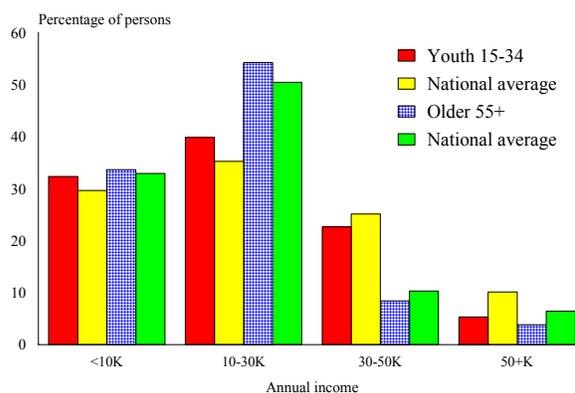
VIC Barwon
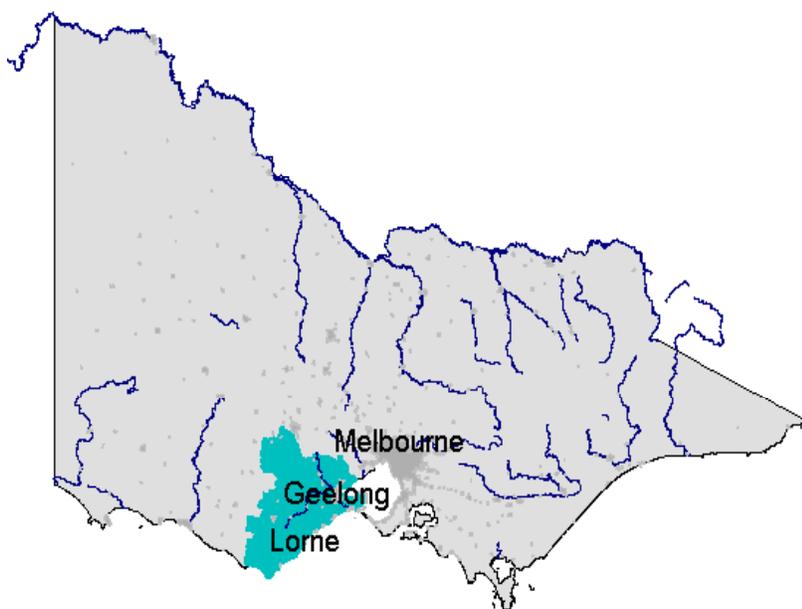
Much of the Barwon region, including its urban centre in Geelong, is within commuting range of Melbourne, and the commuter traffic has increased considerably over the past several decades. Even so, Geelong is a manufacturing centre in its own right, and has suffered from the decline of manufacturing, particularly the textile industry. The region also includes resort and retirement communities and agricultural areas.

Major centres:

Geelong

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	243,376		252,511		254,497		1.1
No. households	90,588		97,835		100,889		2.7
Workforce	117,308	48.3	118,682	46.9	128,038	49.9	2.2
Employment	102,953	–	103,608	–	115,023	–	2.8
Unemployment	14,355	12.2	15,074	12.7	13,015	10.2	-2.4
DEWRSB U/E	11,540	10.0	9,126	7.9	7,399	5.9	-10.5
Structural U/E, % population	16,617	11.5	18,416	12.2	17,620	11.5	5.1

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	3,518	14,340	3,832	15,174	4,261	16,873	5.6
Taxes paid	780	3,177	843	3,338	942	3,731	5.5
GST paid	217	886	314	1,245	374	1,482	n.a.
Benefits	580	2,366	635	2,515	640	2,533	2.3
Business income	431	1,756	447	1,769	479	1,898	2.6
Interest/dividends	140	569	158	627	158	626	3.3
Interest paid	279	1,137	371	1,469	351	1,389	6.9
Net property income	15	62	18	71	19	76	7.4
Net flow of funds	3,409	13,893	3,561	14,104	3,890	15,405	3.5
Rank		29		31		23	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	4.0	34
2. Creative professionals	16.3	13.1	31
3. Service class	47.8	48.8	18
4. Super creative class	8.9	8.0	21
5. Working class	23.6	26.1	30
6. Creative class (2 + 4)	25.2	21.1	26

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.28	40	264
High tech		23	239
Diversity index (S)	0.69	28	172
Bohemian Index (S)	0.83	23	150
Foreign born (%)	0.13	34	20
Composite diversity		27	113
Creativity Index	168	33	258
U.S. region most like	Pueblo, CO		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	10,103	10.0	24
Very poor households	11,529	11.4	21
Social Security dependent families	12,745	12.6	15
ICONS	4,309	4.3	33
Total households	100,889		
Social benefits as a % of net flow of funds	1999 (%) 17.0	2001 (%) 17.8	2002 (%) 16.4

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	678	895	1.32
Implied price (IP) ($K)	91	147	1.61
Valuer General (VG) price ($K)	95	154	1.62
Ratio of IP/VG	0.96	0.95	0.99
Excess price growth (% p.a.)			3.5
Change in implied yield (%)			-19
VG implied mortgage ($/m)	706	1,013	1.44
Per cent who cannot afford VG	57	68	-11
Scenario 1 – Interest rates			1,295
Scenario 2 – Affordability (%)			-13.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	28.8	14
Building approvals per '000 pop. – 2001-02	20.3	8
Commercial floor stock m²/capita – 1998-02	1.5	26

ENVIRONMENT

Annual rainfall (mm)	711.4		
Seasonality	Mostly winter rainfall		

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	79	21	–
Evapotranspiration	–	100	–
Days below zero	16	44	40

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.1	28.6	23.8
National average	27.9	28.7	21.8
Ratio of region to national	0.94	1.00	1.09
SOR rank	39	32	19

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	33.0	37.4	22.8	6.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	35.7	51.8	8.2	4.3
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
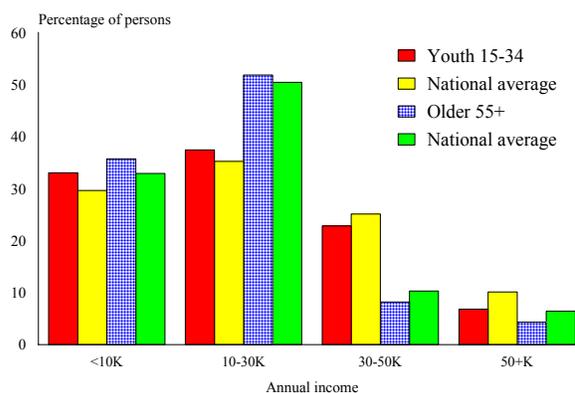
VIC Central Highlands
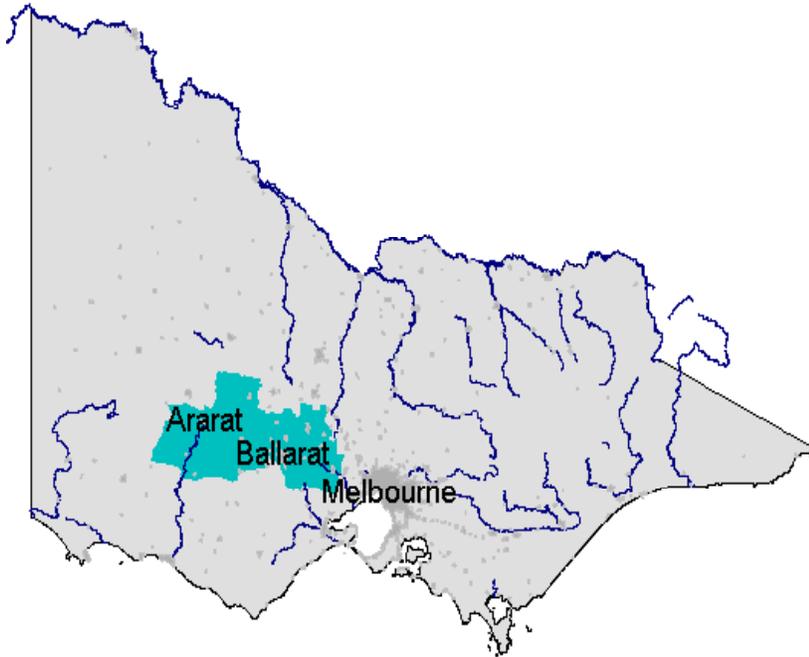
The Central Highlands are centred on Ballarat. The urban structure of the region dates from the gold rushes 150 years ago; Ballarat itself and many of the smaller towns were kept going by industries founded in the nineteenth century, and now in a state of gradual decay. The region includes areas of intensive farming, and its nineteenth century heritage has become the basis of a tourism, hobby farm and retirement revival.

Major centres:

Ballarat

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	136,458		139,234		139,760		0.6
No. households	51,026		53,712		54,941		1.9
Workforce	67,411	49.4	77,507	55.6	73,044	52.1	2.0
Employment	58,489	–	68,849	–	65,173	–	2.7
Unemployment	8,923	13.2	8,658	11.2	7,871	10.8	-3.1
DEWRSB U/E	8,117	12.8	6,028	7.9	5,807	8.2	-8.0
Structural U/E, % population	10,595	13.0	11,191	13.5	10,995	13.1	5.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,824	13,293	2,060	14,792	1,988	14,280	2.4
Taxes paid	384	2,799	426	3,060	405	2,911	1.3
GST paid	100	730	167	1,202	169	1,217	n.a.
Benefits	335	2,439	361	2,593	367	2,634	2.6
Business income	223	1,628	230	1,654	250	1,794	3.3
Interest/dividends	66	481	73	521	70	503	1.4
Interest paid	158	1,148	208	1,491	193	1,385	6.4
Net property income	6	40	7	47	7	50	7.9
Net flow of funds	1,812	13,205	1,929	13,855	1,914	13,748	1.4
Rank		42		38		47	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	17.1	6
2. Creative professionals	16.3	10.9	59
3. Service class	47.8	38.4	60
4. Super creative class	8.9	6.9	45
5. Working class	23.6	26.8	25
6. Creative class (2 + 4)	25.2	17.8	53

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.18	57	265
High tech		62	267
Diversity index (S)	0.83	21	101
Bohemian Index (S)	0.67	41	184
Foreign born (%)	0.11	39	26
Composite diversity		24	103
Creativity Index	175	32	256
U.S. region most like	Steubenville – Weirton, OH-WV		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	6,125	11.1	43
Very poor households	6,795	12.4	39
Social Security dependent families	7,838	14.3	47
ICONS	2,214	4.0	50
Total households	54,941		
Social benefits as a % of net flow of funds	1999 (%) 18.5	2001 (%) 18.7	2002 (%) 19.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	669	835	1.25
Implied price (IP) ($K)	90	137	1.53
Valuer General (VG) price ($K)	81	114	1.40
Ratio of IP/VG	1.10	1.20	1.09
Excess price growth (% p.a.)			1.9
Change in implied yield (%)			-11
VG implied mortgage ($/m)	606	749	1.24
Per cent who cannot afford VG	47	50	-3
Scenario 1 – Interest rates			770
Scenario 2 – Affordability (%)			-8.7

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	21.1	40
Building approvals per '000 pop. – 2001-02	14.0	25
Commercial floor stock m²/capita – 1998-02	1.5	33

ENVIRONMENT

Annual rainfall (mm)	709.0		
Seasonality	Mostly winter rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	25	75	–
Evapotranspiration	1	99	–
Days below zero	–	29	71

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.5	28.6	22.6
National average	27.9	28.7	21.8
Ratio of region to national	0.95	1.00	1.04
SOR rank	32	35	31
	Percentage of persons		
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	36.8	38.2	20.1	4.9
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.3	54.2	8.0	3.5
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
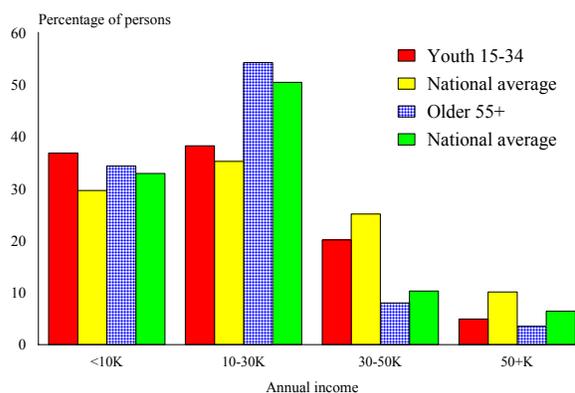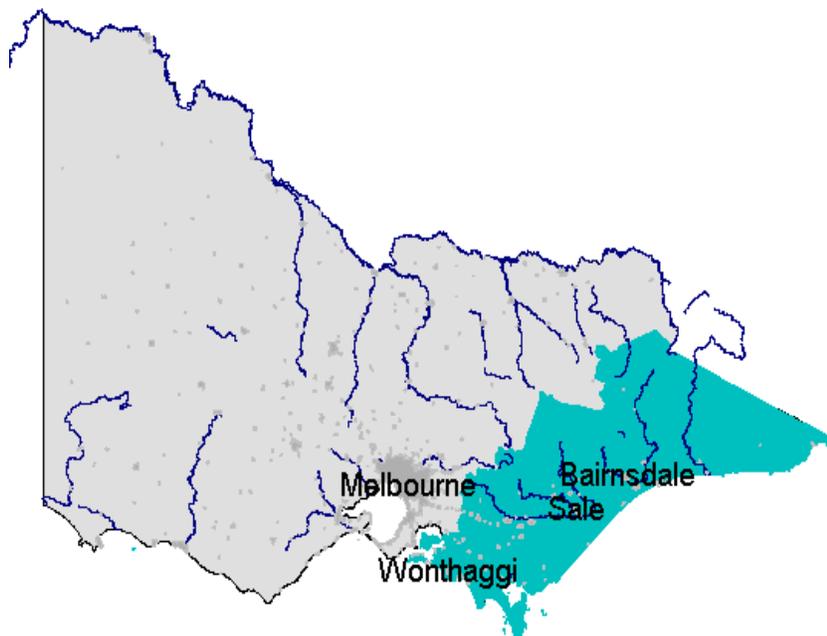
VIC Gippsland

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 everal sub-regions.

❑ West Gippsland – intensive dairy farming, some timber milling and commuting to Melbourne. Its main centre is Warragul.

❑ South Gippsland – intensive dairy farming, coastal retirement areas and resorts. Leongatha is emerging as the main centre.

❑ The Latrobe Valley – centre of Victorian power generation based on brown coal which generates relatively little employment 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 and a retirement area round Lakes Entrance. Many of its small towns are making the difficult transition from old forest to plantation-based timber production.

Major centres:

Warragul, Traralgon, Bairnsdale

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	233,546		233,124		234,039		0.1
No. households	89,219		94,006		96,264		1.9
Workforce	109,994	46.9	100,576	42.8	101,846	43.5	-1.9
Employment	96,442	–	84,799	–	87,684	–	
Unemployment	13,582	12.3	15,776	15.7	14,162	13.9	3.1
DEWRSB U/E	11,009	10.2	9,041	9.4	8,444	8.7	-3.9
Structural U/E, % population	16,703	17.9	19,309	20.6	18,479	19.5	5.8

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	3,120	13,355	3,326	14,270	3,426	14,699	3.2
Taxes paid	630	2,696	648	2,782	651	2,795	1.2
GST paid	222	949	276	1,186	296	1,271	n.a.
Benefits	578	2,474	635	2,727	639	2,742	3.5
Business income	420	1,798	433	1,858	478	2,052	4.5
Interest/dividends	101	431	108	464	104	445	1.1
Interest paid	260	1,115	350	1,503	329	1,413	8.2
Net property income	9	39	11	46	12	50	8.5
Net flow of funds	3,115	13,337	3,238	13,894	3,381	14,508	2.8
Rank		40		36		36	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	10.4	16
2. Creative professionals	16.3	12.6	37
3. Service class	47.8	43.3	47
4. Super creative class	8.9	7.3	31
5. Working class	23.6	26.4	27
6. Creative class (2 + 4)	25.2	19.9	37

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	5.69	46	264
High tech		42	267
Diversity index (S)	0.37	47	268
Bohemian Index (S)	0.53	55	217
Foreign born (%)	0.12	37	25
Composite diversity		51	169
Creativity Index	32	48	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	10,458	10.9	36
Very poor households	11,658	12.1	30
Social Security dependent families	13,369	13.9	36
ICONS	3,813	4.0	53
Total households	96,264		
Social benefits as a % of net flow of funds	1999 (%) 18.5	2001 (%) 19.6	2002 (%) 18.9

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	637	826	1.30
Implied price (IP) ($K)	85	135	1.58
Valuer General (VG) price ($K)	75	85	1.13
Ratio of IP/VG	1.13	1.59	1.40
Excess price growth (% p.a.)			-2.2
Change in implied yield (%)			14
VG implied mortgage ($/m)	562	562	1.00
Per cent who cannot afford VG	46	34	12
Scenario 1 – Interest rates			739
Scenario 2 – Affordability (%)			1.6

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	20.2	42
Building approvals per '000 pop. – 2001-02	15.8	15
Commercial floor stock m^2/capita – 1998-02	1.3	44

ENVIRONMENT

Annual rainfall (mm)	1,007.3
Seasonality	Mostly winter rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	41	59	–
Evapotranspiration	–	100	–
Days below zero	10	38	52

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.5	28.9	25.2
National average	27.9	28.7	21.8
Ratio of region to national	0.84	1.01	1.16
SOR rank	56	26	10

INCOME	<10K	10-30K	30-50K	50+K
		Percentage of persons		
Youth 15-34	36.2	39.3	18.6	5.9
– National average	29.6	35.2	25.1	10.1
Older – 55+	35.8	52.8	7.4	3.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
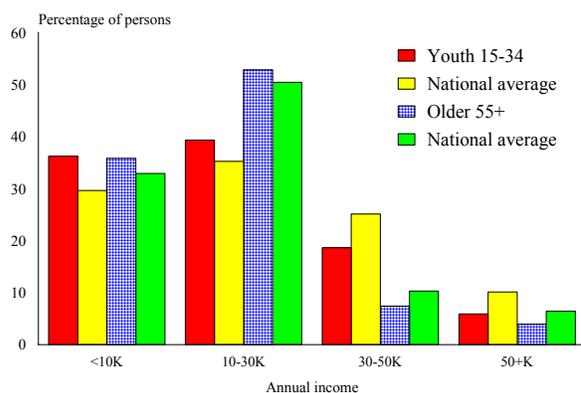
VIC Loddon

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.

Major centres:

Bendigo, Castlemaine

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	159,933		163,336		164,205		0.7
No. households	60,251		63,587		65,224		2.0
Workforce	74,778	46.7	73,155	44.8	78,812	47.7	1.3
Employment	65,306	–	63,503	–	70,311	–	1.9
Unemployment	9,471	12.7	9,653	13.2	8,501	10.8	-2.7
DEWRSB U/E	6,785	9.2	5,818	8.2	6,476	8.4	-1.2
Structural U/E, % population	11,514	12.2	12,574	13.0	12,223	12.5	5.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,070	12,836	2,262	13,851	2,540	15,554	6.6
Taxes paid	428	2,652	460	2,815	510	3,125	5.6
GST paid	143	885	196	1,203	233	1,424	n.a.
Benefits	385	2,385	417	2,551	422	2,583	2.7
Business income	268	1,659	276	1,688	309	1,889	4.4
Interest/dividends	70	436	76	464	73	444	0.6
Interest paid	190	1,175	249	1,524	232	1,422	6.6
Net property income	7	43	8	50	9	54	7.9
Net flow of funds	2,040	12,648	2,133	13,062	2,377	14,554	4.8
Rank		49		46		34	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	6.1	28
2. Creative professionals	16.3	12.7	35
3. Service class	47.8	49.2	15
4. Super creative class	8.9	7.6	27
5. Working class	23.6	24.3	41
6. Creative class (2 + 4)	25.2	20.3	34

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.76	50	265
High tech		32	253
Diversity index (S)	0.72	27	156
Bohemian Index (S)	0.68	38	182
Foreign born (%)	0.08	54	38
Composite diversity		33	124
Creativity Index	163	35	259
U.S. region most like	Pueblo, CO		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	7,070	10.8	35
Very poor households	8,002	12.3	32
Social Security dependent families	9,066	13.9	38
ICONS	2,654	4.1	47
Total households	65,224		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	18.9	19.5	17.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	659	835	1.27
Implied price (IP) ($K)	88	137	1.55
Valuer General (VG) price ($K)	89	121	1.36
Ratio of IP/VG	1.00	1.13	1.14
Excess price growth (% p.a.)			1.2
Change in implied yield (%)			-7
VG implied mortgage ($/m)	661	797	1.21
Per cent who cannot afford VG	56	56	0
Scenario 1 – Interest rates			949
Scenario 2 – Affordability (%)			-7.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	21.7	38
Building approvals per '000 pop. – 2001-02	15.0	19
Commercial floor stock m^2/capita – 1998-02	1.2	51

ENVIRONMENT

Annual rainfall (mm)	548.9		
Seasonality	Mostly winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	67	33	–
Days below zero	–	73	27

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	24.6	29.5	23.5
National average	27.9	28.7	21.8
Ratio of region to national	0.88	1.03	1.08
SOR rank	49	13	24

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	36.5	39.3	19.7	4.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	35.0	53.1	8.2	3.7
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
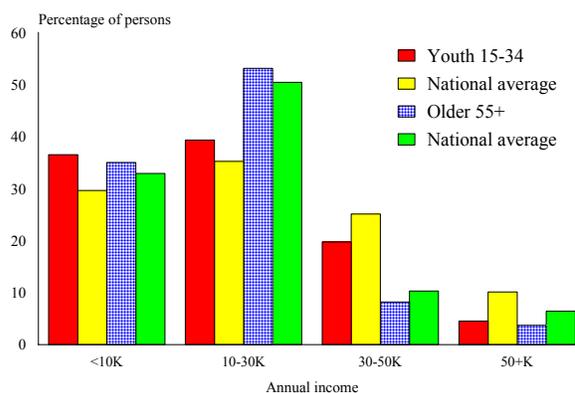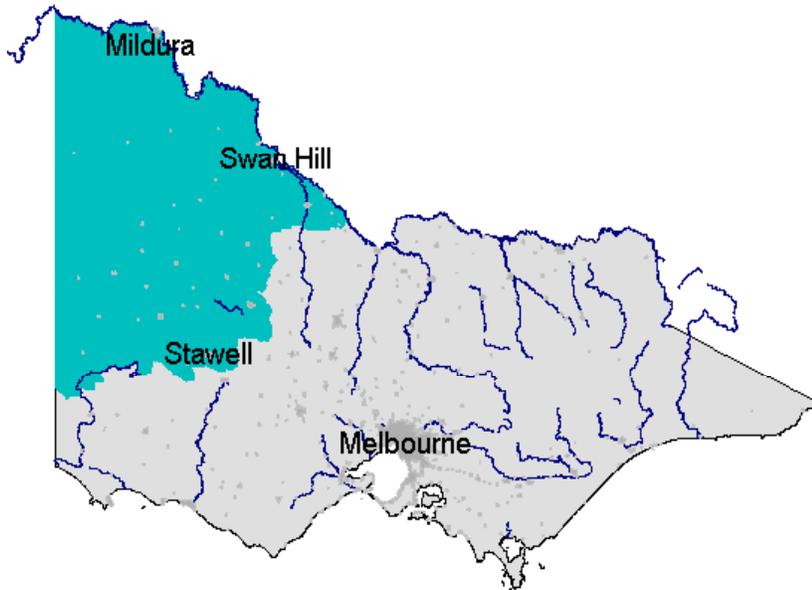
VIC Mallee-Wimmera

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; in the northern part of the region the Sunset country does not have sufficient rainfall to be worth clearing. Though wheat remains the basic crop, rain-fed agriculture is increasingly supplemented by oilseeds. Along the Murray there are irrigation areas: some of these have fallen on hard times due to saltation, but the intensive viticulture areas still prosper. Horsham is the chief town in the Wimmera, and Swan Hill and Mildura serve irrigation areas along the Murray.

Major centres:

Mildura, Horsham

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	139,486		139,358		139,274		0.0
No. households	53,264		55,415		56,185		1.3
Workforce	69,862	50.0	73,915	52.8	75,713	54.5	2.1
Employment	62,786	–	66,910	–	69,275	–	
Unemployment	7,076	10.1	7,006	9.5	6,439	8.5	-4.2
DEWRSB U/E	4,996	7.3	3,969	5.5	4,330	5.9	-5.2
Structural U/E, % population	9,364	11.8	9,688	12.2	9,399	11.9	6.0

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,954	14,002	2,029	14,558	2,421	17,371	7.5
Taxes paid	309	2,215	283	2,027	296	2,127	-1.3
GST paid	108	773	157	1,130	176	1,263	n.a.
Benefits	310	2,222	342	2,456	346	2,485	3.8
Business income	304	2,180	311	2,229	319	2,292	1.7
Interest/dividends	65	468	64	462	56	401	-5.0
Interest paid	163	1,169	219	1,574	207	1,483	8.2
Net property income	7	50	8	59	9	64	8.5
Net flow of funds	2,061	14,764	2,095	15,033	2,472	17,740	6.3
Rank		19		23		14	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	19.8	5
2. Creative professionals	16.3	10.9	58
3. Service class	47.8	39.6	59
4. Super creative class	8.9	6.1	59
5. Working class	23.6	23.5	50
6. Creative class (2 + 4)	25.2	17.0	58

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.32	54	265
High tech		53	267
Diversity index (S)	0.14	62	269
Bohemian Index (S)	0.42	61	239
Foreign born (%)	0.07	59	48
Composite diversity		62	184
Creativity Index	7	62	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	4,983	8.9	14
Very poor households	6,200	11.0	15
Social Security dependent families	7,152	12.7	17
ICONS	2,170	3.9	55
Total households	56,185		
Social benefits as a % of net flow of funds	1999 (%) 15.0	2001 (%) 16.3	2002 (%) 14.0

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	600	783	1.30
Implied price (IP) ($K)	80	128	1.59
Valuer General (VG) price ($K)	74	100	1.34
Ratio of IP/VG	1.08	1.29	1.19
Excess price growth (% p.a.)			0.5
Change in implied yield (%)			-3
VG implied mortgage ($/m)	554	658	1.19
Per cent who cannot afford VG	49	48	1
Scenario 1 – Interest rates			649
Scenario 2 – Affordability (%)			-8.5

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	15.4	51
Building approvals per '000 pop. – 2001-02	9.9	45
Commercial floor stock m^2/capita – 1998-02	1.7	17

ENVIRONMENT

Annual rainfall (mm)	397.6
Seasonality	Mostly winter rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	9	91	–
Evapotranspiration	89	11	–
Days below zero	5	94	1

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.1	28.0	25.9
National average	27.9	28.7	21.8
Ratio of region to national	0.83	0.98	1.19
SOR rank	60	48	7

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	32.0	43.9	19.5	4.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.1	54.8	7.3	3.7
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
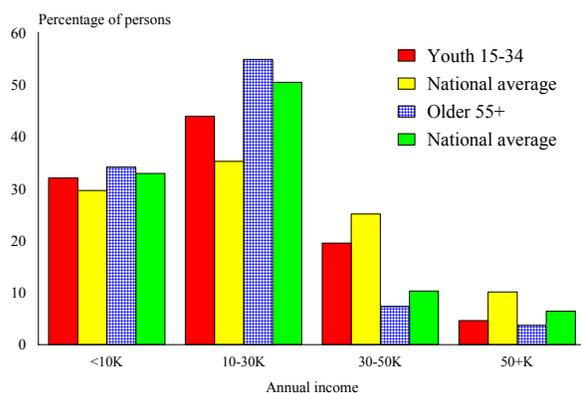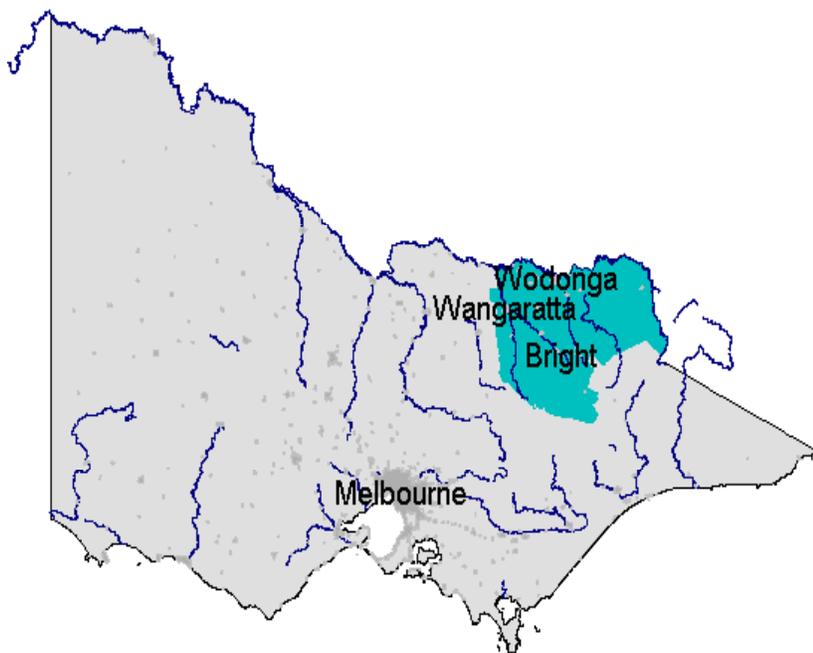
VIC Ovens-Hume

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 resource-processing manufacturing. There were also decentralised footloose industries.

Major centres:

Wodonga, Wangaratta

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	89,993		91,411		91,687		0.5
No. households	34,031		35,878		36,637		1.9
Workforce	50,816	56.4	53,392	58.3	51,943	56.5	0.5
Employment	46,759	–	48,569	–	47,424	–	0.4
Unemployment	4,058	8.0	4,823	9.0	4,519	8.7	2.7
DEWRSB U/E	3,241	6.4	3,080	5.9	2,616	5.2	-5.2
Structural U/E, % population	5,381	10.1	5,885	10.8	5,785	10.6	6.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,291	14,272	1,329	14,537	1,340	14,661	0.9
Taxes paid	258	2,848	261	2,850	257	2,810	-0.4
GST paid	75	824	109	1,196	115	1,256	n.a.
Benefits	196	2,170	216	2,358	219	2,395	3.4
Business income	165	1,829	170	1,862	174	1,902	1.3
Interest/dividends	40	437	44	480	43	471	2.5
Interest paid	107	1,186	143	1,569	133	1,451	7.0
Net property income	4	49	5	57	6	61	8.0
Net flow of funds	1,257	13,899	1,250	13,678	1,277	13,973	0.2
Rank		28		41		45	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	6.9	24
2. Creative professionals	16.3	13.8	18
3. Service class	47.8	46.2	38
4. Super creative class	8.9	7.1	38
5. Working class	23.6	26.1	31
6. Creative class (2 + 4)	25.2	20.9	27

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.24	56	265
High tech		24	239
Diversity index (S)	0.53	36	241
Bohemian Index (S)	0.76	29	164
Foreign born (%)	0.10	44	30
Composite diversity		38	144
Creativity Index	98	37	265
U.S. region most like	Jacksonville, NC		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	3,582	9.8	21
Very poor households	4,327	11.8	26
Social Security dependent families	4,767	13.0	21
ICONS	1,535	4.2	40
Total households	36,637		
Social benefits as a % of net flow of funds	1999 (%) 15.6	2001 (%) 17.2	2002 (%) 17.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	703	867	1.23
Implied price (IP) ($K)	94	142	1.51
Valuer General (VG) price ($K)	94	113	1.20
Ratio of IP/VG	1.01	1.26	1.25
Excess price growth (% p.a.)			-0.4
Change in implied yield (%)			2
VG implied mortgage ($/m)	698	743	1.06
Per cent who cannot afford VG	53	44	9
Scenario 1 – Interest rates			520
Scenario 2 – Affordability (%)			-1.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	21.8	36
Building approvals per '000 pop. – 2001-02	13.3	27
Commercial floor stock m²/capita – 1998-02	1.7	16

ENVIRONMENT

Annual rainfall (mm)	1,169.0		
Seasonality	Mostly winter rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	–	–	100

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	25.7	29.3	21.9
National average	27.9	28.7	21.8
Ratio of region to national	0.92	1.02	1.01
SOR rank	42	18	36

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	31.8	38.3	23.4	6.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.3	54.6	9.0	4.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
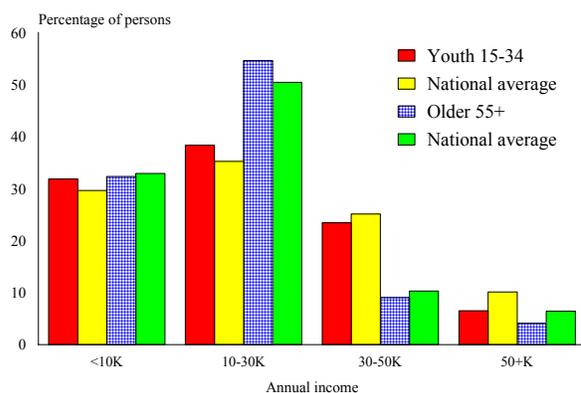
VIC West
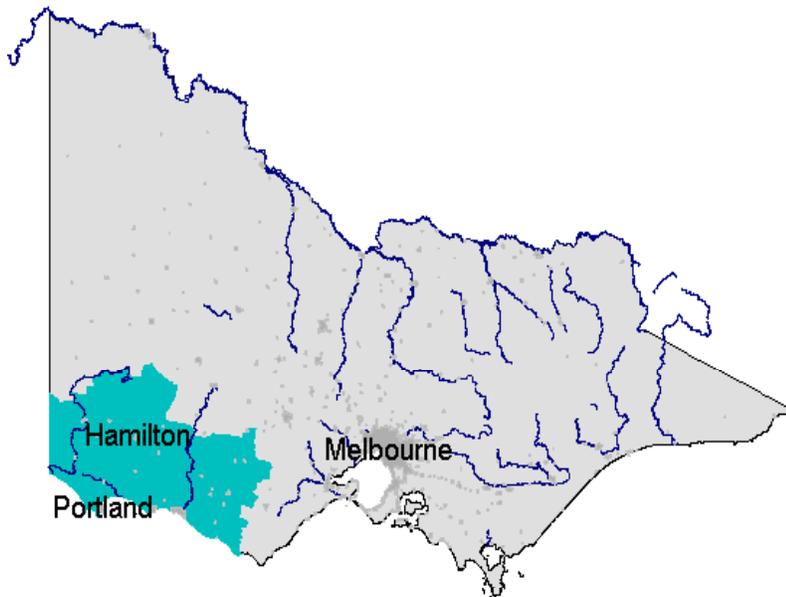
The Western District in Victoria is beyond commuter range from Melbourne, and is hence primarily an agricultural region. The plains were renowned as fine wool country, but with falling wool prices there has been pressure to diversify. The southern part of the region, in Colac, Corangamite and Moyne Shires, has long engaged in more intensive agriculture, including dairying. The region has two main centres, Warrnambool, which following the decline of the textile and clothing industry is mainly a commercial centre, and Portland, which is both a port and heavy industrial town.

Major centres:

Warrnambool, Hamilton, Portland

POPULATION / LABOUR FORCE

|	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	99,246		97,935		97,988		-0.3
No. households	37,593		38,761		39,390		1.2
Workforce	50,489	50.8	51,474	52.3	55,539	56.6	2.4
Employment	45,915	–	46,368	–	51,014	–	2.7
Unemployment	4,574	9.1	5,106	9.9	4,525	8.1	-0.3
DEWRSB U/E	3,832	7.7	3,127	6.2	2,568	4.7	-9.5
Structural U/E, % population	6,136	10.7	6,549	11.6	6,081	10.8	6.5

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,464	14,799	1,497	15,282	1,752	17,888	6.5
Taxes paid	259	2,614	242	2,468	268	2,738	1.6
GST paid	82	826	116	1,184	137	1,400	n.a.
Benefits	217	2,197	237	2,418	236	2,412	3.2
Business income	222	2,242	228	2,324	239	2,444	2.9
Interest/dividends	55	558	58	597	55	560	0.1
Interest paid	120	1,215	163	1,666	152	1,554	8.5
Net property income	6	66	8	78	8	85	8.8
Net flow of funds	1,505	15,206	1,506	15,380	1,733	17,696	5.2
Rank		16		18		15	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	20.0	4
2. Creative professionals	16.3	10.7	61
3. Service class	47.8	39.7	57
4. Super creative class	8.9	6.1	58
5. Working class	23.6	23.5	51
6. Creative class (2 + 4)	25.2	16.8	59

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.34	53	265
High tech		48	267
Diversity index (S)	0.32	51	268
Bohemian Index (S)	0.53	54	217
Foreign born (%)	0.06	61	58
Composite diversity		59	180
Creativity Index	8	58	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	3,658	9.3	16
Very poor households	4,382	11.1	19
Social Security dependent families	5,035	12.8	19
ICONS	1,662	4.2	36
Total households	39,390		
Social benefits as a % of net flow of funds	1999 (%) 14.5	2001 (%) 15.7	2002 (%) 13.6

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	627	793	1.27
Implied price (IP) ($K)	84	130	1.55
Valuer General (VG) price ($K)	79	99	1.25
Ratio of IP/VG	1.06	1.31	1.24
Excess price growth (% p.a.)			-0.2
Change in implied yield (%)			1
VG implied mortgage ($/m)	590	652	1.11
Per cent who cannot afford VG	51	47	4
Scenario 1 – Interest rates			470
Scenario 2 – Affordability (%)			-4.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	12.5	57
Building approvals per '000 pop. – 2001-02	9.3	51
Commercial floor stock m²/capita – 1998-02	1.5	32

ENVIRONMENT

Annual rainfall (mm)	721.7		
Seasonality	Mostly winter rainfall		

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	100	–	–
Evapotranspiration	–	100	–
Days below zero	25	73	1

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.6	28.6	24.5
National average	27.9	28.7	21.8
Ratio of region to national	0.85	1.00	1.13
SOR rank	55	33	16

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	33.6	40.9	19.7	5.9
– National average	29.6	35.2	25.1	10.1
Older – 55+	31.5	55.1	8.9	4.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
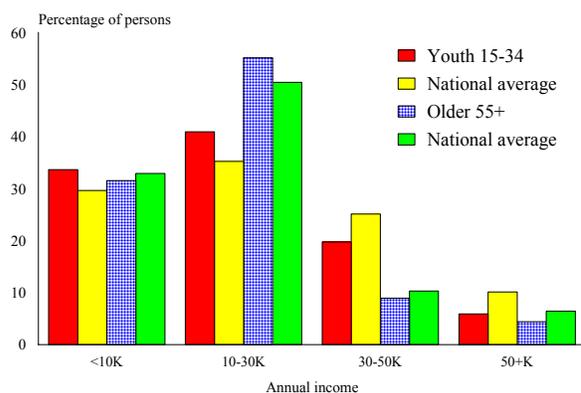
Brisbane City

Given the choice to 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 is inevitable that it would have yielded different regions, with 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	852,967		899,604		907,653		1.6
No. households	329,094		353,283		362,485		2.4
Workforce	463,017	54.6	482,935	53.7	481,994	52.6	1.0
Employment	424,465	–	442,329	–	446,554	–	1.3
Unemployment	38,552	8.3	40,606	8.4	35,440	7.4	-2.1
DEWRSB U/E	31,138	6.8	31,556	6.6	34,290	7.2	2.4
Structural U/E, % population	45,133	8.2	49,266	8.5	48,626	8.2	3.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	14,122	16,278	15,633	17,378	16,192	17,999	3.4
Taxes paid	3,691	4,255	4,070	4,524	4,427	4,921	5.0
GST paid	809	933	1,226	1,363	1,370	1,523	n.a.
Benefits	1,576	1,816	1,696	1,885	1,732	1,925	2.0
Business income	2,094	2,413	2,201	2,446	2,460	2,735	4.3
Interest/dividends	689	794	763	848	769	854	2.5
Interest paid	1,034	1,192	1,368	1,521	1,325	1,473	7.3
Net property income	-45	-52	-53	-59	-57	-64	6.7
Net flow of funds	12,900	14,870	13,574	15,089	13,973	15,533	1.5
Rank		17		20		21	

OCCUPATION

	Class	National average	% of workforce	SOR rank
1.	Agriculture	3.4	0.5	53
2.	Creative professionals	16.3	18.3	7
3.	Service class	47.8	51.8	5
4.	Super creative class	8.9	8.5	18
5.	Working class	23.6	20.9	58
6.	Creative class (2 + 4)	25.2	26.8	9

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	18.86	4	143
High tech		8	71
Diversity index (S)	1.52	6	3
Bohemian Index (S)	1.01	9	111
Foreign born (%)	0.22	18	6
Composite diversity		6	39
Creativity Index	720	7	62
U.S. region most like	Columbia, SC		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	30,761	8.5	11
Very poor households	36,573	10.1	11
Social Security dependent families	39,864	11.0	10
ICONS	20,486	5.7	8
Total households	362,485		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	12.2	12.5	12.4

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	926	1,103	1.19
Implied price (IP) ($K)	124	181	1.45
Valuer General (VG) price ($K)	140	199	1.42
Ratio of IP/VG	0.89	0.91	1.02
Excess price growth (% p.a.)			3.0
Change in implied yield (%)			-16
VG implied mortgage ($/m)	1,046	1,314	1.26
Per cent who cannot afford VG	63	68	-5
Scenario 1 – Interest rates			5,088
Scenario 2 – Affordability (%)			-10.2

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	32.0	10
Building approvals per '000 pop. – 2001-02	18.3	9
Commercial floor stock m²/capita – 1998-02	2.4	5

ENVIRONMENT

Annual rainfall (mm)	1,192.8		
Seasonality	Mostly summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	32.0	27.7	20.7
National average	27.9	28.7	21.8
Ratio of region to national	1.15	0.97	0.95
SOR rank	3	52	43

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	28.2	33.4	27.8	10.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	27.7	52.2	11.7	8.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
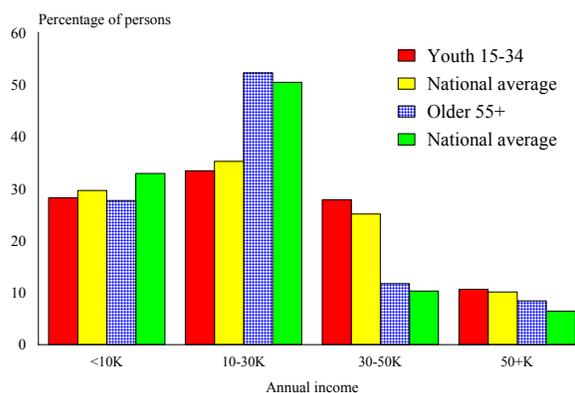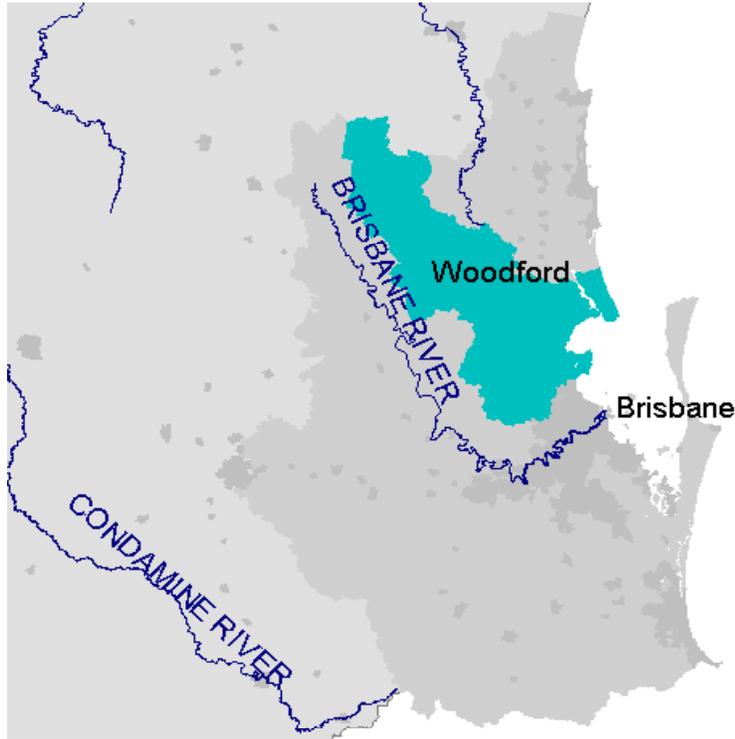
Brisbane North

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 proper, and the Sunshine Coast. North Brisbane is largely a commuter area, with a few surviving rural industries and some manufacturing.

Major centres:

Caboolture, Redcliffe

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	271,372		287,463		290,706		1.7
No. households	99,561		105,655		108,844		2.3
Workforce	132,706	48.7	141,280	49.0	150,524	51.2	3.2
Employment	118,523	–	124,457	–	134,638	–	3.2
Unemployment	14,184	10.7	16,823	11.9	15,886	10.6	2.9
DEWRSB U/E	7,180	6.9	10,795	7.9	11,980	8.2	13.7
Structural U/E, % population	17,286	10.6	20,675	12.0	20,771	11.7	5.1

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	3,647	13,149	4,107	14,289	4,475	15,566	5.8
Taxes paid	853	3,074	958	3,332	1,095	3,808	7.4
GST paid	227	820	336	1,168	394	1,372	n.a.
Benefits	590	2,127	662	2,301	6.78	2,360	3.5
Business income	504	1,816	522	1,815	589	2,050	4.1
Interest/dividends	101	366	110	383	109	379	1.2
Interest paid	339	1,221	446	1,553	424	1,476	6.5
Net property income	-16	-59	-19	-67	-21	-72	6.7
Net flow of funds	3,407	12,284	3,641	12,667	3,917	13,627	3.5
Rank		53		52		50	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	2.5	41
2. Creative professionals	16.3	13.3	29
3. Service class	47.8	50.6	9
4. Super creative class	8.9	7.5	29
5. Working class	23.6	26.1	32
6. Creative class (2 + 4)	25.2	20.8	30

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.49	38	259
High tech		35	260
Diversity index (S)	0.40	43	267
Bohemian Index (S)	0.61	46	199
Foreign born (%)	0.16	27	17
Composite diversity		44	160
Creativity Index	51	43	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	13,704	12.6	60
Very poor households	14,866	13.7	57
Social Security dependent families	16,762	15.4	56
ICONS	4,723	4.3	29
Total households	108,844		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	17.3	18.2	17.3

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	833	936	1.12
Implied price (IP) ($K)	112	153	1.37
Valuer General (VG) price ($K)	107	138	1.28
Ratio of IP/VG	1.04	1.11	1.07
Excess price growth (% p.a.)			2.2
Change in implied yield (%)			-12
VG implied mortgage ($/m)	801	908	1.13
Per cent who cannot afford VG	49	49	0
Scenario 1 – Interest rates			2,373
Scenario 2 – Affordability (%)			-7.2

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	25.2	23
Building approvals per '000 pop. – 2001-02	18.1	11
Commercial floor stock m^2/capita – 1998-02	1.1	62

ENVIRONMENT

Annual rainfall (mm)	1,269.8		
Seasonality	Mostly summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	38	62
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.1	29.3	20.5
National average	27.9	28.7	21.8
Ratio of region to national	0.94	1.02	0.94
SOR rank	38	19	44

INCOME	<10K	10-30K	30-50K	50+K
	Percentage of persons			
Youth 15-34	32.5	40.1	21.9	5.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.6	52.3	9.1	4.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
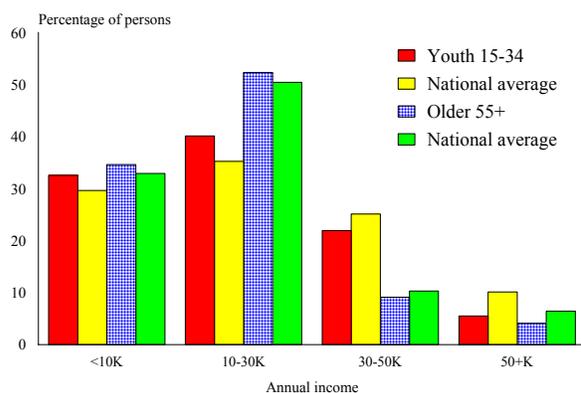
QLD Agricultural SW
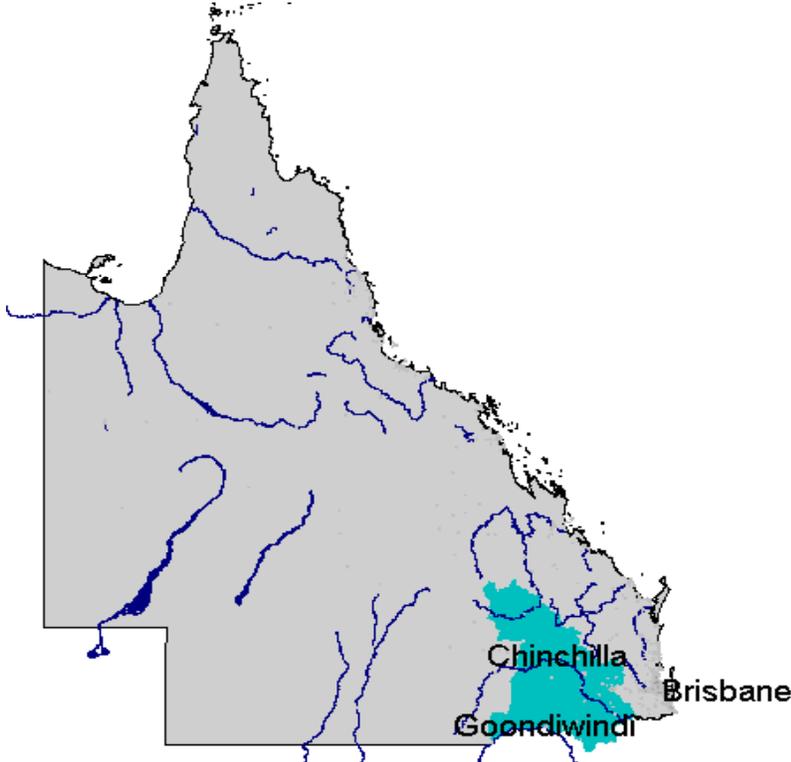
The Agricultural South West of Queensland is centred on the Darling Downs, but the cropping frontier now extends well beyond the Downs into former brigalow country. Toowoomba is still the main regional centre, but Warwick and Dalby are also important. The Darling Downs is one of Australia's premier agricultural 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.

Major centres:

Toowoomba, Warwick

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	200,713		203,564		204,590		0.5
No. households	74,499		77,872		79,261		1.6
Workforce	100,548	50.1	108,677	53.1	106,235	51.7	1.4
Employment	91,267	–	98,346	–	96,897	–	1.5
Unemployment	9,281	9.2	10,332	9.5	9,338	8.8	0.2
DEWRSB U/E	5,918	6.1	4,762	4.5	4,626	4.5	-6.0
Structural U/E, % population	12,223	10.4	13,483	11.3	13,171	10.9	5.5

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,715	13,498	2,919	14,341	3,021	14,838	3.2
Taxes paid	554	2,755	586	2,880	621	3,049	3.4
GST paid	151	752	226	1,111	246	1,210	n.a.
Benefits	439	2,185	484	2,379	495	2,430	3.6
Business income	398	1,977	408	2,007	431	2,117	2.3
Interest/dividends	84	419	87	430	84	410	-0.7
Interest paid	213	1,061	281	1,382	270	1,328	7.8
Net property income	-4	-20	-5	-23	-5	-25	7.5
Net flow of funds	2,714	13,492	2,801	13,760	2,887	14,183	1.7
Rank		35		39		42	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	11.7	13
2. Creative professionals	16.3	11.7	43
3. Service class	47.8	46.1	39
4. Super creative class	8.9	6.5	54
5. Working class	23.6	24.1	44
6. Creative class (2 + 4)	25.2	18.2	51

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	9.43	20	232
High tech		45	267
Diversity index (S)	0.24	58	269
Bohemian Index (S)	0.49	58	226
Foreign born (%)	0.07	57	41
Composite diversity		57	178
Creativity Index	40	47	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	7,550	9.5	20
Very poor households	9,651	12.2	31
Social Security dependent families	10,769	13.6	34
ICONS	3,245	4.1	46
Total households	79,261		
Social benefits as a % of net flow of funds	1999 (%) 16.2	2001 (%) 17.3	2002 (%) 17.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	711	827	1.16
Implied price (IP) ($K)	95	135	1.42
Valuer General (VG) price ($K)	89	113	1.27
Ratio of IP/VG	1.07	1.20	1.12
Excess price growth (% p.a.)			1.5
Change in implied yield (%)			-9
VG implied mortgage ($/m)	662	745	1.13
Per cent who cannot afford VG	49	46	3
Scenario 1 – Interest rates			1,017
Scenario 2 – Affordability (%)			-5.7

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	18.0	45
Building approvals per '000 pop. – 2001-02	10.9	40
Commercial floor stock m^2/capita – 1998-02	2.2	9

ENVIRONMENT

Annual rainfall (mm)	660.5		
Seasonality	Mostly summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	5	95	–
Days below zero	16	77	7

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	27.0	27.1	22.5
National average	27.9	28.7	21.8
Ratio of region to national	0.97	0.95	1.03
SOR rank	28	62	32

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	33.9	41.4	19.6	5.1
– National average	29.6	35.2	25.1	10.1
Older – 55+	33.7	53.1	8.6	4.6
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
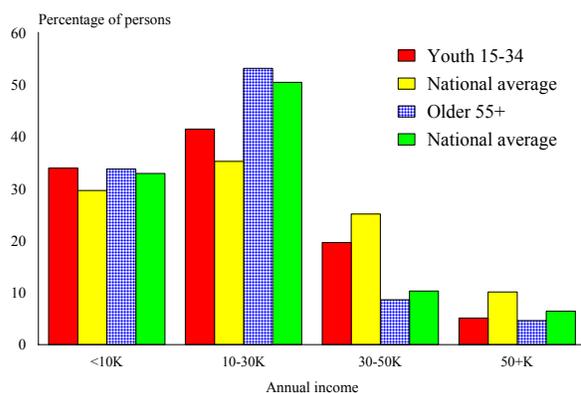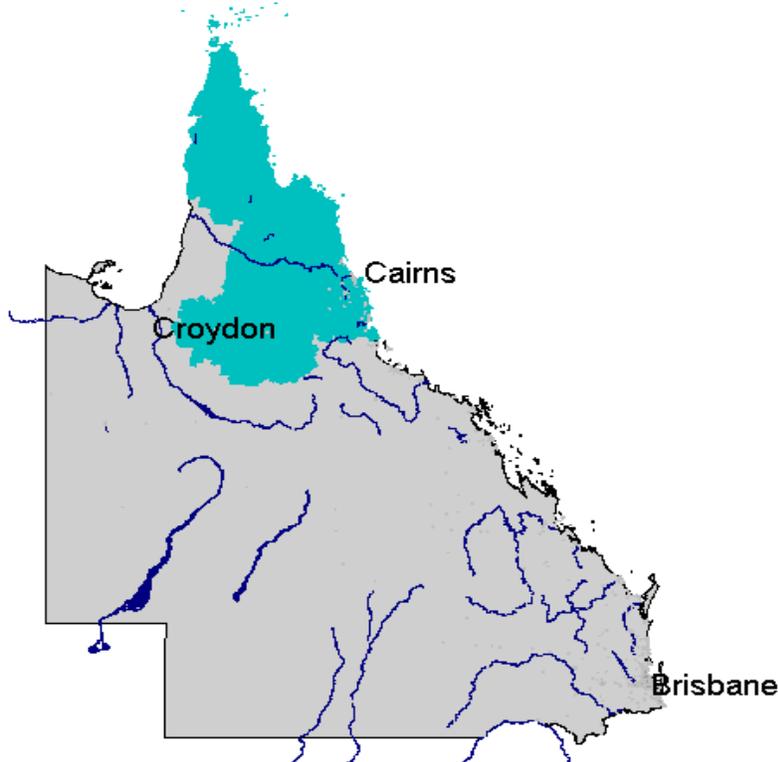
QLD Far North

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	218,254		228,154		229,014		1.2
No. households	84,938		89,207		90,653		1.6
Workforce	122,552	55.9	112,377	49.4	121,736	53.0	-0.2
Employment	108,518	–	97,094	–	106,782	–	-0.4
Unemployment	14,034	11.5	15,283	13.6	14,955	12.3	1.6
DEWRSB U/E	9,820	8.1	7,982	7.3	8,371	7.0	-3.9
Structural U/E, % population	15,420	12.1	17,475	13.1	17,449	13.0	5.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,837	12,773	3,179	13,935	3,538	15,505	6.7
Taxes paid	618	2,782	691	3,031	796	3,490	7.8
GST paid	226	1,016	282	1,238	334	1,465	n.a.
Benefits	451	2,029	500	2,191	507	2,224	3.1
Business income	500	2,251	516	2,262	589	2,580	4.7
Interest/dividends	81	364	88	385	87	383	1.7
Interest paid	256	1,153	346	1,517	322	1,413	7.0
Net property income	1	6	2	7	2	8	7.0
Net flow of funds	2,770	12,473	2,965	12,994	3,270	14,333	4.7
Rank		51		49		39	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	6.9	22
2. Creative professionals	16.3	13.4	26
3. Service class	47.8	47.0	32
4. Super creative class	8.9	6.7	50
5. Working class	23.6	26.1	33
6. Creative class (2 + 4)	25.2	20.1	35

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.99	24	238
High tech		52	267
Diversity index (S)	0.90	16	73
Bohemian Index (S)	0.77	27	162
Foreign born (%)	0.15	28	19
Composite diversity		19	84
Creativity Index	253	23	239
U.S. region most like		Sharon, PA	

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	9,905	10.9	38
Very poor households	12,377	13.7	56
Social Security dependent families	12,836	14.2	46
ICONS	3,973	4.4	27
Total households	90,653		
	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	16.3	16.9	15.5

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	939	992	1.06
Implied price (IP) ($K)	126	162	1.29
Valuer General (VG) price ($K)	131	131	1.00
Ratio of IP/VG	0.96	1.24	1.29
Excess price growth (% p.a.)			-0.9
Change in implied yield (%)			6
VG implied mortgage ($/m)	980	864	0.88
Per cent who cannot afford VG	57	39	18
Scenario 1 – Interest rates			1,046
Scenario 2 – Affordability (%)			3.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	24.9	24
Building approvals per '000 pop. – 2001-02	10.0	43
Commercial floor stock m^2/capita – 1998-02	2.2	8

ENVIRONMENT

Annual rainfall (mm)	1,184.9		
Seasonality	Dominant summr rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	6	94	–
Evapotranspiration	–	70	30
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	25.1	27.6	19.5
National average	27.9	28.7	21.8
Ratio of region to national	0.90	0.96	0.90
SOR rank	46	55	49

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	29.3	42.7	21.9	6.1
– National average	29.6	35.2	25.1	10.1
Older – 55+	31.4	52.4	10.3	5.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
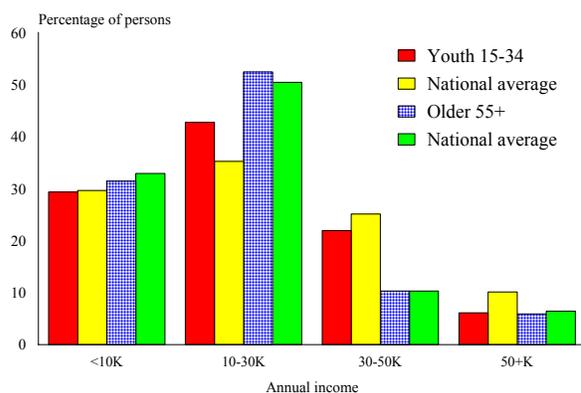
QLD Fitzroy
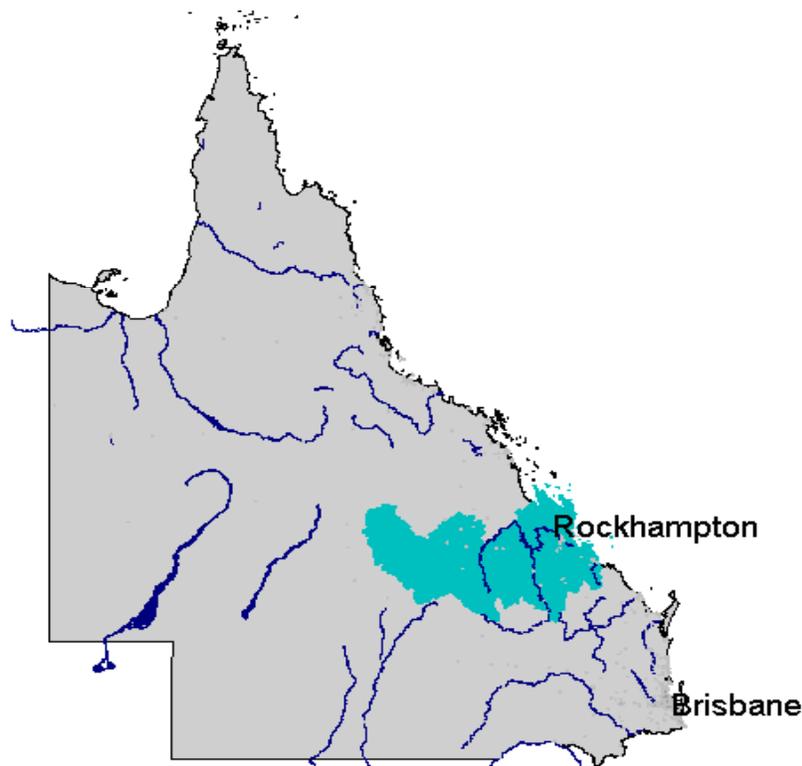
The Fitzroy region comprises the Eastern part of Central Queensland: we include the Western part in Queensland Pastoral. In the nineteenth century the Fitzroy region was regarded as unproductive scrub which had to be crossed in order to reach the better black soil country beyond Jericho, but it is now 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, has been developed as a coal export port and heavy industrial centre.

Major centres:

Rockhampton, Gladstone

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	179,918		182,349		182,993		0.4
No. households	66,054		68,364		69,394		1.2
Workforce	94,871	52.6	97,863	53.6	93,052	50.7	-0.5
Employment	84,340	–	97,957	–	83,432	–	-0.3
Unemployment	10,532	11.1	9,905	10.1	9,620	10.3	-2.2
DEWRSB U/E	8,934	9.6	8,684	9.0	7,845	8.6	-3.2
Structural U/E, % population	11,620	10.7	12,177	11.1	11,568	10.5	5.5

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,684	14,837	2,985	16,371	2,899	15,899	2.3
Taxes paid	642	3,550	715	3,920	701	3,843	2.7
GST paid	151	834	227	1,244	229	1,254	n.a.
Benefits	352	1,946	384	2,104	387	2,121	2.9
Business income	410	2,267	431	2,363	450	2,468	2.9
Interest/dividends	57	314	61	333	60	327	1.4
Interest paid	207	1,146	275	1,506	259	1,418	7.4
Net property income	-11	-62	-13	-72	-14	-77	7.7
Net flow of funds	2,492	13,773	2,631	14,428	2,594	14,224	1.1
Rank		32		25		40	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	5.8	30
2. Creative professionals	16.3	11.3	51
3. Service class	47.8	43.4	46
4. Super creative class	8.9	7.0	40
5. Working class	23.6	32.6	5
6. Creative class (2 + 4)	25.2	18.3	50

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.05	58	265
High tech		40	260
Diversity index (S)	0.26	56	269
Bohemian Index (S)	0.60	47	202
Foreign born (%)	0.08	53	35
Composite diversity		50	168
Creativity Index	14	56	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	7,492	10.8	34
Very poor households	9,042	13.0	49
Social Security dependent families	9,744	14.0	42
ICONS	3,018	4.3	28
Total households	69,394		

Social benefits as a % of net flow of funds	1999 (%) 14.1	2001 (%) 14.6	2002 (%) 14.9

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	779	851	1.09
Implied price (IP) ($K)	104	139	1.33
Valuer General (VG) price ($K)	94	101	1.08
Ratio of IP/VG	1.11	1.37	1.24
Excess price growth (% p.a.)			-0.2
Change in implied yield (%)			1
VG implied mortgage ($/m)	700	668	0.95
Per cent who cannot afford VG	45	33	12
Scenario 1 – Interest rates			824
Scenario 2 – Affordability (%)			0.7

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	16.1	50
Building approvals per '000 pop. – 2001-02	8.6	55
Commercial floor stock m^2/capita – 1998-02	1.7	15

ENVIRONMENT

Annual rainfall (mm)	699.6
Seasonality	Mostly summer rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	99	1
Evapotranspiration	5	95	–
Days below zero	90	10	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	27.2	28.4	20.4
National average	27.9	28.7	21.8
Ratio of region to national	0.98	0.99	0.94
SOR rank	25	39	45

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	32.4	36.4	21.9	9.3
– National average	29.6	35.2	25.1	10.1
Older – 55+	35.1	50.1	8.8	6.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
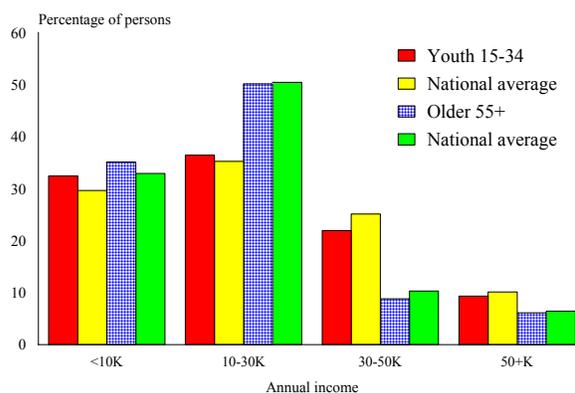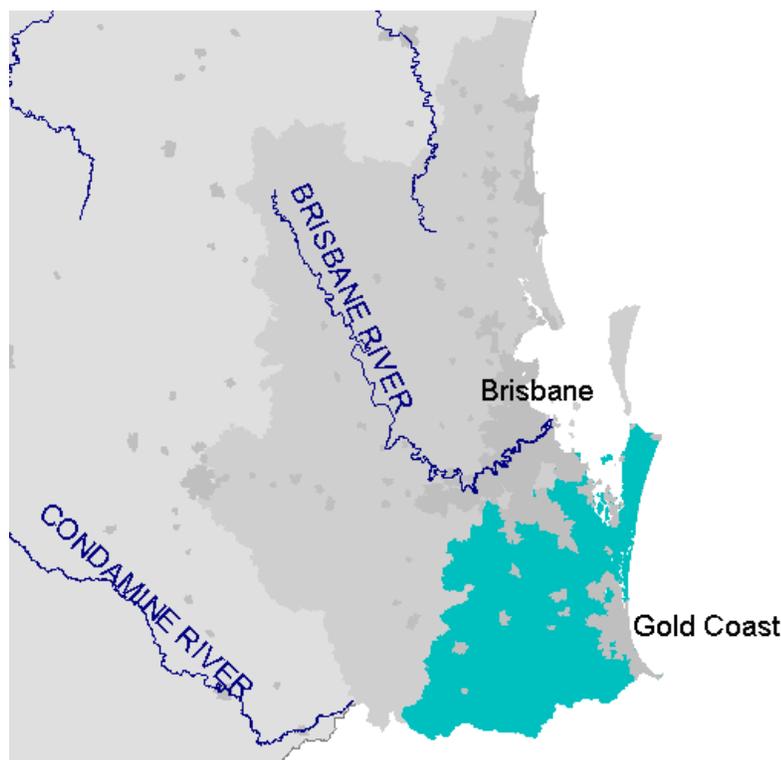
QLD Gold Coast

The Gold Coast region comprises two main sub-regions.

❑ The Gold Coast proper is a tourist and retirement strip, intensively developed along and behind the beach front, and now extending across the backwaters towards the ranges which include Tambourine Mountain.

❑ 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	703,662		759,752		768,356		2.2
No. households	271,933		296,685		306,031		3.0
Workforce	345,733	49.1	390,303	51.6	412,273	53.1	4.5
Employment	301,526	–	341,181	–	367,636	–	5.1
Unemployment	44,207	12.8	49,121	12.6	44,637	10.8	0.2
DEWRSB U/E	35,396	10.4	33,805	8.9	38,031	9.5	1.8
Structural U/E, % population	46,965	11.0	55,690	12.1	55,110	11.7	4.0

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	9,078	12,586	10,516	13,842	11,545	15,196	6.5
Taxes paid	2,162	2,997	2,495	3,284	2,875	3,784	8.1
GST paid	585	811	931	1,226	1,102	1,451	n.a.
Benefits	1,561	2,165	1,744	2,295	1,773	2,333	2.5
Business income	1,415	1,961	1,461	1,923	1,665	2,191	3.8
Interest/dividends	391	542	441	580	453	597	3.2
Interest paid	882	1,223	1,173	1,544	1,107	1,457	6.0
Net property income	-19	-26	-22	-29	-24	-31	6.1
Net flow of funds	8,797	12,197	9,541	12,558	10,327	13,593	3.7
Rank		54		53		51	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	1.3	48
2. Creative professionals	16.3	16.0	13
3. Service class	47.8	52.1	4
4. Super creative class	8.9	6.9	44
5. Working class	23.6	23.7	47
6. Creative class (2 + 4)	25.2	22.9	15

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	16.78	5	154
High tech		22	232
Diversity index (S)	0.22	59	269
Bohemian Index (S)	1.01	10	111
Foreign born (%)	0.23	16	6
Composite diversity		34	128
Creativity Index	206	29	252
U.S. region most like	Wausau, WI		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	36,430	11.9	54
Very poor households	40,647	13.3	51
Social Security dependent families	44,210	14.4	49
ICONS	12,925	4.2	35
Total households	306,031		
Social benefits as a % of net flow of funds	1999 (%) 17.7	2001 (%) 18.3	2002 (%) 17.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	902	994	1.10
Implied price (IP) ($K)	121	163	1.35
Valuer General (VG) price ($K)	133	170	1.28
Ratio of IP/VG	0.91	0.96	1.05
Excess price growth (% p.a.)			2.6
Change in implied yield (%)			-14
VG implied mortgage ($/m)	988	1,121	1.13
Per cent who cannot afford VG	61	62	-1
Scenario 1 – Interest rates			5,256
Scenario 2 – Affordability (%)			-8.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	38.0	5
Building approvals per '000 pop. – 2001-02	20.5	7
Commercial floor stock m^2/capita – 1998-02	1.9	12

ENVIRONMENT

Annual rainfall (mm)	1,300.0		
Seasonality	Mostly summer rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	99	1	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	27.0	28.4	21.4
National average	27.9	28.7	21.8
Ratio of region to national	0.97	0.99	0.98
SOR rank	29	41	40
	Percentage of persons		
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	29.9	42.8	21.7	5.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	31.6	52.4	10.5	5.5
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.

QLD Mackay

The Mackay region is centred on the City of Mackay. Production statistics for the region are dominated by coal mines in the Bowen Basin, but even after allowing for 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, with some recent diversification, while Whitsunday Shire adds tourism to the basic sugar of its economic base.

Major centres:

Mackay

POPULATION / LABOUR FORCE

|	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	123,918		129,415		130,101		1.2
No. households	45,027		47,898		48,824		2.0
Workforce	68,760	55.3	70,708	54.8	67,155	51.3	-0.6
Employment	61,674	–	64,022	–	60,732	–	-0.4
Unemployment	7,087	10.3	6,686	9.5	6,423	9.6	-2.4
DEWRSB U/E	5,747	8.5	5,729	8.3	5,308	8.1	-2.0
Structural U/E, % population	6,995	9.2	7,792	9.8	7,680	9.6	6.1

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,119	16,845	2,073	16,017	1,927	14,891	-4.0
Taxes paid	508	4,039	489	3,781	469	3,625	-3.5
GST paid	110	876	167	1,290	165	1,272	n.a.
Benefits	216	1,721	241	1,864	246	1,900	3.4
Business income	328	2,608	349	2,699	380	2,936	4.0
Interest/dividends	57	451	56	430	50	385	-5.1
Interest paid	154	1,225	198	1,531	190	1,464	6.1
Net property income	-13	-100	-15	-113	-16	-122	7.0
Net flow of funds	1,935	15,385	1,850	14,295	1,764	13,628	-4.0
Rank		15		27		49	

OCCUPATION

	Class	National average	% of workforce	SOR rank
1.	Agriculture	3.4	6.9	23
2.	Creative professionals	16.3	11.3	50
3.	Service class	47.8	40.9	54
4.	Super creative class	8.9	6.0	60
5.	Working class	23.6	34.9	4
6.	Creative class (2 + 4)	25.2	17.3	57

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	9.70	19	232
High tech		44	267
Diversity index (S)	0.30	54	268
Bohemian Index (S)	0.64	43	190
Foreign born (%)	0.09	46	32
Composite diversity		45	162
Creativity Index	41	46	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	4,965	10.2	28
Very poor households	6,015	12.3	35
Social Security dependent families	6,504	13.3	27
ICONS	2,354	4.8	20
Total households	48,824		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	11.2	13.0	13.9

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	815	934	1.15
Implied price (IP) ($K)	109	153	1.40
Valuer General (VG) price ($K)	103	119	1.16
Ratio of IP/VG	1.06	1.28	1.21
Excess price growth (% p.a.)			0.2
Change in implied yield (%)			-1
VG implied mortgage ($/m)	767	786	1.02
Per cent who cannot afford VG	48	37	12
Scenario 1 – Interest rates			595
Scenario 2 – Affordability (%)			-0.2

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	26.3	20
Building approvals per '000 pop. – 2001-02	11.8	37
Commercial floor stock m²/capita – 1998-02	2.7	2

ENVIRONMENT

Annual rainfall (mm)	798.5
Seasonality	Dominant summer rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	1	90	9
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.9	29.6	19.1
National average	27.9	28.7	21.8
Ratio of region to national	0.96	1.03	0.88
SOR rank	30	10	52

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	28.1	39.4	21.6	10.9
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.1	51.8	9.6	6.5
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
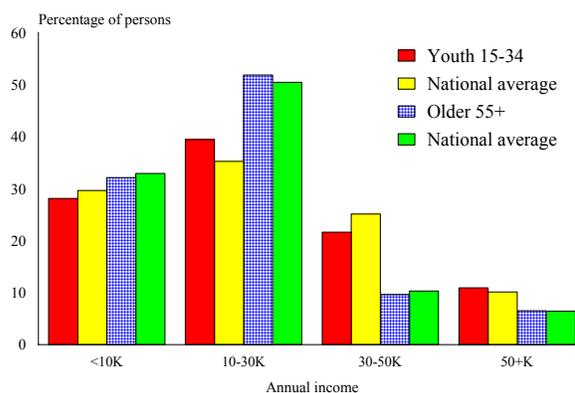
QLD North
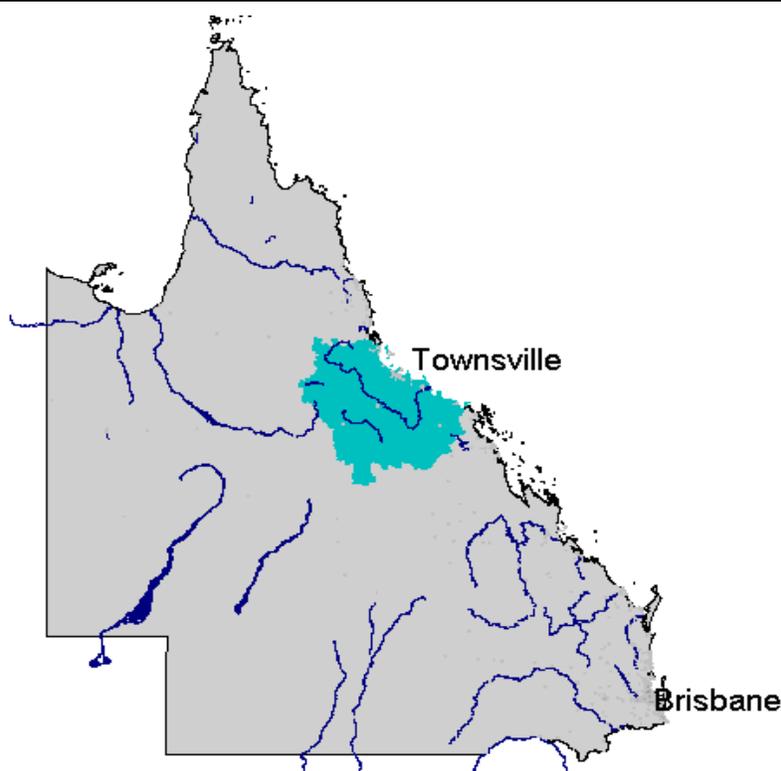
North Queensland is centred on Townsville. The region has two intensive agricultural areas, both originally developed for sugar: the Burdekin Delta (Home Hill, Ayr) and the Herbert River Valley (Ingham). Much of the rest of the region has recently been cleared to provide low-quality pasture. The region includes the north end of the Bowen Basin in Bowen Shire, 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

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	195,349		202,818		204,376		1.1
No. households	71,837		75,974		77,730		2.0
Workforce	108,228	55.5	92,571	45.6	90,350	43.9	-4.4
Employment	96,854	–	81,227	–	79,350	–	-4.9
Unemployment	11,374	10.5	11,343	12.3	11,001	12.2	-0.8
DEWRSB U/E	8,648	8.1	7,481	8.2	6,922	7.8	-5.4
Structural U/E, % population	12,149	10.1	12,986	10.4	13,060	10.3	5.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	3,072	15,593	3,453	17,028	3,351	16,522	1.9
Taxes paid	701	3,557	785	3,869	787	3,880	2.9
GST paid	209	1,059	249	1,227	256	1,265	n.a.
Benefits	384	1,948	415	2,046	424	2,091	2.4
Business income	415	2,105	431	2,127	450	2,220	1.8
Interest/dividends	85	431	88	434	83	412	-1.5
Interest paid	218	1,107	291	1,432	277	1,365	7.2
Net property income	-5	-28	-6	-32	-7	-34	6.9
Net flow of funds	2,822	14,327	3,057	15,075	2,982	14,701	0.9
Rank		22		21		30	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	6.2	27
2. Creative professionals	16.3	12.1	40
3. Service class	47.8	47.5	26
4. Super creative class	8.9	6.8	48
5. Working class	23.6	27.4	21
6. Creative class (2 + 4)	25.2	18.9	42

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	11.78	15	206
High tech		39	260
Diversity index (S)	0.40	45	267
Bohemian Index (S)	0.59	48	202
Foreign born (%)	0.11	40	27
Composite diversity		48	164
Creativity Index	86	38	267
U.S. region most like	Cumberland, MD-WV		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	8,476	10.9	37
Very poor households	10,226	13.2	50
Social Security dependent families	10,741	13.8	35
ICONS	3,419	4.4	26
Total households	77,730		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	13.6	13.6	14.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	820	930	1.13
Implied price (IP) ($K)	110	152	1.38
Valuer General (VG) price ($K)	107	120	1.12
Ratio of IP/VG	1.03	1.27	1.24
Excess price growth (% p.a.)			-0.3
Change in implied yield (%)			2
VG implied mortgage ($/m)	800	789	0.99
Per cent who cannot afford VG	51	37	14
Scenario 1 – Interest rates			1,119
Scenario 2 – Affordability (%)			0.5

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	23.3	29
Building approvals per '000 pop. – 2001-02	14.0	24
Commercial floor stock m^2/capita – 1998-02	1.9	11

ENVIRONMENT

Annual rainfall (mm)	761.6		
Seasonality	Dominant summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	2	92	7
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	29.7	27.3	19.7
National average	27.9	28.7	21.8
Ratio of region to national	1.07	0.95	0.91
SOR rank	15	60	48

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	30.4	36.3	26.4	7.0
– National average	29.6	35.2	25.1	10.1
Older – 55+	31.7	53.2	9.9	5.2
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
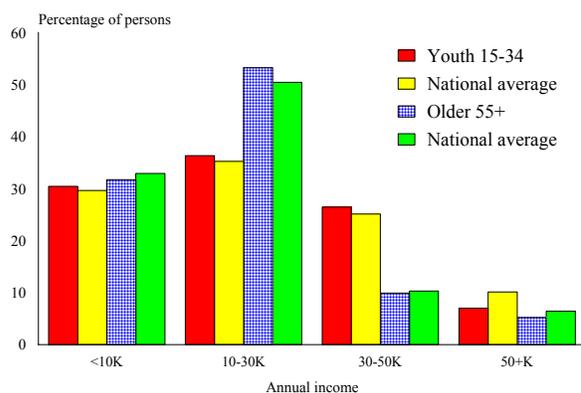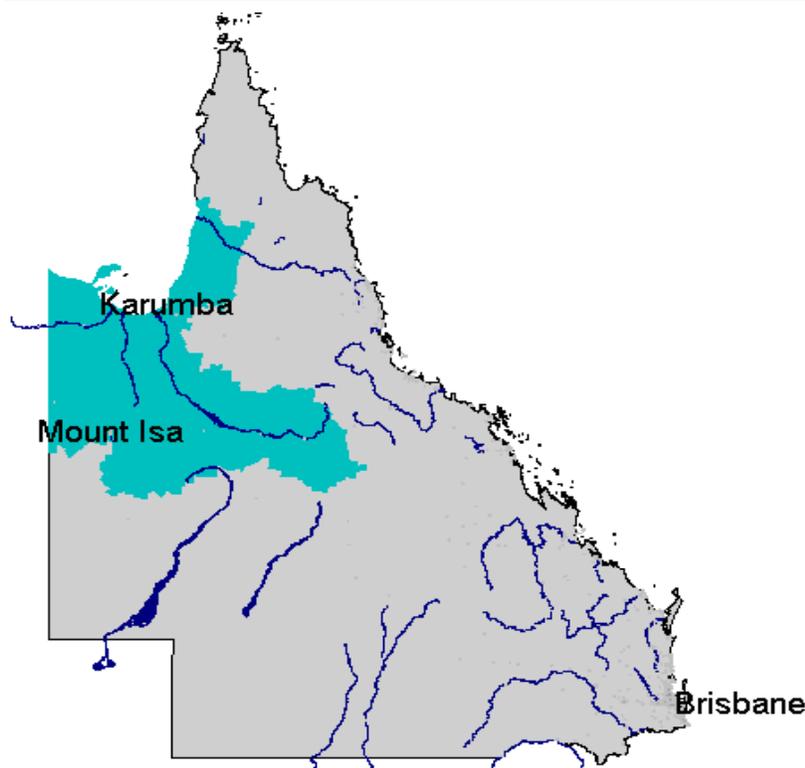
QLD North West

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. The soft country supports extensive grazing, but has sufficient rainfall for there to be potential for intensification in some places.

N.B Unemployment figures in remote regions can display excess variation.

Major centres:

Mt Isa

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	35,727		35,906		35,879		0.1
No. households	12,744		12,984		13,064		0.6
Workforce	21,410	59.8	19,314	53.7	18,886	52.7	-3.1
Employment	20,991	–	17,420	–	16,859	–	-5.3
Unemployment	419	2.0	1,895	9.8	2,027	10.7	48.3
DEWRSB U/E	1,391	6.4	1,424	7.4	1,351	7.3	-0.7
Structural U/E, % population	1,069	4.7	2,443	10.6	2,458	10.7	10.0

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	635	17,834	664	18,480	671	18,677	1.6
Taxes paid	150	4,197	153	4,274	153	4,252	0.4
GST paid	38	1,062	46	1,286	47	1,318	n.a.
Benefits	65	1,828	107	2,985	110	3,053	18.6
Business income	114	3,201	121	3,374	114	3,172	-0.3
Interest/dividends	9	245	9	258	9	252	1.0
Interest paid	47	1,307	62	1,717	58	1,628	7.6
Net property income	-4	-120	-5	-140	-5	-150	7.7
Net flow of funds	585	16,423	635	17,682	639	17,807	2.7
Rank		12		10		13	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	7.6	21
2. Creative professionals	16.3	9.3	64
3. Service class	47.8	36.4	61
4. Super creative class	8.9	7.2	37
5. Working class	23.6	39.5	1
6. Creative class (2 + 4)	25.2	16.5	60

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.15	41	264
High tech		63	267
Diversity index (S)	0.09	63	269
Bohemian Index (S)	0.72	32	175
Foreign born (%)	0.09	47	32
Composite diversity		41	158
Creativity Index	8	58	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	1,485	11.4	45
Very poor households	1,641	12.6	43
Social Security dependent families	1,952	14.9	53
ICONS	652	5.0	17
Total households	13,064		
Social benefits as a % of net flow of funds	1999 (%) 11.1	2001 (%) 16.9	2002 (%) 17.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	820	916	1.12
Implied price (IP) ($K)	110	150	1.36
Valuer General (VG) price ($K)	93	97	1.04
Ratio of IP/VG	1.18	1.54	1.31
Excess price growth (% p.a.)			-1.1
Change in implied yield (%)			7
VG implied mortgage ($/m)	695	641	0.92
Per cent who cannot afford VG	39	22	17
Scenario 1 – Interest rates			95
Scenario 2 – Affordability (%)			6.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	8.4	63
Building approvals per '000 pop. – 2001-02	4.3	64
Commercial floor stock m^2/capita – 1998-02	1.4	40

ENVIRONMENT

Annual rainfall (mm)	592.2
Seasonality	Dominant summer rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	61	39
Evapotranspiration	48	51	1
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	31.4	27.6	16.4
National average	27.9	28.7	21.8
Ratio of region to national	1.13	0.96	0.75
SOR rank	8	56	59

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	23.1	33.2	22.7	21.0
– National average	29.6	35.2	25.1	10.1
Older – 55+	28.9	48.4	11.8	10.9
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
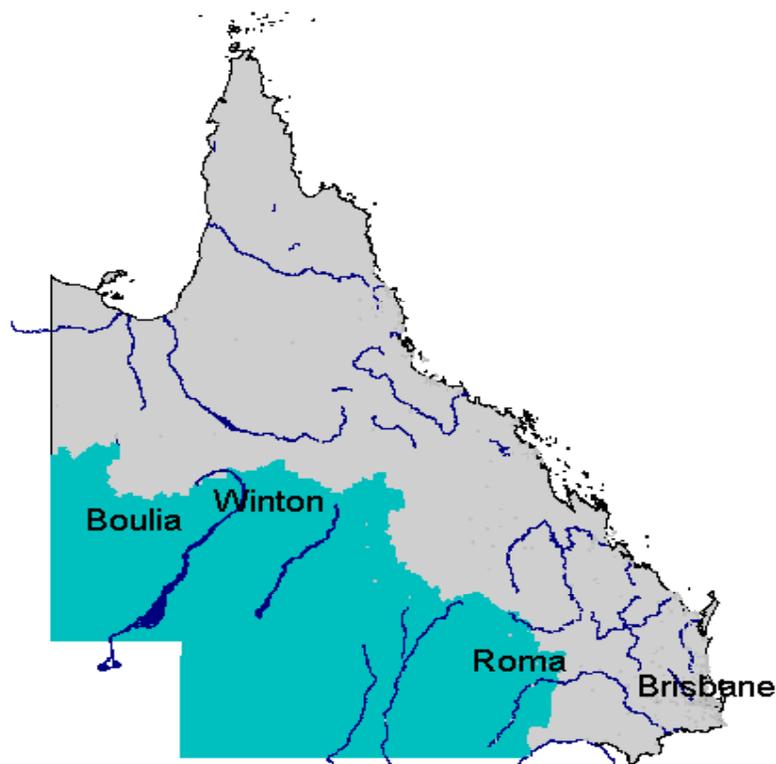
QLD Pastoral

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 has yielded few major mineral discoveries.

Major centres:

Roma, Longreach

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	38,272		37,601		37,594		-0.4
No. households	15,238		15,547		15,663		0.7
Workforce	23,292	60.9	24,291	64.1	23,373	62.2	0.1
Employment	21,229	–	22,798	–	22,284	–	1.2
Unemployment	2,063	8.9	1,491	6.1	1,089	4.7	-14.8
DEWRSB U/E	917	4.1	891	3.7	810	3.5	-3.1
Structural U/E, % population	2,366	10.0	2,199	9.5	1,766	7.6	7.5

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	619	16,329	662	17,599	785	20,877	8.5
Taxes paid	105	2,768	112	2,986	117	3,120	4.1
GST paid	28	732	42	1,111	45	1,193	n.a.
Benefits	73	1,915	83	2,197	80	2,128	3.6
Business income	98	2,589	101	2,689	97	2,577	-0.2
Interest/dividends	15	389	14	379	13	334	-4.9
Interest paid	45	1,176	59	1,575	56	1,495	8.3
Net property income	0	-12	-1	-14	-1	-15	8.3
Net flow of funds	627	16,534	646	17,179	756	20,093	6.7
Rank		10		13		7	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	25.4	1
2. Creative professionals	16.3	9.9	62
3. Service class	47.8	35.4	63
4. Super creative class	8.9	5.7	61
5. Working class	23.6	23.6	49
6. Creative class (2 + 4)	25.2	15.6	63

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	2.97	63	265
High tech		64	267
Diversity index (S)	0.17	60	269
Bohemian Index (S)	0.35	64	257
Foreign born (%)	0.05	64	74
Composite diversity		64	199
Creativity Index	7	62	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	1,354	8.6	12
Very poor households	1,791	11.4	22
Social Security dependent families	2,072	13.2	25
ICONS	659	4.2	38
Total households	15,663		
Social benefits as a % of net flow of funds	1999 (%) 11.6	2001 (%) 12.8	2002 (%) 10.6

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	655	734	1.12
Implied price (IP) ($K)	88	120	1.37
Valuer General (VG) price ($K)	54	63	1.16
Ratio of IP/VG	1.62	1.91	1.18
Excess price growth (% p.a.)			0.6
Change in implied yield (%)			-3
VG implied mortgage ($/m)	406	416	1.03
Per cent who cannot afford VG	25	21	4
Scenario 1 – Interest rates			68
Scenario 2 – Affordability (%)			-3.1

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	9.5	62
Building approvals per '000 pop. – 2001-02	4.7	63
Commercial floor stock m^2/capita – 1998-02	1.5	31

ENVIRONMENT

Annual rainfall (mm)	352.5		
Seasonality	Arid, mostly summer rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	27	73
Evapotranspiration	92	8	–
Days below zero	80	20	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.6	28.1	22.2
National average	27.9	28.7	21.8
Ratio of region to national	0.96	0.98	1.02
SOR rank	31	45	34

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	22.6	44.3	24.6	8.4
– National average	29.6	35.2	25.1	10.1
Older – 55+	30.2	51.6	10.9	7.2
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
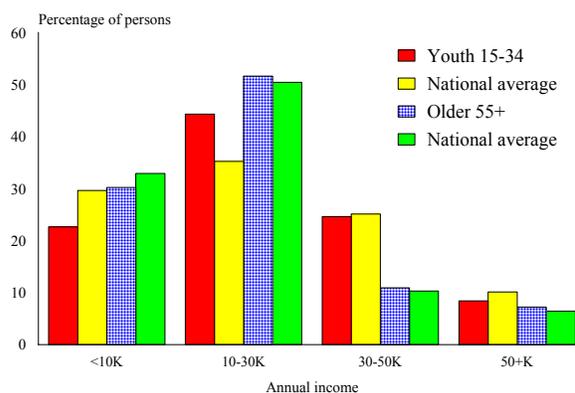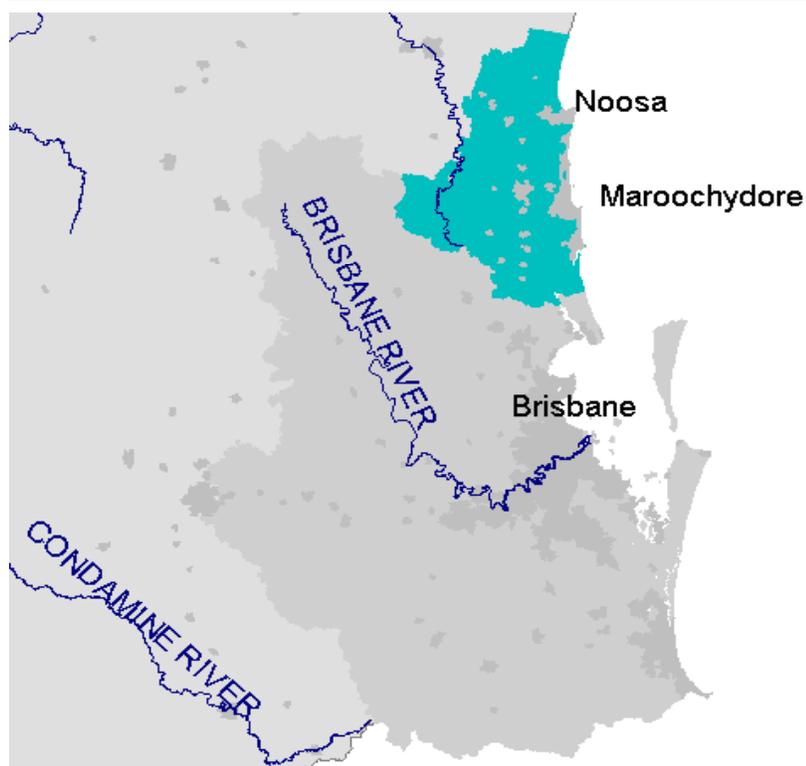
QLD Sunshine Coast

The Sunshine Coast is a resort and retirement strip, newer than the Gold Coast and with more room; hence not so intensively developed. Back from the strip is a row of older towns, the chief of which is Nambour. Some intensive farming survives, and manufacturing partly based on the farm products.

Major centres:

Caloundra, Nambour, Noosa

POPULATION / LABOUR FORCE

|	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	223,868		243,701		246,815		2.5
No. households	93,819		103,248		106,724		3.3
Workforce	105,285	46.8	122,430	50.4	127,338	50.9	4.9
Employment	87,871	–	102,889	–	110,306	–	5.8
Unemployment	17,413	16.5	19,541	16.0	17,032	13.4	-0.6
DEWRSB U/E	11,664	13.4	13,735	11.5	14,497	11.7	5.6
Structural U/E, % population	17,826	14.0	21,073	15.2	20,395	14.3	5.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,505	10,850	3,040	12,474	3,315	13,603	7.8
Taxes paid	568	2,460	686	2,815	785	3,222	9.4
GST paid	187	810	303	1,244	357	1,464	n.a.
Benefits	609	2,639	682	2,797	685	2,813	2.2
Business income	416	1,801	427	1,753	511	2,095	5.2
Interest/dividends	146	633	159	651	158	647	0.8
Interest paid	236	1,023	309	1,267	296	1,216	5.9
Net property income	-1	-3	-1	-3	-1	-3	6.0
Net flow of funds	2,684	11,626	3,009	12,345	3,230	13,252	4.5
Rank		58		54		53	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	3.8	35
2. Creative professionals	16.3	16.4	12
3. Service class	47.8	50.1	11
4. Super creative class	8.9	6.8	47
5. Working class	23.6	22.9	52
6. Creative class (2 + 4)	25.2	23.3	14

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	13.18	12	201
High tech		38	260
Diversity index (S)	1.92	4	1
Bohemian Index (S)	0.85	21	144
Foreign born (%)	0.17	26	16
Composite diversity		9	53
Creativity Index	405	15	187
U.S. region most like	Bellingham, WA		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	11,907	11.2	44
Very poor households	14,839	13.9	59
Social Security dependent families	14,988	14.0	43
ICONS	4,045	3.8	57
Total households	106,724		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	22.7	22.7	21.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	822	950	1.16
Implied price (IP) ($K)	110	156	1.41
Valuer General (VG) price ($K)	134	178	1.33
Ratio of IP/VG	0.82	0.87	1.06
Excess price growth (% p.a.)			2.3
Change in implied yield (%)			-13
VG implied mortgage ($/m)	998	1,172	1.17
Per cent who cannot afford VG	70	71	-1
Scenario 1 – Interest rates			1,143
Scenario 2 – Affordability (%)			-8.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	46.2	2
Building approvals per '000 pop. – 2001-02	24.3	3
Commercial floor stock m^2/capita – 1998-02	1.7	14

ENVIRONMENT

Annual rainfall (mm)	1,631.6		
Seasonality	Mostly summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	–	100
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	21.7	28.1	28.3
National average	27.9	28.7	21.8
Ratio of region to national	0.78	0.98	1.30
SOR rank	61	46	3

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	35.1	43.0	17.3	4.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.2	54.7	8.7	4.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
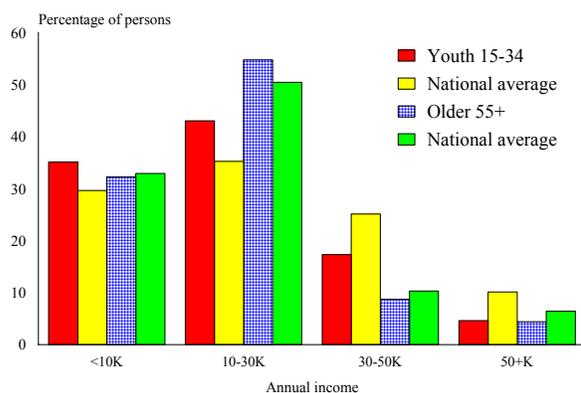
QLD West Moreton

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. Intensive agriculture is still practised in the several fertile valleys of tributaries of the Brisbane river.

Major centres:

Ipswich

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	175,610		179,736		180,309		0.7
No. households	61,370		63,780		64,698		1.3
Workforce	90,470	49.9	98,935	54.8	104,631	58.0	3.8
Employment	79,848	–	87,011	–	92,919	–	
Unemployment	10,621	11.7	11,924	12.1	11,712	11.2	-1.1
DEWRSB U/E	8,422	9.6	7,472	7.9	7,898	7.9	-4.8
Structural U/E, % population	13,661	12.9	15,942	14.7	16,108	14.8	5.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,203	12,468	2,358	13,120	2,535	14,102	4.2
Taxes paid	485	2,747	518	2,882	579	3,221	5.4
GST paid	134	760	204	1,132	234	1,301	n.a.
Benefits	402	2,276	440	2,450	451	2,510	3.3
Business income	316	1,787	326	1,811	354	1,970	3.3
Interest/dividends	37	209	40	220	39	219	1.6
Interest paid	213	1,203	282	1,572	261	1,454	6.5
Net property income	-12	-65	-14	-75	-15	-81	7.4
Net flow of funds	2,114	11,965	2,146	11,940	2,291	12,745	2.1
Rank		57		56		54	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	5.6	32
2. Creative professionals	16.3	11.3	52
3. Service class	47.8	47.0	34
4. Super creative class	8.9	7.3	33
5. Working class	23.6	28.9	13
6. Creative class (2 + 4)	25.2	18.5	49

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.77	49	265
High tech		27	246
Diversity index (S)	0.74	24	141
Bohemian Index (S)	0.63	44	193
Foreign born (%)	0.13	32	20
Composite diversity		30	117
Creativity Index	167	34	258
U.S. region most like		Pueblo, CO	

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	8,484	13.1	62
Very poor households	8,918	13.8	58
Social Security dependent families	10,660	16.5	61
ICONS	2,623	4.1	48
Total households	64,698		

Social benefits as a % of net flow of funds	1999 (%)	2001 (%)	2002 (%)
	19.0	20.5	19.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	753	780	1.04
Implied price (IP) ($K)	101	128	1.26
Valuer General (VG) price ($K)	82	86	1.06
Ratio of IP/VG	1.24	1.48	1.20
Excess price growth (% p.a.)			0.3
Change in implied yield (%)			-2
VG implied mortgage ($/m)	609	569	0.93
Per cent who cannot afford VG	37	27	10
Scenario 1 – Interest rates			954
Scenario 2 – Affordability (%)			-0.3

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	14.6	55
Building approvals per '000 pop. – 2001-02	9.5	49
Commercial floor stock m^2/capita – 1998-02	1.1	61

ENVIRONMENT

Annual rainfall (mm)	970.1
Seasonality	Mostly summer rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	99	1
Days below zero	70	30	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	27.7	28.4	19.2
National average	27.9	28.7	21.8
Ratio of region to national	0.99	0.99	0.88
SOR rank		23	40	51

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	32.7	41.8	21.7	3.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	36.7	51.8	8.2	3.3
– National average	32.9	50.4	10.3	6.4

Percentage of persons (header spanning INCOME row above)

Note: SOR rank out of 64; U.S. rank out of 268.

QLD Wide Bay-Burnett

Wide Bay-Burnett comprises several sub-regions.

❑ The retirement and resort developments around Hervey Bay. These are the most northerly outposts of the strip of such settlements extending from well south of Sydney along the east coast.

❑ 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.

❑ Maryborough and Gympie are old-established towns with trade-exposed manufacturing industries, whose future is uncertain. Their rural hinterland comprises mainly small farms, many of which are on poor country. However round Kingaroy and in several other places intensive agriculture is practised.

Major centres:

Bundaberg, Hervey Bay, Maryborough

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	229,769		237,753		239,269		1.0
No. households	90,969		95,309		97,325		1.7
Workforce	108,488	47.0	104,777	44.1	102,283	42.5	-1.5
Employment	88,720	–	82,977	–	81,748	–	-2.0
Unemployment	19,768	18.2	21,800	20.8	20,535	20.1	1.0
DEWRSB U/E	14,974	12.8	11,674	10.6	11,915	12.4	-5.6
Structural U/E, % population	22,491	17.1	26,109	19.2	25,630	18.6	5.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,299	9,884	2,661	11,191	2,704	11,375	4.8
Taxes paid	467	2,008	541	2,277	563	2,368	5.7
GST paid	206	884	264	1,110	282	1,187	n.a.
Benefits	659	2,833	738	3,105	744	3,131	3.4
Business income	385	1,654	394	1,656	447	1,882	4.4
Interest/dividends	71	307	78	327	79	331	2.5
Interest paid	217	934	289	1,215	272	1,143	7.0
Net property income	-1	-3	-1	-3	-1	-3	7.2
Net flow of funds	2,524	10.849	2,775	11,674	2,857	12,017	3.5
Rank		62		59		58	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	10.5	15
2. Creative professionals	16.3	11.6	45
3. Service class	47.8	44.5	45
4. Super creative class	8.9	6.2	56
5. Working class	23.6	27.1	24
6. Creative class (2 + 4)	25.2	17.8	52

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.49	28	243
High tech		46	267
Diversity index (S)	0.30	52	268
Bohemian Index (S)	0.54	53	215
Foreign born (%)	0.10	42	30
Composite diversity		53	170
Creativity Index	30	49	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	11,574	11.9	53
Very poor households	13,622	14.0	60
Social Security dependent families	15,046	15.5	58
ICONS	3,349	3.4	61
Total households	97,325		

Social benefits as a % of net flow of funds	1999 (%) 26.1	2001 (%) 26.6	2002 (%) 26.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	675	736	1.09
Implied price (IP) ($K)	91	120	1.33
Valuer General (VG) price ($K)	86	91	1.05
Ratio of IP/VG	1.05	1.33	1.26
Excess price growth (% p.a.)			-0.6
Change in implied yield (%)			3
VG implied mortgage ($/m)	643	599	0.93
Per cent who cannot afford VG	51	37	14
Scenario 1 – Interest rates			1,081
Scenario 2 – Affordability (%)			1.7

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	22.4	34
Building approvals per '000 pop. – 2001-02	13.0	29
Commercial floor stock m^2/capita – 1998-02	1.6	23

ENVIRONMENT

Annual rainfall (mm)	886.0		
Seasonality	Mostly summer rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	79	21
Days below zero	87	13	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	21.5	27.5	28.6
National average	27.9	28.7	21.8
Ratio of region to national	0.77	0.96	1.31
SOR rank	62	58	2

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	37.4	44.0	15.1	3.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	40.9	50.3	6.1	2.7
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
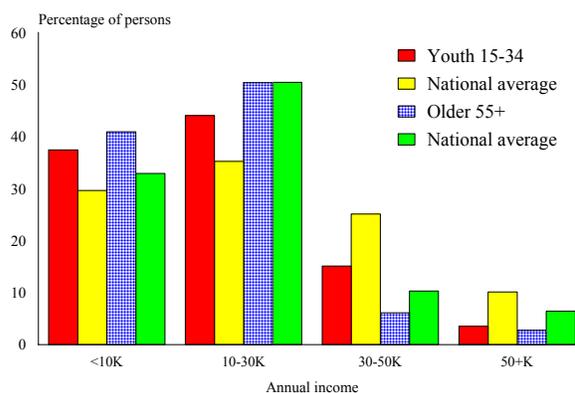
Adelaide Central

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.

Major centres:

Adelaide, Glenelg

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	370,144		375,475		375,406		0.4
No. households	153,804		160,809		162,931		1.5
Workforce	186,855	50.7	189,653	50.6	187,861	50.1	0.1
Employment	168,964	–	172,830	–	172,454	–	0.5
Unemployment	17,891	9.6	16,822	8.9	15,407	8.2	-3.7
DEWRSB U/E	13,963	7.6	11,455	6.2	11,144	6.1	-5.5
Structural U/E, % population	21,636	9.5	21,764	9.4	21,444	9.3	4.6

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	5,712	15,369	6,673	17,771	6,955	18,524	6.4
Taxes paid	1,588	4,272	1,850	4,926	2,011	5,356	7.8
GST paid	374	1,006	544	1,450	613	1,631	n.a.
Benefits	808	2,173	862	2,296	871	2,320	2.2
Business income	773	2,079	813	2,166	950	2,529	6.8
Interest/dividends	446	1,199	502	1,336	519	1,381	4.8
Interest paid	403	1,084	539	1,437	529	1,409	9.1
Net property income	25	69	30	79	32	85	7.6
Net flow of funds	5,399	14,527	5,946	15,835	6,174	16,443	4.2
Rank		20		16		18	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.2	60
2. Creative professionals	16.3	20.4	4
3. Service class	47.8	54.5	1
4. Super creative class	8.9	10.3	8
5. Working class	23.6	14.6	63
6. Creative class (2 + 4)	25.2	30.7	4

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	16.34	7	164
High tech		13	96
Diversity index (S)	1.17	9	26
Bohemian Index (S)	1.14	6	79
Foreign born (%)	0.23	17	6
Composite diversity		5	36
Creativity Index	735	5	58
U.S. region most like	Binghampton, NY		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	10,536	6.5	4
Very poor households	14,169	8.7	8
Social Security dependent families	13,863	8.5	3
ICONS	8,386	5.1	14
Total households	162,931		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	15.0	14.5	14.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	816	1,013	1.24
Implied price (IP) ($K)	109	166	1.52
Valuer General (VG) price ($K)	156	262	1.68
Ratio of IP/VG	0.70	0.63	0.90
Excess price growth (% p.a.)			5.1
Change in implied yield (%)			-26
VG implied mortgage ($/m)	1,165	1,727	1.48
Per cent who cannot afford VG	80	90	-10
Scenario 1 – Interest rates			876
Scenario 2 – Affordability (%)			-16.7

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	18.6	43
Building approvals per '000 pop. – 2001-02	11.0	39
Commercial floor stock m^2/capita – 1998-02	2.1	10

ENVIRONMENT

Annual rainfall (mm)	563.8		
Seasonality	Mostly winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	86	14	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	27.2	28.5	27.4
National average	27.9	28.7	21.8
Ratio of region to national	0.98	1.00	1.26
SOR rank	27	36	5

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	30.9	33.3	26.6	9.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	27.5	53.3	11.2	8.0
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
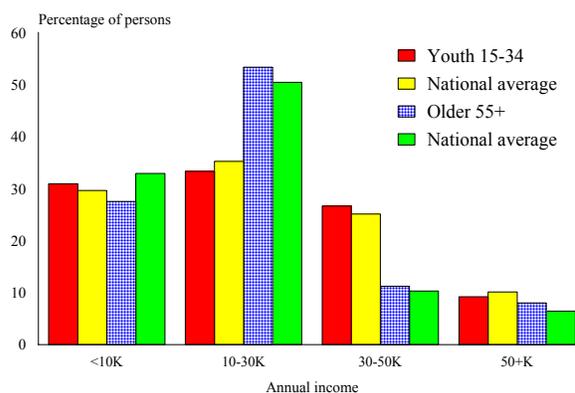
Adelaide Outer

The Outer Adelaide region has been defined essentially as the Adelaide Hills, using that term broadly, without restriction to the LGA of that name. It begins at the scarp which angles across from behind Gawler to the sea at Marino. To the south it ends at the coast, while to the east it ends where 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 (and formerly almond orchards), and beyond again to the south are the tourist resorts and retirement areas of Encounter Bay. The wine industry combines agriculture, manufacturing and tourism, and there is also some manufacturing; however the region is mainly a commuter zone.

Major centres:

Angaston, Mt Barker, Noalunga Centre

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	352,106		359,268		360,960		0.6
No. households	132,305		139,465		142,735		1.9
Workforce	179,268	50.7	186,982	52.0	187,002	51.6	1.1
Employment	161,465	–	167,687	–	169,402	–	1.2
Unemployment	17,803	9.9	19,295	10.3	17,601	9.4	-0.3
DEWRSB U/E	14,327	8.1	11,445	6.3	10,494	5.8	-7.5
Structural U/E, % population	20,739	9.5	23,642	10.6	23,003	10.2	4.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	4,873	13,735	5,101	14,198	5,243	14,594	2.0
Taxes paid	1,180	3,326	1,243	3,459	1,325	3,687	3.5
GST paid	310	874	443	1,232	489	1,362	n.a.
Benefits	875	2,466	807	2,245	816	2,271	-2.7
Business income	606	1,707	624	1,737	686	1,909	3.8
Interest/dividends	153	431	166	461	166	462	2.3
Interest paid	463	1,304	602	1,675	572	1,592	6.9
Net property income	1	3	1	4	1	4	7.5
Net flow of funds	4,555	12,838	4,411	12,279	4,527	12,600	-0.6
Rank		47		55		55	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	5.3	33
2. Creative professionals	16.3	13.4	25
3. Service class	47.8	49.6	13
4. Super creative class	8.9	8.0	22
5. Working class	23.6	23.8	46
6. Creative class (2 + 4)	25.2	21.4	23

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.14	31	248
High tech		30	253
Diversity index (S)	0.72	26	156
Bohemian Index (S)	0.71	33	175
Foreign born (%)	0.20	21	9
Composite diversity		26	112
Creativity Index	186	31	254
U.S. region most like	Gadsden, AL		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	14,248	10.0	23
Very poor households	16,122	11.3	20
Social Security dependent families	18,136	12.7	16
ICONS	7,102	5.0	18
Total households	142,735		
Social benefits as a % of net flow of funds	1999 (%) 19.2	2001 (%) 18.3	2002 (%) 18.0

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	708	800	1.13
Implied price (IP) ($K)	95	131	1.38
Valuer General (VG) price ($K)	105	165	1.58
Ratio of IP/VG	0.91	0.79	0.87
Excess price growth (% p.a.)			5.7
Change in implied yield (%)			-28
VG implied mortgage ($/m)	780	1,089	1.40
Per cent who cannot afford VG	62	83	-21
Scenario 1 – Interest rates			2,629
Scenario 2 – Affordability (%)			-17.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	20.2	41
Building approvals per '000 pop. – 2001-02	14.3	22
Commercial floor stock m^2/capita – 1998-02	1.0	63

ENVIRONMENT

Annual rainfall (mm)	648.1		
Seasonality	Mostly winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	66	34	–
Evapotranspiration	27	73	–
Days below zero	69	31	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.3	31.1	20.8
National average	27.9	28.7	21.8
Ratio of region to national	0.94	1.09	0.95
SOR rank	35	1	42

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	32.6	38.7	23.8	4.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.4	52.4	10.4	4.8
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
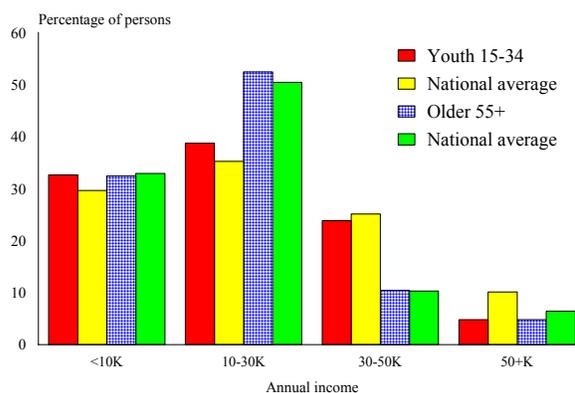
Adelaide Plains

The Adelaide Plains region includes the southern or urbanised part of the plain which begins with Adelaide airport and extends into the Lower and Mid North of SA. The region includes old-established inner suburbs, old-established independent settlements 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. Manufacturing is more important as an element in the economic base than in virtually any other part of Australia, and the region has not been favoured by Commonwealth policies over the past several decades. Given that Central Adelaide is less buoyant than Global Sydney, the region has not been able to develop the alternative reliance on commuting which has helped to keep its equivalents in Sydney prosperous.

Major centres:

Port Adelaide, Salisbury, Elizabeth

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	468,524		473,298		474,813		0.3
No. households	187,627		194,874		198,669		1.4
Workforce	222,546	47.4	232,029	49.0	233,651	49.1	1.2
Employment	187,332	–	195,270	–	199,757	–	1.6
Unemployment	35,214	15.8	36,760	15.8	33,894	14.5	-1.0
DEWRSB U/E	27,314	12.8	23,580	10.6	21,918	9.8	-5.4
Structural U/E, % population	46,147	16.0	49,721	17.1	48,344	16.5	4.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	5,424	11,526	5,868	12,399	6,066	12,818	3.6
Taxes paid	1,295	2,752	1,404	2,966	1,509	3,189	5.0
GST paid	391	831	558	1,179	621	1,313	n.a.
Benefits	1,327	2,820	1,445	3,053	1,461	3,088	3.1
Business income	641	1,362	658	1,390	742	1,567	4.8
Interest/dividends	156	331	161	341	156	330	-0.1
Interest paid	467	992	610	1,288	584	1,233	7.5
Net property income	13	27	15	31	16	33	7.7
Net flow of funds	5,407	11,491	5,575	11,780	5,728	12,101	1.7
Rank		61		57		57	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	1.2	49
2. Creative professionals	16.3	13.7	21
3. Service class	47.8	46.7	36
4. Super creative class	8.9	6.9	42
5. Working class	23.6	31.5	7
6. Creative class (2 + 4)	25.2	20.6	31

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	7.92	32	248
High tech		14	96
Diversity index (S)	0.95	15	60
Bohemian Index (S)	0.83	22	148
Foreign born (%)	0.25	15	4
Composite diversity		14	70
Creativity Index	433	13	171
U.S. region most like	Canton, OH		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	23,661	11.9	55
Very poor households	26,602	13.4	52
Social Security dependent families	28,749	14.5	50
ICONS	6,526	3.3	64
Total households	198,669		

Social benefits as a % of net flow of funds	1999 (%)	2001 (%)	2002 (%)
	24.5	25.9	25.5

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	659	761	1.15
Implied price (IP) ($K)	88	125	1.41
Valuer General (VG) price ($K)	90	138	1.53
Ratio of IP/VG	0.98	0.90	0.92
Excess price growth (% p.a.)			4.8
Change in implied yield (%)			-25
VG implied mortgage ($/m)	671	910	1.36
Per cent who cannot afford VG	56	75	-19
Scenario 1 – Interest rates			3,356
Scenario 2 – Affordability (%)			-14.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	14.7	54
Building approvals per '000 pop. – 2001-02	12.4	35
Commercial floor stock m^2/capita – 1998-02	1.2	55

ENVIRONMENT

Annual rainfall (mm)	447.7		
Seasonality	Mostly winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	5	95	–
Evapotranspiration	77	23	–
Days below zero	76	24	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	28.1	28.2	23.6
National average	27.9	28.7	21.8
Ratio of region to national	1.01	0.99	1.09
SOR rank	22	43	21

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	33.4	39.8	22.4	4.4
– National average	29.6	35.2	25.1	10.1
Older – 55+	39.0	51.5	6.9	2.6
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
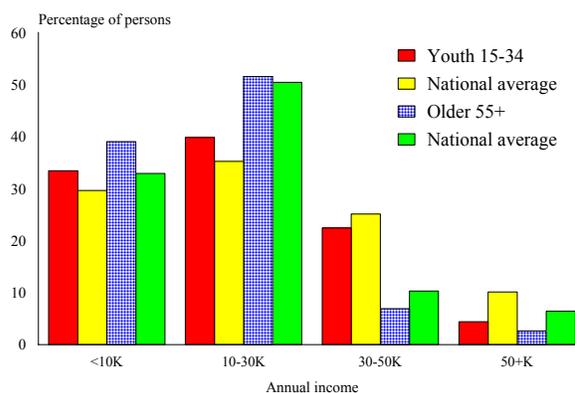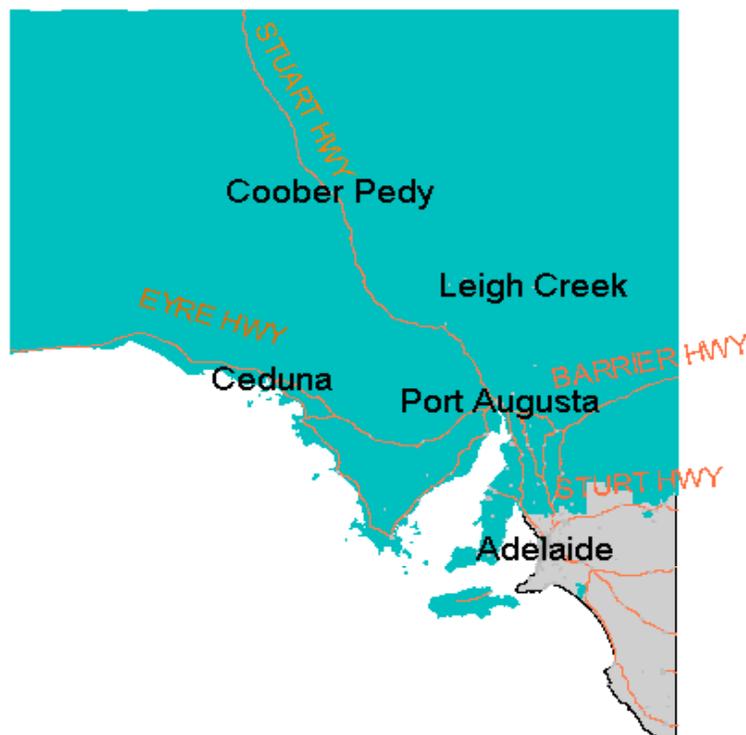
SA Eyre and Yorke

Eyre and Yorke comprise several distinct sub-regions.

❑ Kangaroo Island – agricultural shire increasingly involved in tourism.

❑ Eyre Peninsula and the SA West Coast – added to the wheat belt in the first half of last century. 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, which is also a rail and road transport centre.

❑ The SA Outback comprises the northern two-thirds of the state. It has scattered pastoral stations, Aboriginal communities and several tourist attractions, e.g. Flinders Ranges and Coober Pedy.

❑ The Mid and Upper North is again wheat/sheep country, with a longer history of settlement than Eyre Peninsula. The Clare Valley is slightly higher than the rest and is wet enough to support viticulture.

Major centres:

Port Pirie, Port Augusta, Whyalla

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	164,463		163,187		163,272		-0.2
No. households	64,294		66,479		67,450		1.2
Workforce	76,636	46.6	73,544	44.8	67,852	41.6	-2.8
Employment	66,057	–	61,297	–	57,290	–	
Unemployment	10,577	13.8	12,248	16.7	10,563	15.6	-3.0
DEWRSB U/E	7,268	9.6	6,323	9.0	5,630	8.7	-2.4
Structural U/E, % population	14,229	15.6	15,948	17.6	14,040	15.4	5.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,977	12,031	1,915	11,737	1,971	12,076	0.1
Taxes paid	419	2,549	425	2,604	436	2,673	1.6
GST paid	147	894	187	1,146	200	1,223	n.a.
Benefits	396	2,413	436	2,669	437	2,675	3.5
Business income	270	1,642	277	1,700	260	1,596	-0.9
Interest/dividends	60	358	55	335	45	277	-9.0
Interest paid	148	901	203	1,244	193	1,185	9.6
Net property income	0	2	0	2	0	2	8.2
Net flow of funds	1,990	12,112	1,868	11,449	1,884	11,547	-1.6
Rank		56		60		62	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	13.2	12
2. Creative professionals	16.3	11.5	46
3. Service class	47.8	40.5	55
4. Super creative class	8.9	6.3	55
5. Working class	23.6	28.6	15
6. Creative class (2 + 4)	25.2	17.8	54

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.51	51	265
High tech		47	267
Diversity index (S)	0.52	37	247
Bohemian Index (S)	0.55	52	213
Foreign born (%)	0.10	41	30
Composite diversity		45	162
Creativity Index	29	50	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	6,814	10.1	27
Very poor households	8,632	12.8	48
Social Security dependent families	8,974	13.3	26
ICONS	2,401	3.6	59
Total households	67,450		
	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	19.9	23.3	23.2

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	558	635	1.14
Implied price (IP) ($K)	75	104	1.39
Valuer General (VG) price ($K)	69	91	1.31
Ratio of IP/VG	1.08	1.15	1.06
Excess price growth (% p.a.)			2.3
Change in implied yield (%)			-13
VG implied mortgage ($/m)	517	597	1.15
Per cent who cannot afford VG	50	56	-6
Scenario 1 – Interest rates			721
Scenario 2 – Affordability (%)			-7.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	15.4	52
Building approvals per '000 pop. – 2001-02	9.2	53
Commercial floor stock m^2/capita – 1998-02	1.4	35

ENVIRONMENT

Annual rainfall (mm)	211.8		
Seasonality	Arid, mostly uniform rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	29	71
Evapotranspiration	100	–	–
Days below zero	64	34	2

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.3	28.9	25.5
National average	27.9	28.7	21.8
Ratio of region to national	0.84	1.01	1.17
SOR rank	59	27	8
	Percentage of persons		
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	35.0	38.9	19.2	6.9
– National average	29.6	35.2	25.1	10.1
Older – 55+	38.4	51.0	7.1	3.6
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
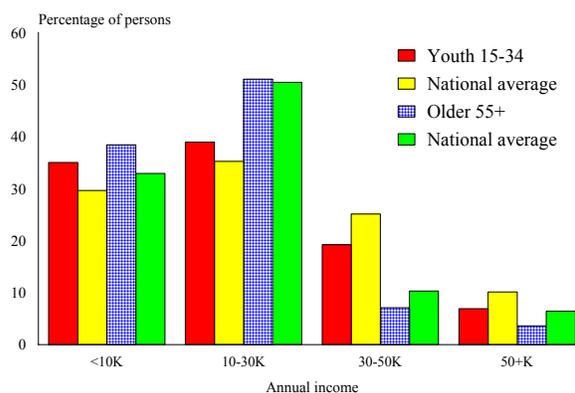
SA Murraylands
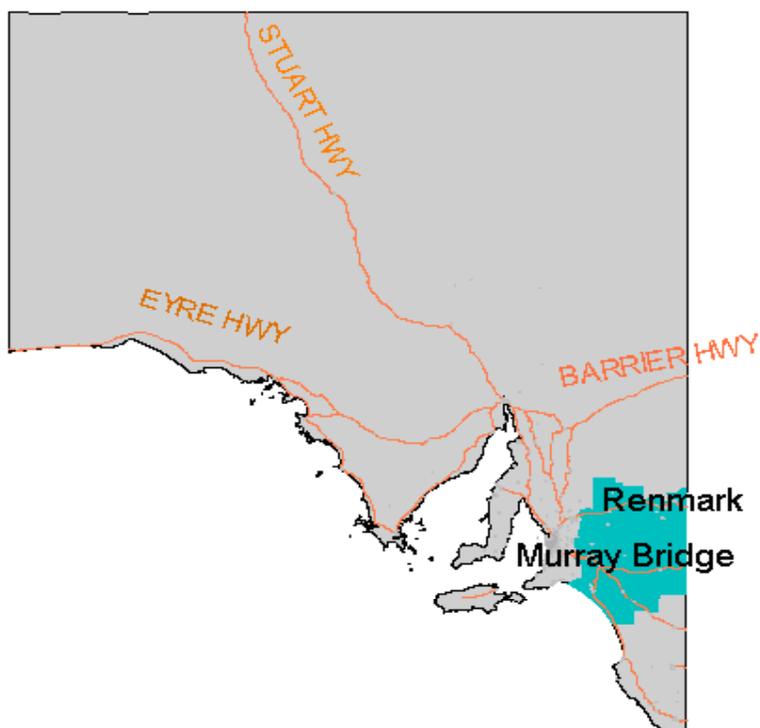
The Murray Mallee of SA adjoins the Mallee of Victoria, and has a similar pattern of development: intensive irrigated agriculture along the river, and extensive grain cultivation away from it.

Major centres:

Renmark, Murray Bridge

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	68,164		68,397		68,447		0.1
No. households	26,825		27,754		28,170		1.2
Workforce	33,059	48.4	37.790	55.4	37,918	55.4	3.5
Employment	29,301	–	33,744	–	34,021	–	3.8
Unemployment	3,759	11.4	4,046	10.7	3,897	10.3	0.9
DEWRSB U/E	3,733	11.5	2,859	7.7	2,430	6.6	-10.2
Structural U/E, % population	5,119	12.7	5,660	14.0	5,532	13.6	7.2

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	926	13,564	742	10,849	796	11,632	-5.0
Taxes paid	166	2,435	143	2,086	150	2,186	-3.5
GST paid	49	712	75	1,104	82	1,199	n.a.
Benefits	167	2,440	179	2,623	182	2,656	2.9
Business income	119	1,744	121	1,775	132	1,924	3.3
Interest/dividends	25	362	24	347	21	310	-5.1
Interest paid	68	996	93	1,361	90	1,312	9.6
Net property income	2	27	2	31	2	33	7.9
Net flow of funds	955	13,994	757	11,075	811	11,857	-5.4
Rank		27		61		60	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	23.1	3
2. Creative professionals	16.3	9.4	63
3. Service class	47.8	39.6	58
4. Super creative class	8.9	5.0	64
5. Working class	23.6	22.8	53
6. Creative class (2 + 4)	25.2	14.4	64

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.00	44	264
High tech		55	267
Diversity index (S)	0.27	55	269
Bohemian Index (S)	0.45	60	233
Foreign born (%)	0.10	43	30
Composite diversity		56	176
Creativity Index	8	58	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	2,667	9.5	19
Very poor households	3,577	12.7	47
Social Security dependent families	3,706	13.2	24
ICONS	948	3.4	62
Total households	28,170		
Social benefits as a % of net flow of funds	1999 (%) 17.4	2001 (%) 23.7	2002 (%) 22.4

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	575	679	1.18
Implied price (IP) ($K)	77	111	1.44
Valuer General (VG) price ($K)	68	91	1.35
Ratio of IP/VG	1.14	1.22	1.07
Excess price growth (% p.a.)			2.2
Change in implied yield (%)			-12
VG implied mortgage ($/m)	505	600	1.19
Per cent who cannot afford VG	46	52	-6
Scenario 1 – Interest rates			339
Scenario 2 – Affordability (%)			-7.5

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	16.2	49
Building approvals per '000 pop. – 2001-02	9.3	52
Commercial floor stock m²/capita – 1998-02	1.4	42

ENVIRONMENT

Annual rainfall (mm)	354.5		
Seasonality	Mostly winter rainfall		

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	11	89	–
Evapotranspiration	100	–	–
Days below zero	35	65	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.7	29.0	25.3
National average	27.9	28.7	21.8
Ratio of region to national	0.85	1.01	1.16
SOR rank	54	22	9

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	31.6	48.0	17.2	3.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	37.8	51.3	7.6	3.3
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
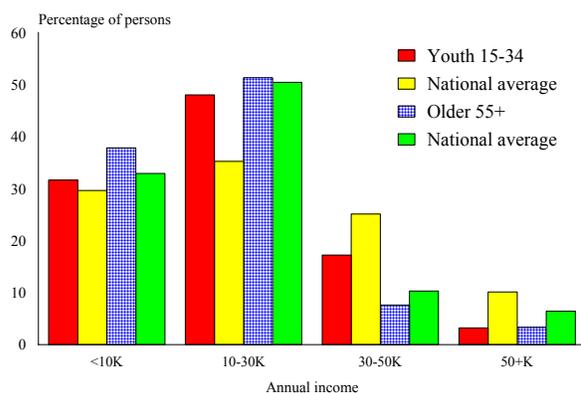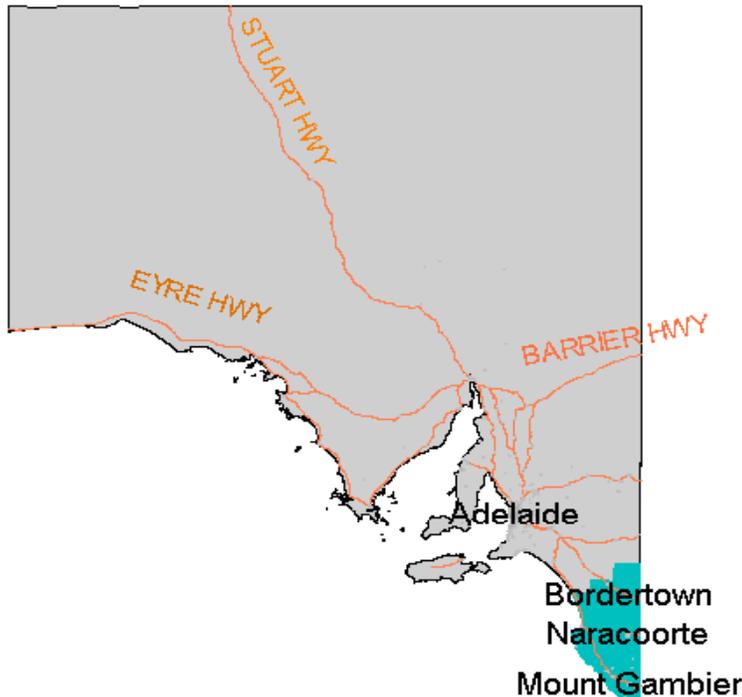
SA South East

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	62,819		62,772		62,865		0.0
No. households	23,753		24,616		25,017		1.3
Workforce	32,531	51.8	35,329	56.3	35,439	56.4	2.1
Employment	29,334	–	32,526	–	32,810	–	
Unemployment	3,196	9.8	2,804	7.9	2,629	7.4	-6.8
DEWRSB U/E	2,656	8.5	1,907	5.5	1,571	4.5	-14.7
Structural U/E, % population	3,143	8.3	3,660	9.7	3,562	9.4	7.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	926	14,729	897	14,293	950	15,127	0.9
Taxes paid	191	3,045	198	3,156	212	3,382	3.6
GST paid	49	776	74	1,176	82	1,307	n.a.
Benefits	125	1,990	140	2,231	143	2,271	4.5
Business income	111	1,770	114	1,819	136	2,171	7.0
Interest/dividends	32	511	34	540	33	532	1.3
Interest paid	68	1,078	92	1,466	88	1,395	9.0
Net property income	3	43	3	51	3	55	8.0
Net flow of funds	889	14,145	825	13,136	883	14,072	-0.2
Rank		24		44		44	

OCCUPATION

		National average	% of workforce	SOR rank
Class				
1.	Agriculture	3.4	16.2	7
2.	Creative professionals	16.3	11.1	55
3.	Service class	47.8	39.9	56
4.	Super creative class	8.9	5.1	63
5.	Working class	23.6	27.6	20
6.	Creative class (2 + 4)	25.2	16.3	61

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	2.99	62	265
High tech		59	267
Diversity index (S)	0.17	61	269
Bohemian Index (S)	0.39	62	246
Foreign born (%)	0.08	52	34
Composite diversity		61	182
Creativity Index	7	62	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	2,083	8.3	10
Very poor households	2,764	11.0	16
Social Security dependent families	2,929	11.7	11
ICONS	1,014	4.1	49
Total households	25,017		
Social benefits as a % of net flow of funds	1999 (%) 14.1	2001 (%) 17.0	2002 (%) 16.1

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	631	716	1.13
Implied price (IP) ($K)	85	117	1.39
Valuer General (VG) price ($K)	73	109	1.49
Ratio of IP/VG	1.16	1.07	0.93
Excess price growth (% p.a.)			4.7
Change in implied yield (%)			-24
VG implied mortgage ($/m)	546	721	1.32
Per cent who cannot afford VG	44	62	-18
Scenario 1 – Interest rates			408
Scenario 2 – Affordability (%)			-13.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	14.4	56
Building approvals per '000 pop. – 2001-02	9.7	47
Commercial floor stock m^2/capita – 1998-02	1.6	19

ENVIRONMENT

Annual rainfall (mm)	592.8
Seasonality	Mostly winter rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	93	7	–
Evapotranspiration	26	74	–
Days below zero	45	55	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.0	29.6	21.6
National average	27.9	28.7	21.8
Ratio of region to national	0.93	1.03	0.99
SOR rank	40	11	39

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	28.1	43.1	22.6	6.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	33.5	51.8	9.8	4.8
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
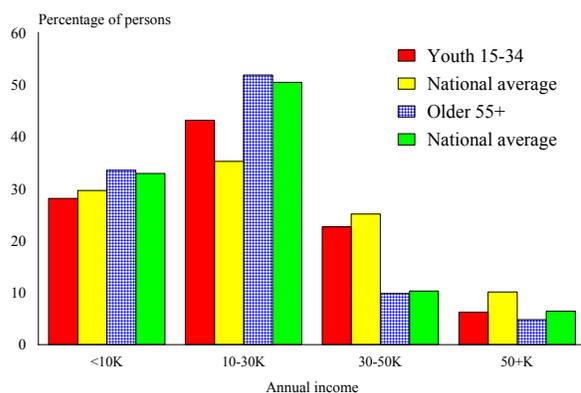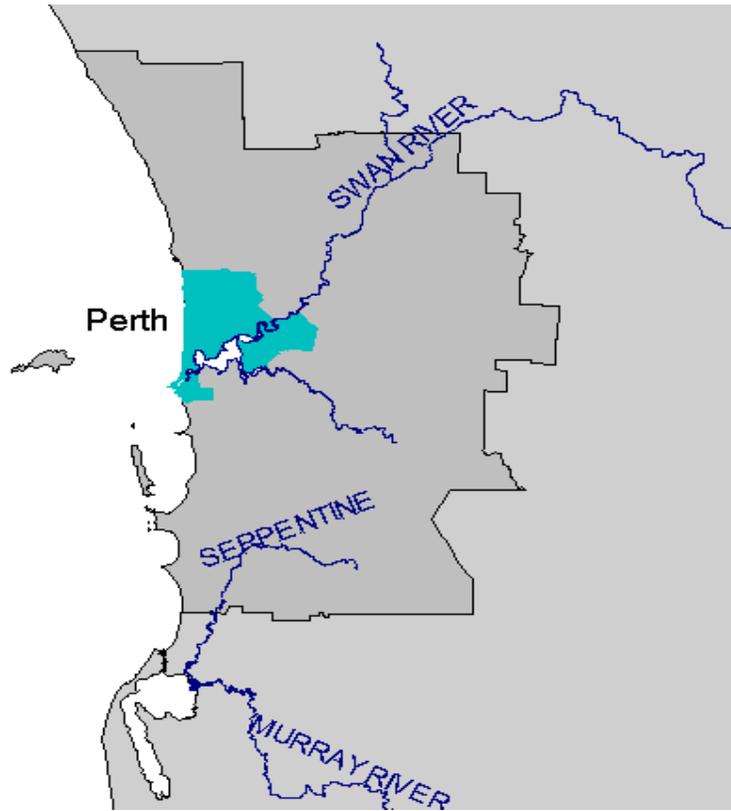
Perth Central

For its first century, what is now metropolitan Perth included several distinct population centres—Fremantle, Perth and others up-river to Guildford and Midland. 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 older part of the port, the established eastern and inner southern suburbs, and even some 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	418,744		428,092		429,063		0.6
No. households	175,613		187,969		191,856		2.2
Workforce	233,072	55.5	244,128	56.9	245,402	57.1	1.3
Employment	212,193	–	223,009	–	225,317	–	1.5
Unemployment	20,878	9.0	21,121	8.7	20,085	8.2	-1.0
DEWRSB U/E	18,740	8.1	17,593	7.2	17,904	7.3	-1.1
Structural U/E, % population	26,536	9.9	27,538	10.1	27,697	10.1	4.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	6,943	16,455	8,040	18,781	8,366	19,543	5.9
Taxes paid	1,952	4,628	2,256	5,270	2,535	5,921	8.6
GST paid	376	892	589	1,376	662	1,546	n.a.
Benefits	847	2,008	881	2,057	901	2,104	1.6
Business income	1,661	3,936	1,774	4,143	1,988	4,643	5.7
Interest/dividends	458	1,087	518	1,211	537	1,254	4.9
Interest paid	604	1,431	802	1,873	783	1,830	8.5
Net property income	12	30	15	35	16	37	8.2
Net flow of funds	6,989	16,564	7,581	17,708	7,827	18,285	3.3
Rank		9		9		12	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.4	56
2. Creative professionals	16.3	19.1	5
3. Service class	47.8	51.0	7
4. Super creative class	8.9	10.6	7
5. Working class	23.6	19.0	59
6. Creative class (2 + 4)	25.2	29.6	6

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	16.07	8	164
High tech		9	71
Diversity index (S)	1.18	8	27
Bohemian Index (S)	1.05	8	102
Foreign born (%)	0.31	7	2
Composite diversity		7	43
Creativity Index	744	4	52
U.S. region most like	Cedar Rapids, IA		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	13,843	7.2	6
Very poor households	18,293	9.5	9
Social Security dependent families	17,787	9.3	5
ICONS	9,393	4.9	19
Total households	191,856		

Social benefits as a % of net flow of funds	1999 (%)	2001 (%)	2002 (%)
	12.1	11.6	11.5

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	886	1,196	1.35
Implied price (IP) ($K)	119	181	1.53
Valuer General (VG) price ($K)	177	307	1.74
Ratio of IP/VG	0.67	0.59	0.88
Excess price growth (% p.a.)			4.3
Change in implied yield (%)			-22
VG implied mortgage ($/m)	1,320	2,026	1.54
Per cent who cannot afford VG	81	88	-7
Scenario 1 – Interest rates			691
Scenario 2 – Affordability (%)			-14.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	32.1	9
Building approvals per '000 pop. – 2001-02	17.2	13
Commercial floor stock m^2/capita – 1998-02	2.5	3

ENVIRONMENT

Annual rainfall (mm)	746.4		
Seasonality	Dominant winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	100	–	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	31.0	27.5	23.6
National average	27.9	28.7	21.8
Ratio of region to national	1.11	0.96	1.09
SOR rank	9	57	22

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	29.0	32.7	26.0	12.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	29.0	50.5	11.6	9.0
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
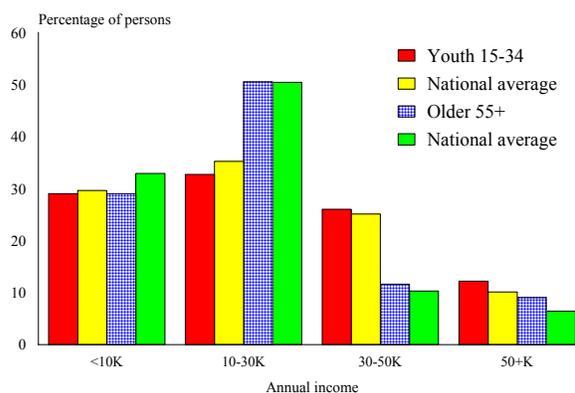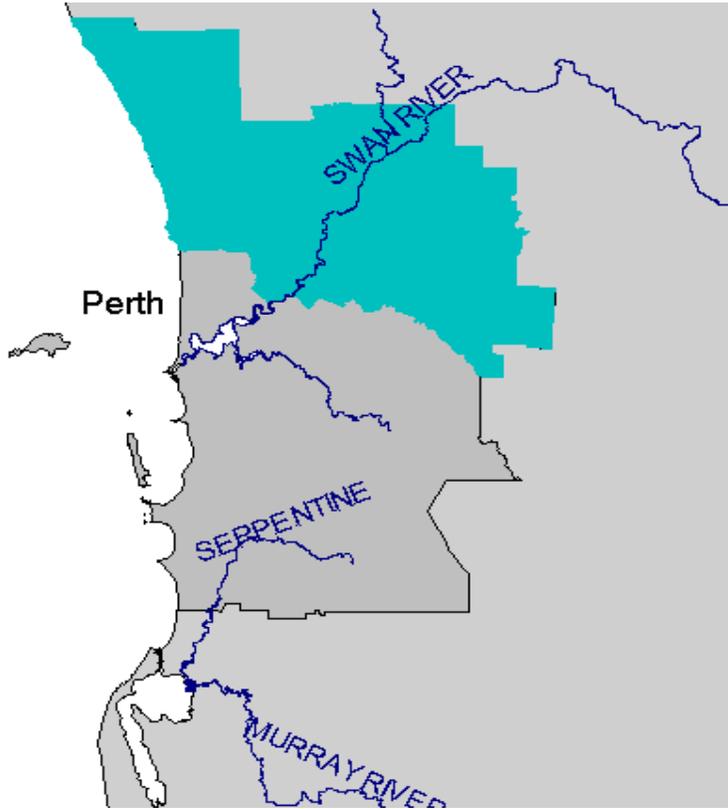
Perth Outer North

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.

Major centres:

Joondalup

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	406,586		432,575		436,440		1.8
No. households	143,936		156,262		161,508		2.9
Workforce	205,204	50.3	213,364	49.3	221,432	50.3	1.9
Employment	188,023	–	196,934	–	203,577	–	20
Unemployment	12,588	6.1	16,430	7.7	17,855	8.1	9.1
DEWRSB U/E	13,426	6.6	12,524	5.9	14,032	6.4	1.1
Structural U/E, % population	19,273	7.6	23,828	8.8	23,895	8.7	4.6

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	6,126	14,703	7,087	16,383	7,241	16,740	4.4
Taxes paid	1,526	3,662	1,755	4,057	1,927	4,454	6.7
GST paid	350	840	519	1,199	571	1,321	n.a.
Benefits	697	1,673	789	1,825	830	1,919	4.7
Business income	1,147	2,752	1,190	2,750	1,341	3,101	4.1
Interest/dividends	149	357	162	374	162	373	1.5
Interest paid	645	1,549	862	1,993	813	1,880	6.7
Net property income	-11	-27	-13	-31	-14	-33	7.3
Net flow of funds	5,586	13,407	6,079	14,052	6,249	14,445	2.5
Rank		38		32		37	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	1.5	45
2. Creative professionals	16.3	13.4	28
3. Service class	47.8	47.0	31
4. Super creative class	8.9	6.5	51
5. Working class	23.6	31.6	6
6. Creative class (2 + 4)	25.2	19.9	38

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	8.84	26	243
High tech		31	253
Diversity index (S)	0.76	23	135
Bohemian Index (S)	0.87	17	139
Foreign born (%)	0.33	4	2
Composite diversity		21	91
Creativity Index	200	30	251
U.S. region most like	Wausau, WI		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	18,458	11.4	46
Very poor households	17,857	11.1	18
Social Security dependent families	22,525	13.9	39
ICONS	8,366	5.2	13
Total households	161,508		

Social benefits as a % of net flow of funds	1999 (%) 12.5	2001 (%) 13.0	2002 (%) 13.3

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	820	980	1.20
Implied price (IP) ($K)	110	149	1.35
Valuer General (VG) price ($K)	131	179	1.37
Ratio of IP/VG	0.84	0.83	0.99
Excess price growth (% p.a.)			2.3
Change in implied yield (%)			-13
VG implied mortgage ($/m)	978	1,183	1.21
Per cent who cannot afford VG	69	76	-7
Scenario 1 – Interest rates			3,167
Scenario 2 – Affordability (%)			-8.2

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	30.3	12
Building approvals per '000 pop. – 2001-02	20.6	6
Commercial floor stock m²/capita – 1998-02	1.2	53

ENVIRONMENT

Annual rainfall (mm)	792.9		
Seasonality	Dominant winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	86	14	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	28.3	31.0	16.9
National average	27.9	28.7	21.8
Ratio of region to national	1.02	1.08	0.78
SOR rank	20	2	57

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	33.0	35.5	24.3	7.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.9	49.4	12.0	5.6
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
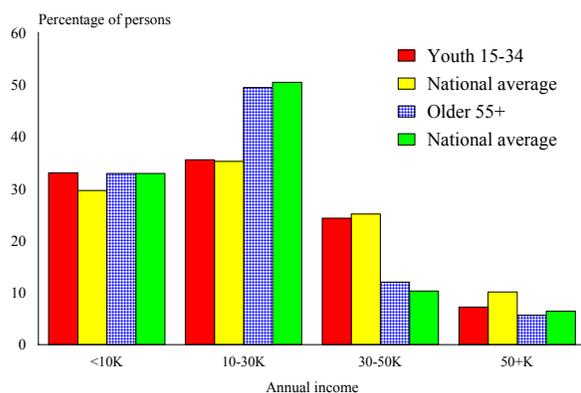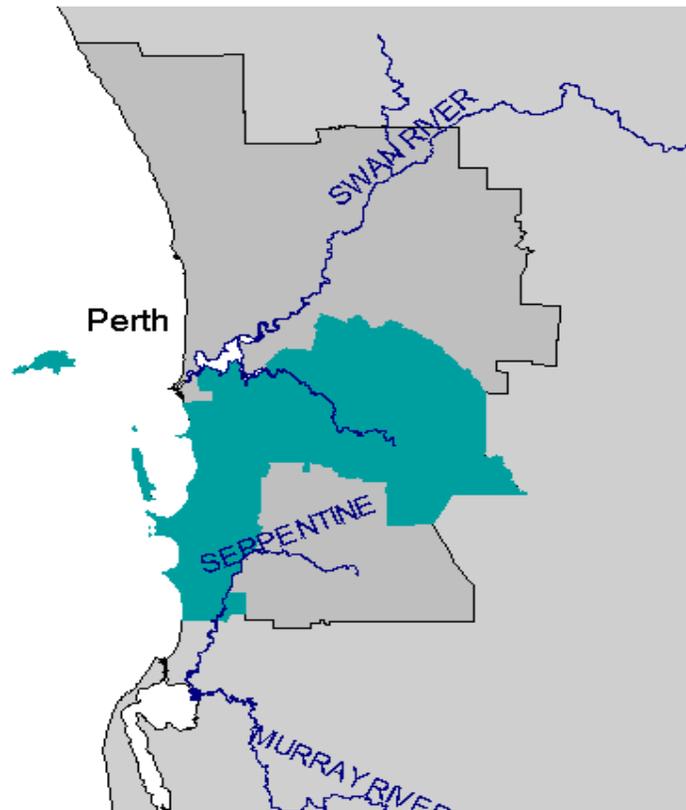
Perth Outer South

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. 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 functions for its economic base.

Major centres:

Armadale, Rockingham

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	502,751		528,105		531,352		1.4
No. households	179,778		194,625		200,108		2.7
Workforce	253,466	50.4	272,630	51.7	277,805	52.0	2.3
Employment	235,218	–	248,982	–	255,720	–	2.1
Unemployment	18,249	7.2	23,649	8.7	22,085	7.9	4.9
DEWRSB U/E	16,402	6.5	17,379	6.4	18,339	6.7	2.8
Structural U/E, % population	25,604	8.3	30,887	9.5	30,668	9.3	4.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	7,423	14,497	8,509	16,112	8,616	16,316	4.0
Taxes paid	1,883	3,677	2,150	4,071	2,342	4,435	6.4
GST paid	408	798	624	1,182	682	1,291	n.a.
Benefits	966	1,886	1,083	2,051	1,110	2,102	3.7
Business income	1,491	2,912	1,552	2,940	1,681	3,183	3.0
Interest/dividends	225	439	242	459	240	455	1.2
Interest paid	743	1,451	987	1,869	930	1,761	6.7
Net property income	-8	-15	-9	-17	-10	-19	7.6
Net flow of funds	7,062	13,793	7,616	14,422	7,684	14,550	1.8
Rank		30		26		35	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	1.3	46
2. Creative professionals	16.3	13.5	23
3. Service class	47.8	47.3	28
4. Super creative class	8.9	7.8	24
5. Working class	23.6	30.1	11
6. Creative class (2 + 4)	25.2	21.3	24

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	9.04	23	238
High tech		17	190
Diversity index (S)	0.69	29	172
Bohemian Index (S)	0.71	34	175
Foreign born (%)	0.31	6	2
Composite diversity		28	115
Creativity Index	243	25	242
U.S. region most like	Dubuque, IA		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	22,135	11.1	42
Very poor households	21,250	10.6	12
Social Security dependent families	26,847	13.4	29
ICONS	10,075	5.0	16
Total households	200,108		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	13.7	14.2	14.4

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	791	944	1.19
Implied price (IP) ($K)	106	143	1.35
Valuer General (VG) price ($K)	116	155	1.33
Ratio of IP/VG	0.91	0.93	1.02
Excess price growth (% p.a.)			1.8
Change in implied yield (%)			-10
VG implied mortgage ($/m)	868	1,019	1.17
Per cent who cannot afford VG	63	68	-5
Scenario 1 – Interest rates			4,192
Scenario 2 – Affordability (%)			-6.6

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	30.7	11
Building approvals per '000 pop. – 2001-02	17.3	12
Commercial floor stock m^2/capita – 1998-02	1.9	13

ENVIRONMENT

Annual rainfall (mm)	906.4		
Seasonality	Dominant winter rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	100	–	–
Evapotranspiration	–	100	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	28.6	29.2	19.4
National average	27.9	28.7	21.8
Ratio of region to national	1.02	1.02	0.89
SOR rank	17	20	50

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	33.9	36.2	22.9	7.0
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.4	50.2	11.3	6.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
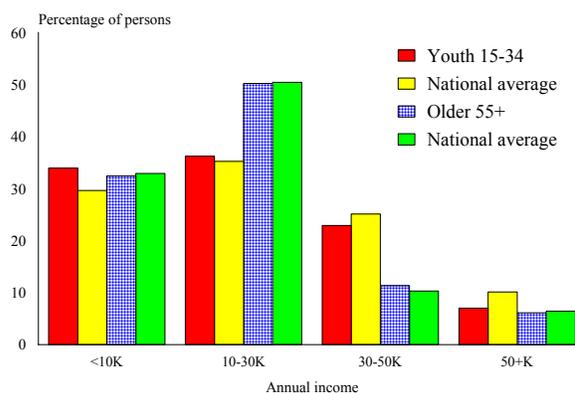
WA Gascoyne-Goldfields
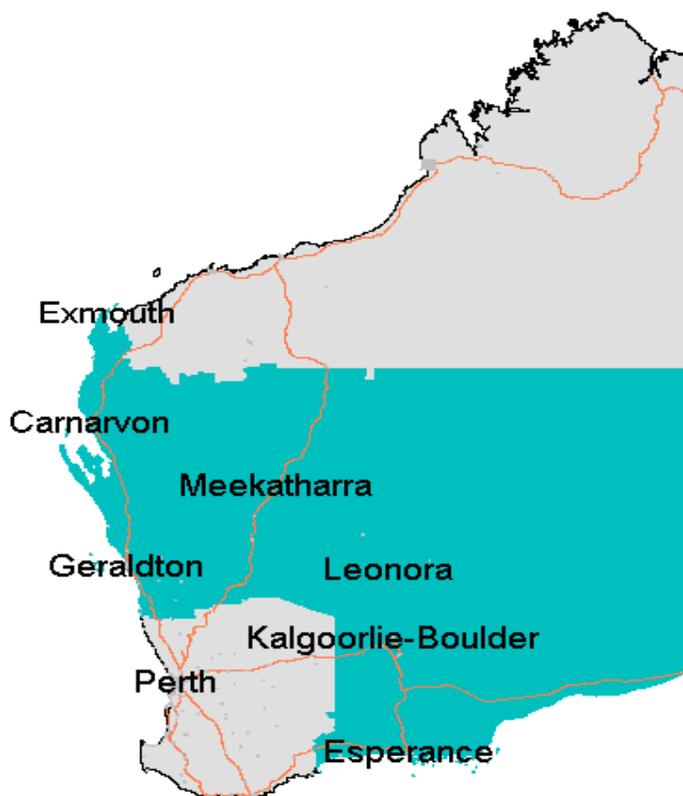
The Gascoyne/Goldfields region conflates the three low-population WA planning regions centred on Carnarvon, Geraldton and Kalgoorlie. With the exception of the wheat country back of Geraldton and in the immediate vicinity of Esperance, rural production is confined to extensive pastoralism, which peters 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	117,610		119,956		119,820		0.5
No. households	43,334		45,718		46,323		1.7
Workforce	70,232	59.2	65,097	54.3	64,164	53.6	-2.5
Employment	64,827	–	59,058	–	58,503	–	
Unemployment	5,405	7.7	6,039	9.3	5,662	8.8	3.4
DEWRSB U/E	5,185	7.5	3,882	6.0	4,006	6.3	-4.3
Structural U/E, % population	6,246	8.5	7,665	10.2	7,258	9.7	6.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,740	14,755	1,918	16,105	1,907	16,019	2.8
Taxes paid	433	3,674	453	3,806	468	3,935	2.3
GST paid	112	954	150	1,264	156	1,312	n.a.
Benefits	212	1,797	250	2,098	248	2,083	5.1
Business income	460	3,898	483	4,057	476	3,997	0.8
Interest/dividends	51	433	48	404	40	339	-7.9
Interest paid	170	1,444	234	1,966	217	1,822	8.1
Net property income	-5	-38	-5	-45	-6	-49	8.3
Net flow of funds	1,743	14,774	1,855	15,583	1,824	15,319	1.2
Rank		18		17		24	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	8.1	19
2. Creative professionals	16.3	11.1	57
3. Service class	47.8	35.8	62
4. Super creative class	8.9	7.8	25
5. Working class	23.6	37.2	2
6. Creative class (2 + 4)	25.2	18.9	44

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.00	43	264
High tech		54	267
Diversity index (S)	0.60	33	213
Bohemian Index (S)	0.78	26	159
Foreign born (%)	0.14	31	20
Composite diversity		35	130
Creativity Index	75	41	268
U.S. region most like		Enid, OK	

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	4,565	9.9	22
Very poor households	5,467	11.8	25
Social Security dependent families	5,982	12.9	20
ICONS	2,125	4.6	22
Total households	46,323		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	12.2	13.5	13.6

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	826	941	1.14
Implied price (IP) ($K)	111	143	1.29
Valuer General (VG) price ($K)	119	116	0.97
Ratio of IP/VG	0.93	1.24	1.33
Excess price growth (% p.a.)			-2.7
Change in implied yield (%)			18
VG implied mortgage ($/m)	890	762	0.86
Per cent who cannot afford VG	61	43	19
Scenario 1 – Interest rates			550
Scenario 2 – Affordability (%)			8.5

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	24.7	25
Building approvals per '000 pop. – 2001-02	9.7	46
Commercial floor stock m^2/capita – 1998-02	1.6	20

ENVIRONMENT

Annual rainfall (mm)	235.2		
Seasonality	Arid, mostly uniform rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	3	33	64
Evapotranspiration	100	–	–
Days below zero	84	16	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	28.4	28.9	18.9
National average	27.9	28.7	21.8
Ratio of region to national	1.02	1.01	0.87
SOR rank	19	25	53

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	26.0	31.7	23.6	18.7
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.5	48.2	10.6	6.7
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.

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, which is an old-established 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	187,992		204,487		207,062		2.4
No. households	69,012		77,872		81,086		4.1
Workforce	90,174	47.8	100,171	49.2	102,701	49.0	3.3
Employment	83,202	–	89,744	–	92,902	–	2.8
Unemployment	6,974	7.7	10,427	10.4	9,799	9.5	8.9
DEWRSB U/E	5,798	6.5	6,699	6.8	7,248	7.2	5.7
Structural U/E, % population	10,444	9.4	13,782	11.4	13,829	11.2	5.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,575	13,299	2,816	13,770	2,937	14,363	2.6
Taxes paid	634	3,277	681	3,332	755	3,690	4.0
GST paid	148	766	230	1,123	255	1,248	n.a.
Benefits	410	2,119	471	2,304	485	2,373	3.9
Business income	502	2,592	520	2,543	534	2,614	0.3
Interest/dividends	84	436	89	436	87	424	-0.9
Interest paid	245	1,266	327	1,597	310	1,515	6.2
Net property income	2	9	2	10	2	11	6.7
Net flow of funds	2,545	13,147	2,660	13,010	2,726	13,332	0.5
Rank		43		48		52	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	7.8	20
2. Creative professionals	16.3	11.7	44
3. Service class	47.8	42.1	50
4. Super creative class	8.9	6.9	41
5. Working class	23.6	31.4	8
6. Creative class (2 + 4)	25.2	18.7	46

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	9.95	18	227
High tech		26	246
Diversity index (S)	0.09	64	269
Bohemian Index (S)	0.70	35	177
Foreign born (%)	0.17	25	15
Composite diversity		40	153
Creativity Index	77	40	268
U.S. region most like	Enid, OK		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	8,485	10.5	31
Very poor households	9,657	11.9	29
Social Security dependent families	10,627	13.1	23
ICONS	3,352	4.1	44
Total households	81,086		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	16.1	17.7	17.8

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	760	922	1.21
Implied price (IP) ($K)	102	140	1.37
Valuer General (VG) price ($K)	103	135	1.31
Ratio of IP/VG	0.98	1.03	1.05
Excess price growth (% p.a.)			1.3
Change in implied yield (%)			-7
VG implied mortgage ($/m)	772	893	1.16
Per cent who cannot afford VG	56	58	-2
Scenario 1 – Interest rates			1,477
Scenario 2 – Affordability (%)			-4.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	50.6	1
Building approvals per '000 pop. – 2001-02	26.3	2
Commercial floor stock m²/capita – 1998-02	1.5	27

ENVIRONMENT

Annual rainfall (mm)	947.8
Seasonality	Dominant winter rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	100	–	–
Evapotranspiration	–	100	–
Days below zero	73	27	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	24.7	29.5	22.0
National average	27.9	28.7	21.8
Ratio of region to national	0.88	1.03	1.01
SOR rank	47	14	35

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	32.9	39.7	19.8	7.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	36.0	50.6	8.6	4.8
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
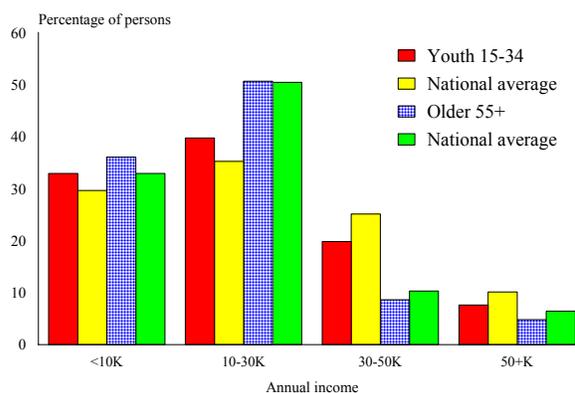
WA Pilbara-Kimberly
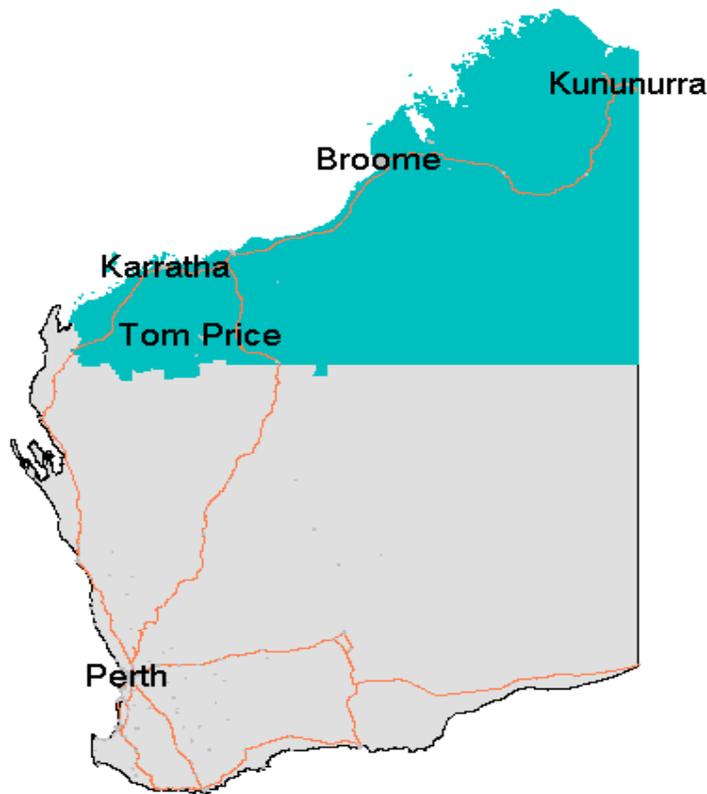
The Pilbara and Kimberley are two WA planning regions, here brought together due to low populations. Output is dominated by minerals: offshore oil and gas, and onshore iron ore. The extensive pastoral stations first settled in the nineteenth century are still there, and so is a significant Aboriginal population. The region has a dry-season tourist trade. The several 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.

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	68,979		71,619		71,745		1.0
No. households	26,281		27,642		28,164		1.7
Workforce	42,438	61.1	39,655	55.6	39,016	54.3	-2.1
Employment	39,607	–	35,573	–	34,669	–	-3.3
Unemployment	2,832	6.7	4,082	10.3	4,348	11.1	11.3
DEWRSB U/E	2,829	6.7	2,782	7.1	3,011	7.8	1.6
Structural U/E, % population	3,743	8.3	4,943	10.5	4,936	10.5	7.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,153	16,348	1,212	16,917	1,159	16,181	-0.3
Taxes paid	308	4,360	318	4,437	321	4,489	1.0
GST paid	72	1,022	100	1,397	102	1,418	n.a.
Benefits	119	1,692	173	2,417	176	2,454	13.2
Business income	328	4,644	353	4,936	423	5,905	8.3
Interest/dividends	17	238	17	237	15	216	-3.1
Interest paid	102	1,451	141	1,965	146	2,035	11.9
Net property income	-13	-180	-15	-210	-16	-227	8.1
Net flow of funds	1,122	15,909	1,181	16,496	1,188	16,588	1.4
Rank		13		14		17	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	3.0	37
2. Creative professionals	16.3	11.2	53
3. Service class	47.8	41.0	53
4. Super creative class	8.9	7.7	26
5. Working class	23.6	37.1	3
6. Creative class (2 + 4)	25.2	18.9	43

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	3.31	61	265
High tech		61	267
Diversity index (S)	0.54	35	236
Bohemian Index (S)	0.88	16	137
Foreign born (%)	0.15	29	19
Composite diversity		35	130
Creativity Index	51	44	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	2,844	10.1	26
Very poor households	3,575	12.7	46
Social Security dependent families	3,576	13.0	22
ICONS	1,557	5.5	10
Total households	28,164		

Social benefits as a % of net flow of funds	1999 (%)	2001 (%)	2002 (%)
	10.6	14.7	14.8

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	554	876	1.58
Implied price (IP) ($K)	74	133	1.79
Valuer General (VG) price ($K)	145	131	0.90
Ratio of IP/VG	0.51	1.02	1.99
Excess price growth (% p.a.)			-9.0
Change in implied yield (%)			76
VG implied mortgage ($/m)	1,081	861	0.80
Per cent who cannot afford VG	87	60	27
Scenario 1 – Interest rates			140
Scenario 2 – Affordability (%)			26.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	26.4	18
Building approvals per '000 pop. – 2001-02	10.8	41
Commercial floor stock m²/capita – 1998-02	1.6	18

ENVIRONMENT

Annual rainfall (mm)	479.0		
Seasonality	Arid, mostly summer rainfall		

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	–	56	44
Evapotranspiration	80	20	–
Days below zero	100	–	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	30.3	29.0	16.1
National average	27.9	28.7	21.8
Ratio of region to national	1.09	1.01	0.74
SOR rank	13	24	61

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	26.6	28.0	22.9	22.5
– National average	29.6	35.2	25.1	10.1
Older – 55+	28.8	46.1	13.3	11.8
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
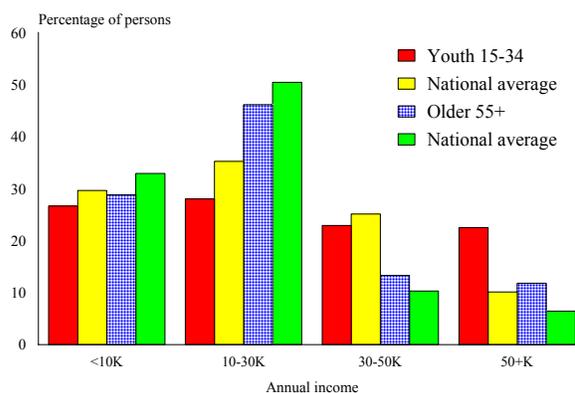
WA Wheatbelt-Great Southern
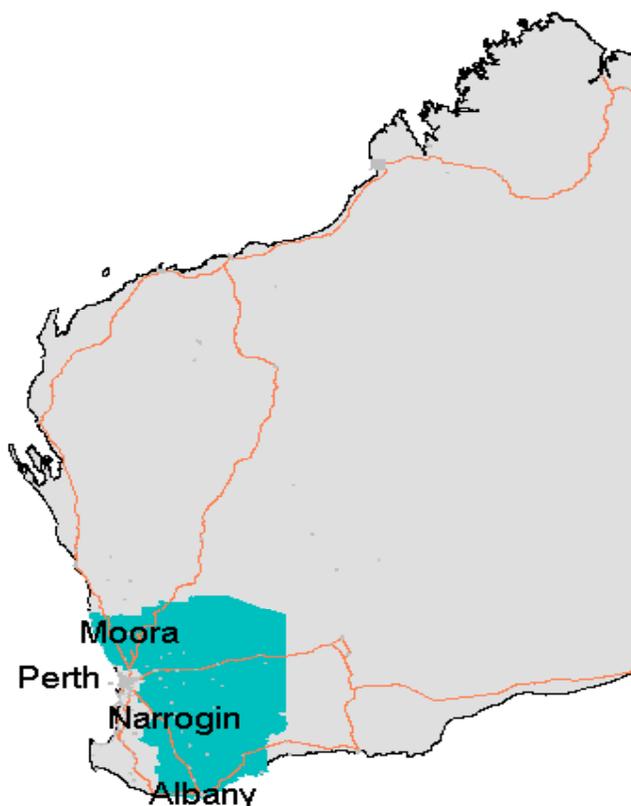
The WA planning authorities distinguish the Wheat Belt and the Great Southern, but they are here brought together because of small populations in each. The WA wheat belt was opened up later than its eastern-states equivalents, well into the age of the motor car, and accordingly lacks large towns: the 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 may be defined as 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 saltation. The strip close to Albany is better watered, and now even has a woodchip mill.

Major centres:

Albany, Northam

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	123,115		124,917		125,086		0.4
No. households	45,297		48,475		49,374		2.2
Workforce	70,218	56.9	67,826	53.9	68,830	55.0	-0.8
Employment	60,511	–	61,504	–	63,793	–	
Unemployment	9,707	13.8	6,323	9.3	5,037	7.3	-14.7
DEWRSB U/E	3,224	5.1	3,284	4.9	3,676	5.4	1.4
Structural U/E, % population	6,211	8.5	8,503	11.4	7,388	9.9	6.3

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,507	12,151	1,843	14,755	2,092	16,745	11.3
Taxes paid	309	2,487	326	2,607	371	2,971	6.1
GST paid	97	783	136	1,090	156	1,247	n.a.
Benefits	271	2,184	282	2,258	276	2,211	0.4
Business income	459	3,698	470	3,764	474	3,794	0.9
Interest/dividends	77	618	78	627	73	588	-1.6
Interest paid	164	1,322	230	1,844	221	1,772	10.3
Net property income	4	30	4	36	5	39	8.4
Net flow of funds	1,748	14,088	1,986	15,899	2,172	17,386	7.3
Rank		25		15		16	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	23.6	2
2. Creative professionals	16.3	10.7	60
3. Service class	47.8	33.5	64
4. Super creative class	8.9	5.5	62
5. Working class	23.6	26.7	26
6. Creative class (2 + 4)	25.2	16.2	62

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	12.20	14	206
High tech		58	267
Diversity index (S)	0.41	42	264
Bohemian Index (S)	0.37	63	253
Foreign born (%)	0.14	30	20
Composite diversity		58	178
Creativity Index	71	42	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	4,328	8.8	13
Very poor households	5,306	10.7	13
Social Security dependent families	6,206	12.6	14
ICONS	2,096	4.2	34
Total households	49,374		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	15.5	14.2	12.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	632	795	1.26
Implied price (IP) ($K)	85	121	1.42
Valuer General (VG) price ($K)	79	98	1.23
Ratio of IP/VG	1.07	1.23	1.16
Excess price growth (% p.a.)			-0.4
Change in implied yield (%)			2
VG implied mortgage ($/m)	591	644	1.09
Per cent who cannot afford VG	51	47	4
Scenario 1 – Interest rates			500
Scenario 2 – Affordability (%)			-0.6

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	28.3	15
Building approvals per '000 pop. – 2001-02	13.6	26
Commercial floor stock m^2/capita – 1998-02	1.3	46

ENVIRONMENT

Annual rainfall (mm)	414.8
Seasonality	Mostly winter rainfall

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	29	71	–
Evapotranspiration	80	20	–
Days below zero	56	44	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	23.5	29.8	22.4
National average	27.9	28.7	21.8
Ratio of region to national	0.84	1.04	1.03
SOR rank	57	6	33

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	32.0	43.0	19.8	5.2
– National average	29.6	35.2	25.1	10.1
Older – 55+	33.8	52.0	9.8	4.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
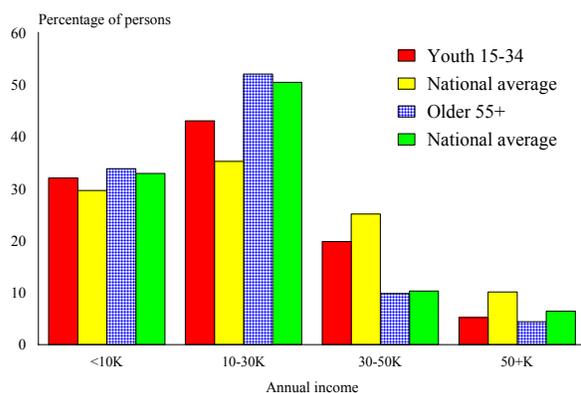
TAS Hobart-South
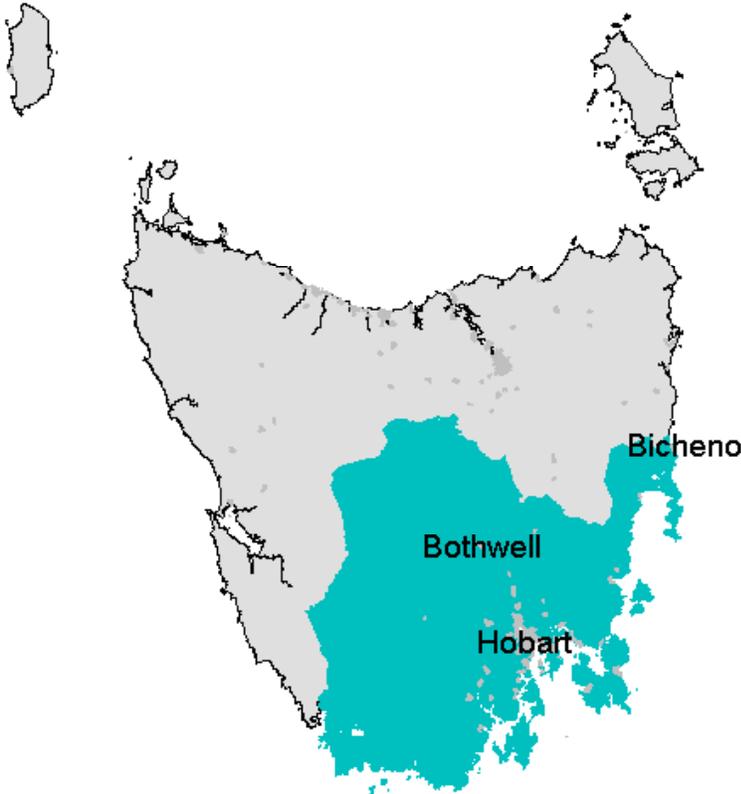
Southern Tasmania includes all of Hobart, plus its commuter zone, purely rural areas and forests. It accordingly has a greater mix of economic base than the central city regions of the mainland states. The economic base includes city centre functions (with perhaps a little more tourism than most), manufacturing, agriculture, fishing and forestry.

Major centres:

Hobart

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	229,471		229,256		230,845		0.1
No. households	91,561		93,955		95,101		1.0
Workforce	115,429	50.3	111,862	48.8	110.753	47.6	-1.0
Employment	92,134	–	93,300	–	93,064	–	0.3
Unemployment	23,294	20.2	18,560	16.6	17,689	16.0	-6.7
DEWRSB U/E	9,252	8.5	9,956	9.3	9,531	9.1	0.7
Structural U/E, % population	25,006	17.9	22,372	16.1	21,527	15.3	5.0

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,833	12,363	2,841	12,392	2,825	12,323	-0.1
Taxes paid	709	3,094	715	3,117	786	3,430	3.5
GST paid	215	939	284	1,239	303	1,323	n.a.
Benefits	590	2,576	600	2,616	611	2,667	1.2
Business income	403	1,757	416	1,812	409	1,784	0.5
Interest/dividends	119	520	123	538	123	536	1.0
Interest paid	238	1,039	300	1,307	286	1,246	6.2
Net property income	9	38	10	44	11	47	7.4
Net flow of funds	2,791	12,183	2,691	11,739	2,604	11,357	-2.3
Rank		55		58		63	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	2.9	38
2. Creative professionals	16.3	15.5	15
3. Service class	47.8	50.9	8
4. Super creative class	8.9	9.6	9
5. Working class	23.6	21.1	57
6. Creative class (2 + 4)	25.2	25.2	12

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.48	52	265
High tech		28	246
Diversity index (S)	0.90	18	73
Bohemian Index (S)	0.86	18	144
Foreign born (%)	0.11	38	26
Composite diversity		38	26
Creativity Index	295	20	225
U.S. region most like	Billings, MT		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	10,138	10.7	33
Very poor households	11,714	12.3	34
Social Security dependent families	12,817	13.5	33
ICONS	4,314	4.5	23
Total households	95,101		
Social benefits as a % of net flow of funds	1999 (%) 21.1	2001 (%) 22.3	2002 (%) 23.5

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	823	941	1.14
Implied price (IP) ($K)	110	154	1.40
Valuer General (VG) price ($K)	121	135	1.12
Ratio of IP/VG	0.91	1.14	1.25
Excess price growth (% p.a.)			-0.4
Change in implied yield (%)			2
VG implied mortgage ($/m)	902	892	0.99
Per cent who cannot afford VG	64	59	5
Scenario 1 – Interest rates			304
Scenario 2 – Affordability (%)			-0.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	11.2	59
Building approvals per '000 pop. – 2001-02	7.5	56
Commercial floor stock m^2/capita – 1998-02	1.4	37

ENVIRONMENT

Annual rainfall (mm)	1,341.9		
Seasonality	Mostly winter rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	46	54	–
Evapotranspiration	–	100	–
Days below zero	2	15	83

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.4	29.3	22.9
National average	27.9	28.7	21.8
Ratio of region to national	0.95	1.02	1.05
SOR rank	34	17	29

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	35.9	39.2	20.3	4.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	32.2	53.7	9.6	4.6
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
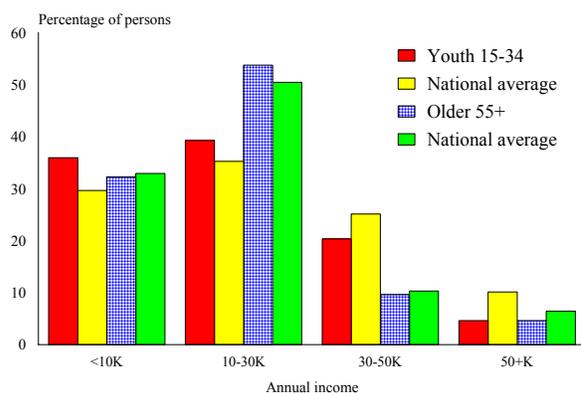
TAS North
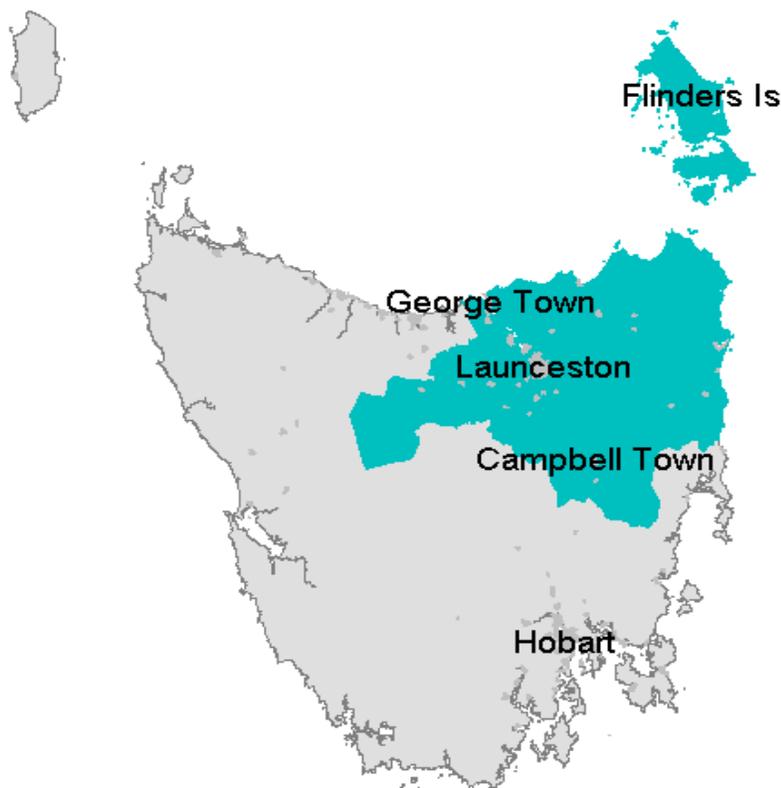
Northern Tasmania comprises the North East part of the island. Its chief city is Launceston. The region includes areas of intensive farming with associated agricultural processing. It has some manufacturing development, notably aluminium smelting at Bell Bay.

Major centres:

Launceston

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	133,459		133,106		133,998		0.1
No. households	52,674		54,003		54,649		0.9
Workforce	66,741	50.1	68,679	51.6	70,710	52.4	1.5
Employment	56,753	–	58,304	–	60,971	–	1.8
Unemployment	9,988	15.0	10,375	15.1	9,738	13.8	-0.6
DEWRSB U/E	7,269	11.2	4,987	7.5	5,106	7.5	-8.5
Structural U/E, % population	11,244	14.0	12,356	15.4	11,871	14.6	6.0

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,542	11,578	1,487	11,174	1,569	11,790	0.6
Taxes paid	359	2,697	345	2,595	397	2,986	3.4
GST paid	117	876	156	1,176	175	1,315	n.a.
Benefits	332	2,492	363	2,730	369	2,776	3.7
Business income	215	1,612	220	1,653	219	1,646	0.7
Interest/dividends	59	444	59	447	58	433	-0.9
Interest paid	130	975	164	1,233	154	1,153	5.8
Net property income	4	31	5	35	5	38	7.4
Net flow of funds	1,546	11,609	1,469	11,036	1,494	11,227	-1.1
Rank		59		63		64	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	5.7	31
2. Creative professionals	16.3	13.7	20
3. Service class	47.8	48.0	24
4. Super creative class	8.9	7.1	39
5. Working class	23.6	25.4	37
6. Creative class (2 + 4)	25.2	20.8	29

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	6.32	39	259
High tech		41	267
Diversity index (S)	0.40	44	267
Bohemian Index (S)	0.70	36	179
Foreign born (%)	0.09	45	32
Composite diversity		42	158
Creativity Index	44	45	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	5,689	10.4	30
Very poor households	6,889	12.6	44
Social Security dependent families	7,361	13.5	32
ICONS	2,156	3.9	54
Total households	54,649		

Social benefits as a % of net flow of funds	1999 (%)	2001 (%)	2002 (%)
	21.5	24.7	24.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	624	674	1.08
Implied price (IP) ($K)	84	110	1.32
Valuer General (VG) price ($K)	113	127	1.12
Ratio of IP/VG	0.74	0.87	1.17
Excess price growth (% p.a.)			0.6
Change in implied yield (%)			-4
VG implied mortgage ($/m)	840	834	0.99
Per cent who cannot afford VG	79	76	2
Scenario 1 – Interest rates			339
Scenario 2 – Affordability (%)			-2.1

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	10.8	60
Building approvals per '000 pop. – 2001-02	7.3	58
Commercial floor stock m^2/capita – 1998-02	1.5	34

ENVIRONMENT

Annual rainfall (mm)	1,019.0
Seasonality	Mostly winter rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	10	90	–
Evapotranspiration	–	100	–
Days below zero	4	22	74

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	26.1	28.7	23.5
National average	27.9	28.7	21.8
Ratio of region to national	0.94	1.00	1.08
SOR rank	37	31	25

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	36.3	40.5	19.2	4.0
– National average	29.6	35.2	25.1	10.1
Older – 55+	35.7	53.5	7.4	3.4
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
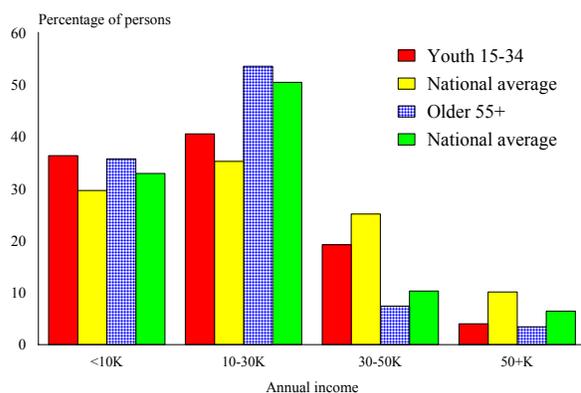
TAS North West

North West Tasmania comprises the urban strip along the North West 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 is now gradually overshadowing 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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	109,068		107,910		108,371		-0.2
No. households	42,164		42,959		43,263		0.6
Workforce	51,639	47.3	51,213	47.4	50,455	46.6	-0.4
Employment	43,035	–	41,371	–	41,052	–	
Unemployment	8,606	16.7	9,843	19.2	9,403	18.6	2.7
DEWRSB U/E	5,351	10.8	5,172	10.7	5,001	10.6	-0.5
Structural U/E, % population	9,693	9.1	11,518	11.0	11,091	10.5	5.7

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,267	11,680	1,450	13,439	1,435	13,299	4.4
Taxes paid	293	2,698	336	3,116	360	3,341	7.4
GST paid	99	908	123	1,141	128	1,190	n.a.
Benefits	272	2,511	306	2,836	308	2,852	4.3
Business income	174	1,602	179	1,655	181	1,673	1.5
Interest/dividends	33	302	36	335	39	358	5.9
Interest paid	100	923	127	1,181	119	1,103	6.1
Net property income	2	22	3	26	3	28	7.6
Net flow of funds	1,257	11,588	1,387	12,853	1,357	12,576	2.8
Rank		60		50		56	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	6.6	26
2. Creative professionals	16.3	12.1	41
3. Service class	47.8	44.7	44
4. Super creative class	8.9	6.9	46
5. Working class	23.6	29.7	12
6. Creative class (2 + 4)	25.2	18.9	41

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	3.71	60	265
High tech		50	267
Diversity index (S)	0.25	57	269
Bohemian Index (S)	0.66	42	186
Foreign born (%)	0.08	55	40
Composite diversity		47	164
Creativity Index	18	55	n.a.
U.S. region most like			

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	5,119	11.8	52
Very poor households	5,849	13.5	55
Social Security dependent families	6,406	14.8	51
ICONS	1,611	3.7	58
Total households	43,263		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	21.7	22.1	22.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	580	625	1.08
Implied price (IP) ($K)	78	102	1.32
Valuer General (VG) price ($K)	83	75	0.91
Ratio of IP/VG	0.94	1.36	1.44
Excess price growth (% p.a.)			-2.7
Change in implied yield (%)			18
VG implied mortgage ($/m)	616	498	0.81
Per cent who cannot afford VG	59	41	18
Scenario 1 – Interest rates			205
Scenario 2 – Affordability (%)			9.4

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	8.1	64
Building approvals per '000 pop. – 2001-02	4.8	62
Commercial floor stock m^2/capita – 1998-02	1.3	45

ENVIRONMENT

Annual rainfall (mm)	1,984.7
Seasonality	Mostly winter rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	88	12	–
Evapotranspiration	–	100	–
Days below zero	13	34	54

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	24.7	29.0	23.7
National average	27.9	28.7	21.8
Ratio of region to national	0.88	1.01	1.09
SOR rank	48	21	20

INCOME	Percentage of persons			
	<10K	10-30K	30-50K	50+K
Youth 15-34	35.9	41.8	17.5	4.8
– National average	29.6	35.2	25.1	10.1
Older – 55+	38.7	51.5	6.7	3.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
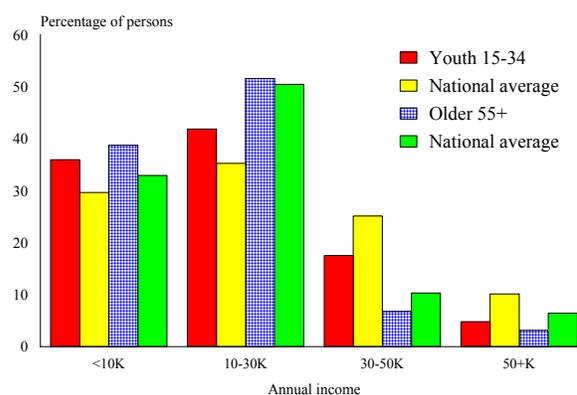
Darwin

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. There was little choice as to the actual boundary: the group of LGAs centred on Darwin is surrounded by unincorporated areas. 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.

Major centres:

Darwin

POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	101,699		108,594		108,941		1.7
No. households	37,863		41,164		41,758		2.5
Workforce	53,142	51.8	56,467	52.2	59,572	54.5	2.9
Employment	46,996	–	49,706	–	53,053	–	3.1
Unemployment	6,146	11.6	6,761	12.0	6,519	10.9	1.5
DEWRSB U/E	2,388	4.5	2,042	3.7	2,528	4.3	1.4
Structural U/E, % population	6,744	10.0	7,844	11.0	7,907	11.0	6.4

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	2,241	21,420	2,551	23,488	2,629	24,206	4.2
Taxes paid	423	4,044	479	4,411	554	5,100	8.0
GST paid	101	965	153	1,409	170	1,563	n.a.
Benefits	169	1,614	187	1,721	188	1,735	2.4
Business income	203	1,943	213	1,965	212	1,957	0.2
Interest/dividends	41	387	46	426	48	442	4.5
Interest paid	108	1,031	145	1,336	138	1,274	7.3
Net property income	-13	-122	-15	-141	-17	-154	8.1
Net flow of funds	2,009	19,203	2,205	20,302	2,199	20,249	1.8
Rank		5		5		6	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	1.1	50
2. Creative professionals	16.3	17.4	9
3. Service class	47.8	47.0	33
4. Super creative class	8.9	9.4	10
5. Working class	23.6	25.2	39
6. Creative class (2 + 4)	25.2	26.8	10
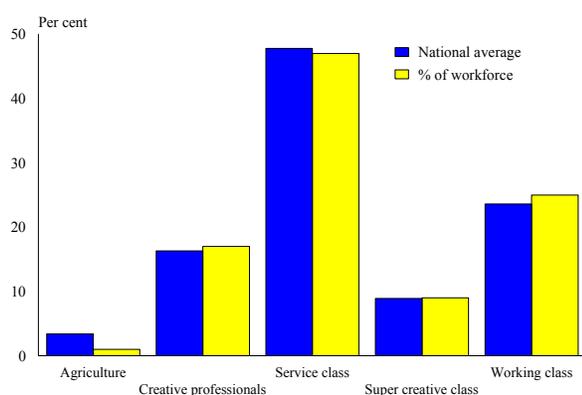
HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	943	1,108	1.18
Implied price (IP) ($K)	126	181	1.44
Valuer General (VG) price ($K)	220	282	1.28
Ratio of IP/VG	0.58	0.64	1.12
Excess price growth (% p.a.)			1.5
Change in implied yield (%)			-8
VG implied mortgage ($/m)	1,637	1,859	1.14
Per cent who cannot afford VG	90	91	-1
Scenario 1 – Interest rates			271
Scenario 2 – Affordability (%)			-5.3

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	31.5	30.3	13.4
National average	27.9	28.7	21.8
Ratio of region to national	1.13	1.06	0.62
SOR rank	7	3	63

INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	21.3	31.3	37.2	10.3
– National average	29.6	35.2	25.1	10.1
Older – 55+	25.5	47.1	16.3	11.1
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	4.31	55	265
High tech		29	253
Diversity index (S)	1.03	13	44
Bohemian Index (S)	0.86	19	144
Foreign born (%)	0.18	24	12
Composite diversity		12	66
Creativity Index	317	19	217
U.S. region most like	Janesville – Beloit, WI		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	4,922	11.8	51
Very poor households	5,289	12.7	45
Social Security dependent families	5,962	14.3	48
ICONS	2,177	5.2	12
Total households	41,758		

	1999 (%)	2001 (%)	2002 (%)
Social benefits as a % of net flow of funds	8.4	8.5	8.6

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	42.5	4
Building approvals per '000 pop. – 2001-02	12.8	30
Commercial floor stock m^2/capita – 1998-02	2.3	6

ENVIRONMENT

Annual rainfall (mm)	1,520.7
Seasonality	Dominant summer rainfall

Area based analysis	Percentage of area classified as		
	Low	Moderate	High
Variability of rainfall	100	–	–
Evapotranspiration	–	22	78
Days below zero	100	–	–
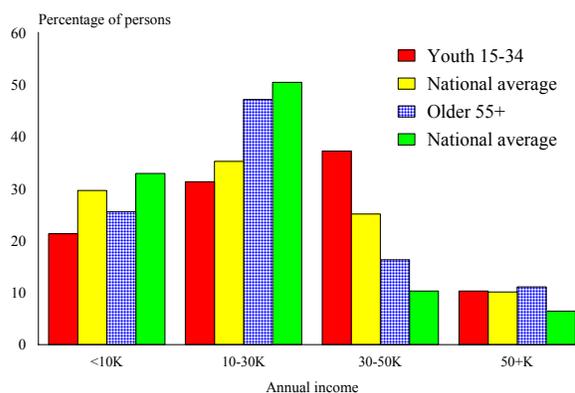
NT Lingiari
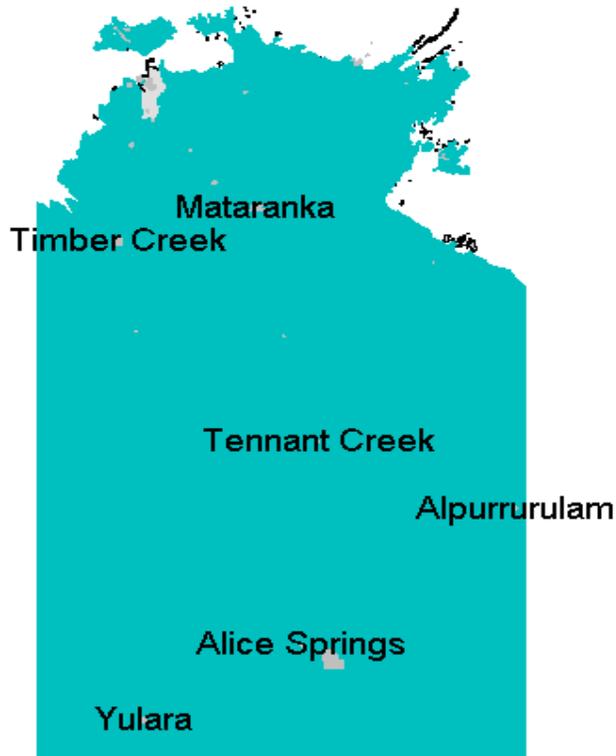
Outside Darwin, the Northern Territory comprises conservation reserves and low-productivity pastoral country. Productions statistics are dominated by offshore oil and gas and onshore minerals, but these do not yield much in employment or local income. In the two main towns, Katherine and Alice Springs, 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. A remarkably high proportion of community commercial income comes from the sale of art.

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	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	87,077		88,996		89,123		0.6
No. households	26,719		28,047		28,373		1.5
Workforce	38,977	44.6	41,258	46.1	44,785	50.2	3.5
Employment	31,738	–	30,708	–	33,347	–	1.2
Unemployment	7,238	18.6	10,549	25.6	11,438	25.5	12.1
DEWRSB U/E	1,777	4.6	2,798	6.8	4,563	10.4	26.6
Structural U/E, % population	8,259	15.4	10,627	19.4	10,204	18.6	6.9

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	1,376	15,619	1,438	16,156	1,576	17,711	4.3
Taxes paid	237	2,694	236	2,650	279	3,135	5.2
GST paid	62	705	86	970	98	1,101	n.a.
Benefits	239	2,717	390	4,382	395	4,438	17.8
Business income	126	1,427	132	1,482	140	1,578	3.4
Interest/dividends	15	170	15	163	13	144	-5.4
Interest paid	57	648	75	842	70	787	6.7
Net property income	-10	-116	-12	-138	-13	-150	9.1
Net flow of funds	1,390	15,771	1,565	17,583	1,664	18,697	5.8
Rank		14		11		10	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	3.7	36
2. Creative professionals	16.3	12.4	38
3. Service class	47.8	46.7	35
4. Super creative class	8.9	9.0	13
5. Working class	23.6	28.3	17
6. Creative class (2 + 4)	25.2	21.4	22

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	2.87	64	265
High tech		60	267
Diversity index (S)	0.90	17	73
Bohemian Index (S)	0.92	12	131
Foreign born (%)	0.09	49	33
Composite diversity		16	78
Creativity Index	238	27	243
U.S. region most like	Jamestown, NY		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	3,682	13.0	61
Very poor households	4,383	15.4	64
Social Security dependent families	4,873	17.2	63
ICONS	1,480	5.2	11
Total households	28,373		
Social benefits as a % of net flow of funds	1999 (%) 17.2	2001 (%) 24.9	2002 (%) 23.7

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	916	1,015	1.11
Implied price (IP) ($K)	123	166	1.35
Valuer General (VG) price ($K)	150	157	1.05
Ratio of IP/VG	0.82	1.06	1.29
Excess price growth (% p.a.)			-0.9
Change in implied yield (%)			6
VG implied mortgage ($/m)	1,117	1,037	0.93
Per cent who cannot afford VG	73	59	14
Scenario 1 – Interest rates			282
Scenario 2 – Affordability (%)			2.8

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	16.8	47
Building approvals per '000 pop. – 2001-02	7.2	59
Commercial floor stock m^2/capita – 1998-02	2.2	7

ENVIRONMENT

Annual rainfall (mm)	560.2		
Seasonality	Arid, mostly summer rainfall		
	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	3	39	58
Evapotranspiration	62	30	8
Days below zero	88	12	–

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	31.9	26.3	12.2
National average	27.9	28.7	21.8
Ratio of region to national	1.14	0.92	0.56
SOR rank	4	64	64
	Percentage of persons		
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	47.7	24.4	19.4	8.6
– National average	29.6	35.2	25.1	10.1
Older – 55+	34.8	42.9	13.0	9.3
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.
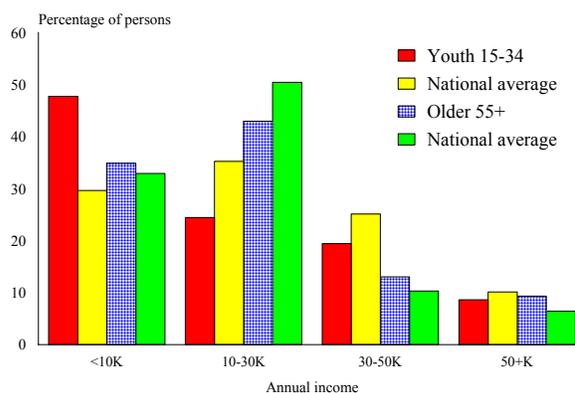
ACT

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'etre, government administration, remains fundamental to its economic base.

Major centres:

Canberra

POPULATION / LABOUR FORCE

|	1998 level	1998 percentage	2001 level	2001 percentage	2002 level	2002 percentage	% p.a. growth 1998-2002
Population	308,947		314,171		315,527		0.5
No. households	116,413		122,589		124,886		1.8
Workforce	171,586	55.6	178,298	56.9	178,809	56.4	1.0
Employment	157,447	–	168,561	–	169,717	–	1.9
Unemployment	14,138	8.2	9,737	5.5	9,092	5.1	-10.5
DEWRSB U/E	10,742	6.3	8,501	4.8	8,541	4.8	-5.6
Structural U/E, % population	15,287	7.6	13,114	6.4	12,847	6.2	4.5

FLOW OF FUNDS

	1999 level ($m)	1999 per capita ($)	2001 level ($m)	2001 per capita ($)	2002 level ($m)	2002 per capita ($)	% p.a. growth 1998-2002
Wages/salaries	7,461	24,123	8,288	26,381	8,366	26,627	3.3
Taxes paid	1,658	5,362	1,834	5,837	1,940	6,177	4.8
GST paid	324	1,046	503	1,600	547	1,742	n.a.
Benefits	406	1,314	403	1,283	410	1,306	-0.2
Business income	511	1,652	546	1,736	638	2,031	7.1
Interest/dividends	197	636	215	686	215	686	2.5
Interest paid	443	1,432	580	1,846	545	1,736	6.6
Net property income	-27	-86	-32	-103	-35	-112	9.1
Net flow of funds	6,123	19,798	6,504	20,701	6,561	20,883	1.8
Rank		3		3		4	

OCCUPATION

Class	National average	% of workforce	SOR rank
1. Agriculture	3.4	0.2	58
2. Creative professionals	16.3	23.2	3
3. Service class	47.8	45.4	42
4. Super creative class	8.9	14.6	1
5. Working class	23.6	16.5	61
6. Creative class (2 + 4)	25.2	37.9	2

CREATIVE CLASS

Index	Value (V)/ Score (S)	SOR rank	U.S. rank
Patents (V)	27.01	3	122
High tech		15	115
Diversity index (S)	1.53	5	3
Bohemian Index (S)	0.89	14	135
Foreign born (%)	0.21	19	8
Composite diversity		8	48
Creativity Index	831	3	34
U.S. region most like	Columbus, C		

SOCIAL

	No. of households	% of households	SOR rank
Unemployed families	11,686	9.4	17
Very poor households	12,085	9.7	10
Social Security dependent families	15,049	12.1	12
ICONS	8,181	6.6	3
Total households	124,886		
Social benefits as a % of net flow of funds	1999 (%) 6.6	2001 (%) 6.2	2002 (%) 6.3

HOME PRICES

	1996	2002	Ratio/ Change
Average mortgage ($/m)	971	1,065	1.10
Implied price (IP) ($K)	130	174	1.34
Valuer General (VG) price ($K)	153	219	1.43
Ratio of IP/VG	0.85	0.80	0.93
Excess price growth (% p.a.)			4.6
Change in implied yield (%)			-23
VG implied mortgage ($/m)	1,141	1,444	1.27
Per cent who cannot afford VG	74	86	-11
Scenario 1 – Interest rates			1,543
Scenario 2 – Affordability (%)			-12.0

CONSTRUCTION

	Value	Rank
Building approvals per '000 pop. – 1998-00	18.2	44
Building approvals per '000 pop. – 2001-02	12.6	34
Commercial floor stock m^2/capita – 1998-02	1.6	21

ENVIRONMENT

Annual rainfall (mm)	954.4		
Seasonality	Uniform rainfall		

	Percentage of area classified as		
Area based analysis	Low	Moderate	High
Variability of rainfall	–	100	–
Evapotranspiration	–	100	–
Days below zero	–	–	100

AGE/INCOME DISTRIBUTION

AGE	15-34	35-54	55+
Per cent of population over 15	31.6	30.1	16.4
National average	27.9	28.7	21.8
Ratio of region to national	1.13	1.05	0.75
SOR rank	6	5	60

	Percentage of persons			
INCOME	<10K	10-30K	30-50K	50+K
Youth 15-34	27.1	28.8	30.8	13.3
– National average	29.6	35.2	25.1	10.1
Older – 55+	22.2	43.4	19.7	14.7
– National average	32.9	50.4	10.3	6.4

Note: SOR rank out of 64; U.S. rank out of 268.