CHARACTERISTICS OF ECONOMIC SUSTAINABILITY IN REGIONAL AUSTRALIA

DISCUSSION PAPER

HC Coombs Policy Forum
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A discussion paper prepared for HC Coombs Policy Forum
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Introduction

Concepts of sustainability are central in conceptualising the future of regional Australia. The history of white settlement of regional Australia has, in many places, been one of dynamic transitions, with a typical pattern of rapid growth from short-term exploitation of an existing natural resource base (involving population growth, infrastructure and capital investment), followed by a long tail of adjustment (shrinking) to a level of population and economic activity that it makes a settlement more sustainable in the long term. The meaning of sustainability in this context encompasses environmental, economic and social sustainability, and implicit in this study is recognition that in natural and human systems sustainability is more about adaptation to dynamic changes than it is about apparent stasis or balance.

This paper explores the journey that regional communities make, focusing on the impact of population movements, economic growth cycles, investment cycles, and adaptation to changing external drivers like commodities and resources prices and consumer/resident preferences, to identify characteristics of long-term sustainability in an Australia context.

The paper is based ion the premise that economic sustainability is underpinned by three factors:

> Population
> Adaption
> Diversity

Population has long been thought to be a driver of economic growth in Australia's regions, and the first part of this paper explores the links between population growth and incomes, and whether there is a population ‘tipping point’ for a town or region above which a sustainable future is guaranteed.

Secondly, the paper uses socio-economic histories of eight regions to explore approaches to adaptation in regional economies since Federation. The case studies explore the extent of the transitions in the case study areas, how the communities have coped and the respective roles of main employers, community and governments. The case studies look for signs of individual opportunism and adaptation (both willingness and capacity) to see if these attributes are as important in responding to a changing tourism customer base as in tracking a change in production in a region from dairy to beef to horticulture.

Finally, the paper also explores economic diversity and the extent to which natural resource endowments drive economic development (‘staples thesis’ of Canadians Harold Innes and Daniel Drache) while exposing the regional economy to external shocks. The paper also considers the pros and cons of diversity in an economic environment where building on specific resource endowments is highly valued.

Population and GDP

The potential link between population growth and economic growth is an important one for regional areas in Australia, many of which struggle to maintain their population base. A key feature of Australia’s post-war population growth has been the emphasis on cities, and more recently coastal areas, at the expense of inland Australia. The only areas of the inland showing steady population growth have been mining towns and the so-called ‘sponge’ cities ie regional centres that draw population from surrounding small towns and villages. Examples of ‘sponge’ cities include Dubbo and Toowoomba.

The consequence of this local population drift is dire for the places losing residents, with many small towns and villages deeply concerned about their long-term viability. In this context, population growth is often seen as synonymous with economic growth and thus increased community welfare. In fact small populations do tend to need to reach a certain size threshold before they can exit a ‘vicious circle’ of decline (discussed more in the next section). Conversely, communities which see high population growth are often concerned with negative impacts on their social infrastructure. The 2011 report by the Grattan Institute (Daley and Lancy 2011) into investment in regional Australia recommended a change in funding procedures for regional infrastructure which favoured fast-growing regions in order to reduce the ‘growing pains’ they have been experiencing.
While both population growth and population decline can pose challenges for regional communities, the economic literature clearly shows that, at the national scale at least, the rate of population growth is not important in increasing per-capita incomes.

Figure 1 shows that comparing Australia’s population against real (i.e., inflation-adjusted) income, there appears to be a clear positive relationship between the two. In other words, on inspection of this figure a larger population might be straightforwardly linked with a larger real national income.

The relationship appears more logarithmic than linear in nature, implying that an increase of a certain proportion in the population would lead to an increase in real income that is not quite of the same proportion.

**Figure 1**
Australia’s population and real income since 1960
Source ABS

Figure 2 helps understand the causality between these two variables by plotting the change in the population against the change in real income. This is what modern statistical techniques would demand at a very minimum if one wanted to draw conclusions about the causal relationship between one and the other.

Visual inspection of such a cross-plot should show a positive relationship between the two, in other words, if population changed by a large amount, then real income should correspondingly increase by a large amount. An examination of Figure 2, however, reveals that no such straightforward link exists between the two variables. Whilst the Australian population has grown by around 0.2 million in a typical year, annual changes in real national income range from drops of $10 billion to increases of up to $40 billion.

**Figure 2**
Changes in Australia’s population and income since 1960
Source ABS
Figure 3 presents a cross plot of annual changes in the Australian population (as above) with changes in real per capita income, in which we see that more of the points on the cross plot have moved to the left of the vertical axis. As it is often per capita income that is of primary interest to policy makers, it is important to note that the link between population growth and per capita income is even weaker than the link between population growth and total income.

It should also be noted that causality may still exist between these variables but that much more rigorous statistical testing would be required to establish the nature of such a relationship. On the face of these simple visual inspections, however, one could not be confident that a strong positive causality could be easily established.

The implication here for the regional economic sustainability is that despite a lot of rhetoric to the contrary, economic theory and national data trends do not suggest a strong causal link between population growth and per capita income growth. It may therefore be possible to sustain modest per capita income growth with modest (or low) population growth rates.

There is increasing recognition that the ‘key ingredients’ to sustainable per capita income growth, and thus increased economic welfare, are investment in physical and ‘human’ capital, including support for research and development (R&D) and a policy environment that fosters knowledge ‘creation and transmission.’ As the 2006 Productivity Commission report on the Economic Impacts of Migration and Population Growth makes clear, immigration and subsequent population growth only make an impact on per capita income growth if immigrants: bring with them additional skills (i.e. extra human capital); are more likely to participate in the labour market; or if they tend to work longer hours. The latter two factors do not require immigration and on balance the Productivity Commission found that the overall economic effect of immigration appears to be ‘positive but small.’

Investment in human capital is thus becoming increasingly important in the emerging knowledge economy. Human capital is generated and accumulated through training and education, lifelong learning, and the effective transfer of skills from older members of the community to younger labour market participants. The implication is that population growth, while often an important factor, is not the key to holistic economic development.
Sustainable populations for towns

In 1997 (COSBOA 1997) the National Institute for Economic and Industry Research (NIEIR) examined correlations between population, population growth, employment and employment growth for a number of statistical local areas (SLAs). The analysis was based on the assumption that there are two proximate causes of a region’s resilience to economic change: its natural resource base and population.

In economic terms, the factors of production that contribute to an area’s natural resource base include the quality and quantity of agricultural land, mineral and energy resources, and natural beauty and tourist attractiveness. An indicator of the natural resource base of a region is the sum of agriculture, mining, manufacturing and accommodation employment. This employment sum is here designated the Natural Resource Base (NRB) employment sum.

The overall resilience of a region is perhaps best expressed as a ratio of other (or flow-on) employment to NRB employment. The formal definition of flow-on (FO) employment is simply total employment less NRB employment. FO employment would include employment in the following sectors: transport and energy, community services, business and finance services, personal and recreational services, and retail and wholesale services.

A higher ratio of FO employment to NRB employment indicates greater overall resilience of a given area. This is because a high ratio means there is less sensitivity in the region to local economic shocks, such as a manufacturing plant closure, and that any new positive economic initiative undertaken in the region will have greater multiplier effects. Population plays a key role in determining the FO/NRB ratio. Econometric regression across country SLAs reveals this relationship, shown in Figure 4. It can be seen that between population sizes of low levels to 15,000 the FO/NRB ratio increases rapidly, and after 15,000 the ratio stabilises.

![Figure 4](source: COBOA 1997)

There is also a statistical relationship between the population of an SLA and the ratio of population change to employment change. A large population has a smaller change in population compared to any given change in employment. Again, population size of 10,000 to 15,000 is critical; for populations above 15,000 the induced population change from a given change in employment is very small.

The implication for regional sustainability is that a population of around 15,000 represents a ‘critical mass’ which significantly enhances a community’s capacity to adapt to economic shocks. For populations above 15,000 the flow-on multiplier values are high and there is low population loss from negative economic shocks. That is, the region is resilient. On the other hand, for a population below 15,000, flow-on multiplier values decline and population loss from any given employment loss increases. In addition, the consequences of a negative economic shock are likely to be more profound.
Case studies

Regional Australia is not a homogeneous place, and to explore the nature of economic sustainability eight case studies are presented here. The case study areas have been selected to represent four drivers of economic activity in regional Australia:

1. Mining-dependent regions (Mt Isa and Whyalla)
2. Agriculture-dependent regions (Richmond River – Northern NSW, and St George – Southwest Qld)
3. Tourism-dependent regions (Blue Mountains and Gold Coast)
4. Population-dependent regions (Busselton and Ballarat).

The case study regions have been selected to contrast experiences – eg early 20th century and mid 20th century mining towns; diverse small-scale and broadacre farming regions; old and new tourism regions; coastal and inland population growth areas. Each case study presents a short socio-economic history exploring the nature and scale of transitions that the regions have been through since Federation.

Population and economic diversity

Each pair of case study areas has a different economic specialisation and recent economic and demographic history.

Table 1 below shows the 2006 Census counts of the number of ‘usual residents’ working, and the Herfindahl Diversity Index for employment in the 17 ANZSIC Divisions (also from the 2006 Census).

<table>
<thead>
<tr>
<th>Working population</th>
<th>Diversity Index*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mt Isa</td>
<td>9,222</td>
</tr>
<tr>
<td>Whyalla</td>
<td>8,494</td>
</tr>
<tr>
<td>Blue Mountains</td>
<td>35,172</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>218,370</td>
</tr>
<tr>
<td>Busselton</td>
<td>11,753</td>
</tr>
<tr>
<td>Ballarat</td>
<td>37,535</td>
</tr>
<tr>
<td>St George</td>
<td>2,340</td>
</tr>
<tr>
<td>Richmond River</td>
<td>41,842</td>
</tr>
<tr>
<td>Equal shares</td>
<td></td>
</tr>
</tbody>
</table>

* Lower index value signifies a more even mix of employment across all industries.

Source ABS Census 2006

The table shows that the working populations of the case study areas ranged from 2,340 to 218,370 – with the Gold Coast well above the other regions. It also shows that all the regions (except St George) have diversity index values in a narrow range from 28 to 34. There is a correlation between the size of the working population and the extent of employment diversity, shown more clearly in Figure 5 (page 10). As might be expected, smaller working populations correspond to lower diversity (higher index scores), while there appears to be a ‘maximum diversity’ corresponding to an index score of 26. By way of comparison, if employment in all 19 industries was distributed evenly the index score would be 23.

1 The Herfindahl Index as used here as a measure of employment diversity within each Local Government Area based on both 2006 and 1996 Census data. The Herfindahl Index is a measure of industry concentration, and a higher score indicates a higher concentration of employment in a few industries, while a lower score suggests greater diversity of employment. Typically, a score of 30 or more would indicate a high concentration of employment in a small number of industries (Carson 2011).
An important implication from this analysis is that while older settlements show greater diversity as they grow and mature through time, the much younger settlement of Busselton shows a high diversity score from the outset. This suggests that newer settlements that grow without a dominant industry are in fact ‘born diverse’, reflecting the multifaceted aspects of a contemporary regional economy from the outset.

**Employment diversity trends**

Table 2 shows that over the decade to 2006, employment diversity increased in four of the case study regions (Mt Isa, Whyalla, St George and Ballarat) and also decreased in four (Blue Mtns, Gold Coast, Busselton and Richmond River).

**Table 2** Changes in employment diversity

<table>
<thead>
<tr>
<th>Region</th>
<th>1996</th>
<th>2006</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mt Isa</td>
<td>37.2</td>
<td>33.7</td>
<td>-9.6%</td>
</tr>
<tr>
<td>Whyalla</td>
<td>35.4</td>
<td>32.8</td>
<td>-7.2%</td>
</tr>
<tr>
<td>Blue Mtns</td>
<td>27.8</td>
<td>28.7</td>
<td>3.3%</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>27.0</td>
<td>27.9</td>
<td>3.2%</td>
</tr>
<tr>
<td>Busselton</td>
<td>27.3</td>
<td>28.8</td>
<td>5.8%</td>
</tr>
<tr>
<td>Ballarat</td>
<td>29.5</td>
<td>29.3</td>
<td>-0.5%</td>
</tr>
<tr>
<td>St George</td>
<td>43.8</td>
<td>40.8</td>
<td>-6.8%</td>
</tr>
<tr>
<td>Richmond River</td>
<td>27.8</td>
<td>28.7</td>
<td>3.0%</td>
</tr>
</tbody>
</table>
Table 3 presents data which compares the diversity changes with population changes by showing the percentage change in the working population between 1996 and 2006, alongside the changes in employment diversification.

**Table 3** Trends in employment growth and diversification

<table>
<thead>
<tr>
<th>Region</th>
<th>% change in working population</th>
<th>% change in Diversity Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mt Isa</td>
<td>-13.5%</td>
<td>-9.6%</td>
</tr>
<tr>
<td>Whyalla</td>
<td>-6.1%</td>
<td>-7.2%</td>
</tr>
<tr>
<td>Blue Mtns</td>
<td>10.6%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>52.0%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Busselton</td>
<td>66.7%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Ballarat</td>
<td>26.9%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>St George</td>
<td>7.7%</td>
<td>-6.8%</td>
</tr>
<tr>
<td>Richmond River</td>
<td>17.3%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

The table shows three types of change patterns:

1. Decreasing working population but increasing diversity (Mt Isa and Whyalla)
2. Increasing working population but decreasing diversity (Blue Mtns, Gold Coast, Busselton and Richmond River)
3. Increasing working population and increasing diversity (St George and Ballarat – latter showing only a small change in diversity).

In Whyalla and Mt Isa, while the overall levels of employment fell, driven by a significant fall in employment in the dominant industries (manufacturing and mining), employment in other industries grew and overall employment diversity increased. In the four regions with growing populations but narrowing diversity, employment growth was greatest in the existing dominant industries (education, health, retail and construction – the industries that usually grow alongside a growing population). St George is an example of a small population showing a low rate of growth alongside a modest rate of employment diversification. In St George in the decade to 2006 employment in the dominant industry (agriculture) fell slightly, while it grew in most other industries, especially the service industries. St George is the closest to a ‘textbook example’ of how a region dominated by one industry slowly diversifies.

**Implications**

The mix of patterns for these case study regions demonstrates the complexity of the relationships between populations and population growth, and economic specialisations and diversity. The mix of changes in these indicators in the decade to 2006 is an indicator of the importance of understanding the local context. Some regions seem to be on a diversification pathway (whether their populations are growing or not), while others seem to be consolidating their employment growth in industries which are already comparatively strong. No simple diagnostic tool emerges from this analysis that would help assess a region’s propensity for either population growth or employment diversification. It is clear from these few examples that the underlying context of the regional economy must be factored in before any overarching measures can be made. Similarly, this quantitative assessment of some aspects of the case study regions suggests that both more and less diverse regions can grow – with no normative judgement possible on which is ‘better’. A region with a dominant industry (or set of them) may well prosper as these industries grow if they are in ascendancy, bypassing diversity. Conversely, a region with dominant industries which are in decline will struggle without diversity. It appears that it is the nature of the industries that dominate, their position in relation to price cycles, and their relationship to the foundations of each region’s economy that are important. This interpretation means that it is difficult to introduce an overarching index that can proxy for thorough local knowledge. This is perhaps one of the main reasons why regional communities are often so sceptical (often aggressively so) of supra-regional analysis, distrusting analysis that doesn’t sufficiently acknowledge regional differences.
Mount Isa

Introduction

Mount Isa is the main city in the northwest region of Queensland, located 1,829 kilometres from Brisbane. Mt Isa is built around one of the most productive single mines in the World, taking into account combined production of lead, silver, copper and zinc. Around a fifth of the city's population is employed in the mines, and fluctuations have been closely linked to the fortunes of the mining industry. The population change in Mount Isa since the middle of last century is shown in the figure below.

The First Mines

In 1923 John Campbell Miles discovered silver-lead ore in the location where the city of Mt Isa is now established. Five hundred mining claims were made in the rush that followed this discovery, and Mt Isa Mines Ltd emerged in 1925, with production beginning in 1931. In the early years the mining company faced hardship in developing the mine and transporting ore to port (Townsville). Before rail construction, ore was transported to Cloncurry on camel back and cart. Rail was made available in 1929 and offered hope to the town by providing an efficient method of transport for both workers and ore. This railway went on to become the State's most profitable and provided the Queensland government with the capital to revitalise its other railways.

Boom and Bust

Mt Isa has been a true ‘boom and bust’ economy, relying on the mining industry to provide employment, boost population and maintain services. While there were several periods of increasing and decreasing population in its early years, the most notable population increase occurred after the Second World War and up until the late 1970’s. In this period, the town’s population rose from about 7,000 people to just under 35,000 people. In 1948 Mt Isa was described as ‘Queensland’s answer to Broken Hill’, producing silver-lead bullion and zinc worth about 500,000 pounds per month, and the sustained population boom increased the need for infrastructure and essential services. In 1954, hundreds of miners’ homes were planned for the Mt Isa community settlement as well as shops, churches, and community halls. In addition, construction of Lake Moondarra for water supply was completed in 1958.

Despite its general good fortune, Mt Isa’s labour force was still subject to the whims of external circumstances. For example, the 1960’s were marked by the industrial dispute of 1964/65 and in 1964 the town made national headlines when the Australian Workers’ Union and lobbyist Pat Mackie led an eight-month strike, which closed the copper smelter and led the Queensland Government...
to declare a state of emergency in the region. In down times like these, when the mine had to put off staff, working men were known to move to the coast or even to New Zealand for work, with the women and children staying in Mt Isa until the mine picked up again.

By 1973, 34,000 people resided in Mt Isa, but from then on the city entered a steady decline, linked partly to volatility in the metal markets. Figures 7 and 8 show the instability in the silver and broader metal markets in recent decades. The pronounced peaks and troughs in the 1970’s and beyond correspond to the exodus from Mt Isa in the same period.

During some thirty years of downturn, Mt Isa has remained the administrative, commercial and industrial centre for Queensland’s vast northwest region. The town is now on the verge of another boom, due to new mining projects in the region (for example, Xstrata’s George Fisher mine and Ernest Henry mine are expanding, and there is also a major phosphate plant being proposed). The estimated population at June 2010 was 21,994, and this is expected to increase up to 24,292 by 2016 and to 25,886 by 2031. Several thousand people also live in the surrounding district. Today Xstrata (Mount Isa Mines) directly employs approximately 4,900 staff and contractors. At the time of the 2006 Census, mining was the largest industry of employment for Mt Isa City usual residents, with 26.6 per cent of
the region’s employed labour force. By occupation, technicians and trades workers were the largest group of residents, comprising 21 per cent of the region’s employed labour force. Many residents not employed directly by the mine are employed by business providing goods and services for the mine.

Mt Isa’s confidence in itself as an essential part of Queensland and Australia’s progress is also an important factor: “The establishment of Mount Isa Mines Ltd in January 1924 harnessed the region’s mining potential, and although the community weathered 30 years of struggle for its very survival, it grew to become the cornerstone of Queensland’s economy, the backbone of the state’s most profitable railway, and in the 1950s, Australia’s largest single creator of export income.”

**Whyalla**

**Introduction**

The Broken Hill Proprietary Company Limited (BHP) acquired leases to work ore in the Iron Knob and Hummock Hill (now Whyalla) region in November 1899, as iron ore could be used for flux in the Company’s smelter in Port Pirie. In January of 1901, men began arriving from Port Pirie to build a tramway to the ore deposits at Iron Knob. Whyalla’s economic and social prosperity has been closely tied to BHP’s activity in the area up until the present day.

Figure 1 shows the population of Whyalla since 1901. The noticeable rise in Whyalla’s population was linked with the opening of shipyards just prior to the Second World War and the success and expansion of steelworks in the town. The shipyards were closed in 1978, with a corresponding decline in population, which has only reversed in recent years. The following case study will look more closely at the factors influencing the ‘boom and bust’ of Whyalla’s population.

![Figure 9](image_url)

**Rapid Expansion**

The BHP Indenture Act was proclaimed in 1937 and an area of land in Whyalla was set aside for the construction of a blast furnace and harbour. With the outbreak of the Second World War, BHP also began construction of shipyards to provide boats for the Australian Navy. The resultant migration of workers into the town saw the population rise drastically.

In 1958, BHP announced the decision to build an integrated steelworks at their site in Whyalla. By 1962, BHP was employing 2,301 staff at the steelworks and 1,407 at the shipyards. The census in 1966 revealed that the population of Whyalla had reached 22,126, an increase of over 8,000 people in the previous five years. To cope with this increase in population, the South Australian Housing Trust was building houses at a rate of 500 a year. At this time new workers were forced to live in ‘tin shacks’ due to lack of housing (The Australian, August 27 2011).
The construction of the Whyalla steelworks was completed in 1968, when the pellet plant and the coke ovens both began operation. Estimates of the population in that year show it continuing to rise, increasing by approximately 6,000 in the previous two years to 28,150. The workforce of BHP in 1970 had reached 6,950. Preliminary planning by the Department of Lands for Whyalla was now allowing for a city of 100,000 people.

The Period of Decline

Due to a shipbuilding slump in the 1970s, mainly because of foreign competition, the Whyalla shipyards closed down in 1978. The city, after a population peak of 33,000 in 1976, rapidly decreased its numbers, declining over a period of 20 years to around 25,000 people. As an example of the scale of population decline in the town, over the period 1991 to 1996 Whyalla experienced the twelfth largest population loss (2012 persons) of all Australian cities, at an annual rate of 1.6 per cent. This was equivalent to losing six per cent of its total population resident in 1991 (SACES 1997).

Population decline had a number of implications for Whyalla's community. One of these was loss of services, for example in 1992 Whyalla had 1600 persons per GP, compared to 873 persons per GP in Adelaide and 1173 persons per GP for non-metropolitan South Australia (Beer and Keane 1999). Local businesses also lacked an environment in which they had to compete and innovate, leaving some stagnation in the business community (see Evans and Sawyer 2009).

Another consequence has been the pressure put on industry to diversify, both within its specialist industrial manufacturing sector and outside of it. The most obvious examples of success to date have been the growth of aquaculture operations, which in 2003 employed around 75 people, and the success of a local algae extraction plant for betatene, which is now the largest producer of beta-carotene in the world. The *Whyalla and Eyre Peninsula Regional Profile* (RDA 2011) also states that: "Increased development to diversify the region's economic base in aquaculture, mining, renewable energy, tourism, and branding the region’s produce will be the critical success factor to reduce economic vulnerability and ensure the future economic growth."

The most recent successes in growing a diverse industry base have arguably been made possible because of investment from the mining boom in South Australia. SACES (1997) points out that the diversification that had taken place in Whyalla up to 1997, since the loss of shipbuilding, had not been of a size or sufficient scale to arrest the gradual decline in the city's population.

Mining Brings New Opportunities

In 2000 OneSteel Ltd was formed after the steelmaking industries were divested from BHP, ending a long relationship with the area. From 2004 OneSteel's investment in a blast furnace reline boosted confidence in Whyalla and marked a turnaround in the city's economic decline. In 2005 OneSteel's 'Project Magnet' began and since then the city has started to experience an upturn in its economy. Despite this, uncertainty in employment has persisted due to the community's reliance on the steelworks. For example, in August 2011 The Australian reported that "In the past 12 months, this fear [of redundancy] has grown, culminating when operator OneSteel announced a $185 million full-year loss, fuelling speculation about retrenchment and plant closure." However, the continued shift in focus of OneSteel's operations from manufacturing to mining means that Whyalla is enjoying a period of renewed growth and prosperity.

Mining Region Lessons and Implications

Both regions have seen major boom-bust cycles, driven by changing prices. In Mt Isa's case the volatility in metal prices contributed to a scaling back of operations, while for Whyalla it was the loss of competitiveness of Australian shipbuilding.

SACES (1997) have pointed out that regions and major urban centres with a high degree of specialisation are strongly associated with periods of rapid growth or rapid decline (net migration loss) dependent upon the fortunes of the industry or activity in which they are found to be concentrated.
This experience is shared with cities such as Moe (electricity, gas), Morwell (electricity), Lithgow (manufacturing) and Broken Hill (mining). They go on to say:

“In the context of long-term planning, it is more realistic, without being unduly pessimistic, to regard the twenty years after World War II, when the South Australian population grew more rapidly than the national population, as an anomaly. This was the only period since the last century when South Australia’s population grew more rapidly, in proportional terms, than the national average.”

Thus the period of decline in Whyalla’s population in particular can be interpreted as a correction in response to a period of unsustainable growth in the decade to 1971.

There are signs of another upswing, as in South Australia, mineral exploration expenditure increased 800 per cent in the five years to 2009 means that the State has become Australia’s second biggest spender on minerals exploration. One of the consequences of this has been an increased demand for and a strong median price growth in housing within the so-called “Iron Triangle” towns of Port Augusta (48 per cent), Whyalla (17 per cent) and Port Pirie (22 per cent) (Evans and Sawyer 2009; Wilson 2008). Whyalla has been well placed to take advantage of this investment, ironically for the same reason it experienced a long decline; its labour skills are specialised in mining, engineering and manufacturing.

The specialisations of the economies of Mt Isa and Whyalla have been both a boon and a source of hardship for residents. The challenge for such communities is to ensure that growth during the ‘boom’ times is sustainable, taking into account the likelihood of decline in the future. With mining exploration and mine development picking up in new areas close to both Mt Isa and Whyalla, both regions are looking at another boom. Many businesses in both towns currently rely on the influx of ‘fly in, fly out’ workers needing goods and services, and this creates a difficult business environment. A stable resident population also implies families that have settled and that retirees may well stay in the area, and this requires some diversity in the industry profile of the town (reflecting the tendency of people to work in other industries once they leave mining). A strategic approach to this boom-bust cycle requires increased diversification, considering the realistic prospect of future population decline from a strategic planning perspective, and using the ‘boom’ cycle to provide a financial basis for self-reliance in ‘bust’ times from a regional perspective.

Despite challenges, part of the resilience of regional mining communities in the face of major uncertainty and economic shocks has been due to the strength of its community. One long-term Mt Isa resident pointed out: “While being so isolated from larger Queensland communities, there was great camaraderie and loyalty in Mt Isa. In sickness or death or celebration it was a community, their entertainment was simple, but the whole town was always welcome.”

Tourism Region Case Studies

Blue Mountains

Introduction

The first road across the Blue Mountains was built in 1814, but it wasn’t until the 1850’s, after gold was discovered in the Bathurst area, that the route became well travelled. The need for better transport became apparent, and a railway linking Penrith to Wentworth Falls was completed within the next decade. The Blue Mountains quickly became popular as a recreational retreat for the wealthy residents of Sydney, as well as an important coal-mining area. Townships emerged around the railway stations and were populated by railway families, miners, timber merchants, blacksmiths, hotel and guesthouse owners, storekeepers, small-scale farmers and market gardeners. Tourism has continued to be the major driver of economic development in the Blue Mountains since that time, and the figure below shows its population growth in the last century.
At the turn of the century, both Springwood and Katoomba, the two major towns in the Blue Mountains, gained a reputation for their health-giving climate, beautiful surrounding bush and plentiful wildlife. Coal mining in the area had begun to decline, and recreational opportunities were becoming the focus of economic activity. By 1917 there were around 60 guesthouses in Katoomba alone, and it was considered the holiday capital of New South Wales. The impetus for the development of tourism infrastructure up until this time had mainly been from wealthy residents and landowners, looking to capitalise on the area’s attractions.

As motorised transport became widely available, tourist numbers continued to rise, and in the 1920’s and 1930’s rich holidaymakers and honeymooners flocked to resorts such as the Carrington Hotel and the Hydro Majestic in their new cars. Aside from bushwalking and spectacular vistas, visitors could make use of the many recreational facilities in the area, including golf courses, bowling greens, skating rinks, swimming pools, tennis courts and theatres. The increasing number of visitors also created demand for food and services, and the number of businesses in the region increased.

The Second World War brought a change in use for the grand buildings of the mountains; many were converted to boarding schools for children to be housed safely away from the fear of enemy attack. Others were used by the military to provide recreation opportunities for wounded servicemen.

A Growing City

The electrification of the railway in the mid-1950’s stimulated a large amount of urban development in the Blue Mountains. The lower mountains in particular were marketed to new residents based on ease of commuting to Sydney, affordable land prices and attractive landscape (today, 58 per cent of the Mountain’s employed population commutes to Sydney). While the City of Blue Mountains was formed in 1947, impetus towards strategic planning in the Blue Mountains did not emerge until the 1970s, with community resistance created by the exhibition of a draft-planning scheme in 1973 that proposed a large increase in the available land for residential development and the densities that were permissible in existing residential areas. The balance between residential development and preservation of existing natural areas, including areas of World Heritage, has been a feature of planning in the Blue Mountains since this time.

The Blue Mountains has grown to have a population of more than 70,000 people, scattered across 100 kilometres of ridgeline in 26 towns and villages. After substantial population growth from about 1950 up to the 1990s, growth in the Blue Mountains has slowed in recent decades. Between 1996 and 2021 the Blue Mountains population is projected to reach 84,600, which is a growth rate of 16.6 per cent. This contrasts with a growth rate of 98 per cent over the 25 years from 1971 to 1996.
Traditionally the Blue Mountains has provided affordable housing opportunities with lower rental costs and house prices than the Sydney Metropolitan area. However, in the upper Mountains affordability of housing is being reduced as pressure on housing stock increases.

Tourism continues to be a major driver of the local economy, employing around 2000 people, or 13 per cent of the local workforce. In addition, businesses that service the tourism industry account for about 40 per cent of all jobs in the region. The Blue Mountains Tourism Authority estimates that there are in excess of three million visitors a year to the Mountains, with the majority of visitors patronising the Upper Mountains destinations. Day tripping or visiting friends and relatives continues to be the most common form of visitation, and the Blue Mountains received nearly 2.2 million domestic daytrip visitors in the year ending March 2011. Blue Mountains Council predicts that trends in the regions economic development will result in a continuation of the reliance on tourism with a growth in home based businesses and cottage/craft industries.

Gold Coast

Introduction

As early as the 1820’s, timber getters were moving from northern NSW in large numbers to the south coast of Queensland seeking red cedar. In 1865 the inland township of Nerang was established as a base for the timber industry. White settlers moved into the area now known as the Gold Coast in the 1860s, establishing large cattle stations. Later stations were divided to smaller sugar, cotton and dairy farms. Over the next 100 years, agricultural industries in the area included avocado plantations, banana farms and cattle grazing.

In 1885, Queensland Governor Musgrave built a holiday home on a hill just north of Southport and the surrounding coastal area built a reputation as a resort for Brisbane’s wealthy and influential. In 1889 a railway line was extended to the town and numerous guesthouses and hotels were soon established up and down the coastline. The figure below shows the consistent population growth in the Gold Coast since the 1960’s (Gold Coast and Tweed combined until 2000).

Figure 11
Population trends, Gold Coast
From Agriculture to Tourism

Around the turn of last century, the failure of cotton production and the crash of the world sugar price saw their decline in the Tweed, with a subsequent increase in dairying. During this period waterways of the coast were considered vital transport links for the local economy, and were used to transport the timber and produce to markets in Sydney and Brisbane. Townships began to grow at key junctions of the river and local roads (such as Nerang and Beenleigh), as well as key points on the coast (such as Southport and Coolangatta). In the farming community the coastal beaches and coastal heath were considered unproductive and of little value.

At this time the Gold Coast was also emerging as a tourist destination, with increasing recognition of the natural assets of the area for bushwalking and surfing. The permanent population of the region increased slowly until 1925 when a new coastal road was built between Brisbane and Southport. That same year, the Surfers Paradise Hotel was built, and visitation began to significantly increase.

From the 1930’s onward, domestic tourism in Australia was stimulated by the prosperity of a modernising economy and a growing cultural attachment to beach life. As automobile technology became more reliable, the number of holidaymakers travelling down the coast road from Brisbane increased, and by 1935 most of the coastal strip between Southport and the New South Wales border had been developed with housing estates and hotels. In the Second World War the Gold Coast towns became well known to the thousands of Australian and US armed servicemen who came for recreational leave. After the Second World War, development in the area increased rapidly, and it was a popular place to buy and sell land in the post-war real estate boom. By the end of the 1940s, real estate speculators and journalists had begun calling the area ‘The Gold Coast’, and the population began experiencing a significant increase.

By 1959 the value of Gold Coast building approvals was the highest of anywhere in Australia; Gold Coast towns such as Coolangatta were becoming regular holiday destinations inland families, with caravan parks and rental flats. The development of the city’s beach strip was also rapid, and in the 1960s the local building industry was able to support the development of high-rise holiday apartments and hotels (the first of which, Kinkabool, was completed in 1959). By the time the Gold Coast airport terminal opened in Coolangatta in 1981, the area was firmly established as Australia’s most well known holiday area, and almost all the vacant land within 10km of the coast had been developed. Japanese property investment during the 1980s made the skyline soar, and the construction of modern theme parks such as Dreamworld and Sea World cemented the Gold Coast’s reputation as an international tourist centre.

The 1987 economic downturn hurt Gold Coast businesses, and corruption during the late 1980’s tainted the Coast’s reputation as a place of business. Despite this, increasing numbers of foreign visitors in the 1990’s stimulated the rise of unparalleled international investment in the City’s property sector. The popularity of the Gold Coast with Japanese tourists was particularly high at this point, with 841,000 Japanese visitors in 1997 (that number has since fallen to 351,000 in 2009). The Gold coast also remained a popular migration point for Australians: In 1997/98 it was estimated that up to 83 per cent of growth to the City was attributable to inward migration.

At present the region hosts about 9.6 million visitors per year, and on any given day tourists can makeup as much as 17 per cent of all people in the region, with leading international markets being Japan, New Zealand, UK, China, Europe, and the Middle East.

Tourism Region Lessons and Implications

Tourism to the Blue Mountains has a long history (by Australian standards), which illustrates how much the tourist market evolves every couple of decades. Blue Mountains tourism-related businesses have had to adapt to changes in expectations – from health tourism to honeymoons, to general holidays and more recently to outdoor activities, maintaining momentum in each area. The Gold Coast, with its shorter history, has also seen quite dramatic changes in the nature of its visitors – best exemplified by the boom and bust in the number from Japan.
The scale of population growth on the Gold Coast has helped underpin the economy through tourism cycles, though there are signs that sustainability in the medium term will depend on the region not exceeding its environmental carrying capacity, and on continuing economic diversification. The rapid urban development of the Gold Coast has been funded to a significant extent by overseas investment, which has had the effect of integrating the Gold Coast into the global economy and to some degree insulating its development industry from state and national development trends. However, the comparatively narrow base of the Gold Coast’s economy means that it is still strongly reliant on the health of the tourism industry, and its development activity is sensitive to international investment trends.

Despite its growth and the strength of its tourism industry, the Gold Coast City faces significant challenges in fostering a sustainable community. The City is characterised by a high rates of population mobility, high rates of building growth and rapid churn in development (i.e. development, refurbishment and redevelopment). The City also has some of the highest rates of building approval and commencement data (Gold Coast City Council, 2008) and the Gold Coast City Council (2009) predicts that by 2030 the Gold Coast City will be home to about 900,000 people. Consumption related industries (eg retail, construction, business services, accommodation, cafes and restaurants) generate the most employment. Gold Coast City experiences higher levels of socio-economic disadvantage relative to other parts of Australia due to lower income levels (associated with an older population), higher levels of unemployment, lower levels of tertiary qualifications, and higher proportions of persons in lower paid and casual occupations such as labourers and sales persons.

Diversification of the economy is also an issue for the Blue Mountains. As an example, the proportion of people involved in manufacturing within the Blue Mountains in 2001 was 4 per cent of the total workforce, compared to 15 per cent in 1975. This reflects the national trends in relation to the reduction of the prominence of local manufacturing, but also indicates the decreasing role that manufacturing plays within the Blue Mountains. Increased mobility across the general population is also resulting in more people willing to travel further to shop, creating leakage of expenditure to areas like Penrith and reducing the market for businesses, retail and commercial businesses to locate within the Blue Mountains.

The Blue Mountains’ tourist attractions provide strong impetus for the local economy, but the region also faces the challenge of maintaining a vibrant and sustainable community within likely growth constraints. Because of the environmental sensitivity of the area, the sorts of economic activity that can be carried out in the mountains are severely limited, both practically and also legislatively. There are also significant and growing differences in socio-economic status within the City of Blue Mountains. People living in the Lower Mountains, on average, are more advantaged in terms of household income, educational achievement, unemployment and occupation. A major challenge for the area will thus be achieving and retaining a mix of young, middle aged and older people as the population ages.

**Population-driven Regions Case Studies**

**Busselton**

**Introduction**

The town of Busselton is situated approximately 220kms south of Perth and is one of the most popular holiday destinations in rural Western Australia. The Busselton Shire is located in the Margaret River wine region and includes the towns of Dunsborough and Yallingup. The Shire had a resident population of about 31,767 in 2010, but it is estimated that visitors increase this to over 60,000 on any given day during peak tourism periods. The Shire’s average annual growth rate over the past 20 years has been over 4 per cent and one of the highest for a regional area in Australia. The figure on page 21 shows the significant rate of population growth in Busselton Shire over the last century.
Early Years

Europeans first settled Busselton in the 1830’s. During subsequent years forestry and timber cutting were the major industries, creating a small but successful port community. The area’s population remained relatively low until after the First World War, due mostly to its isolation.

During the 1920’s Busselton and surrounds underwent an influx of mainly British ex-pats as part of the WA government’s Group Settlement Scheme, which was designed to attract migrants to rural areas of the state. Participants endured difficult conditions and isolation, and the scheme encountered a number of problems. There was a lack of reliable transport (the railway was not extended into the region until 1924) and farmers were forced to cart produce and supplies along hand cut tracks. In addition, the distance from the main market of Perth hampered the distribution and sale of the milk. By July 1927, 72 of the blocks settled by the scheme had been abandoned and 124 amalgamated from the 923 blocks in the Busselton area. The rate of abandonment also increased significantly after the onset of the depression in the 1930’s; the scheme was subsequently abolished. Despite this hardship, the scheme did result in an established dairy industry in the area and in significant improvements in transport and communication, including a rail link with Perth.

Primary Industry’s Changing Role

Since the Group Settlement Scheme, land use in the Busselton Shire has been predominantly agricultural, with significant areas of State Forest and National Park. In 1999-00 milk production had the highest gross value of agricultural production (GVAP) of all commodities in the Shire, accounting for an estimated 33 per cent of all farm output. In the same year cattle sales accounted for 15 per cent of GVAP, vegetables for 9 per cent, hay for 11 per cent and grapes for 19 per cent.

The nature of agricultural production in the area has changed significantly over the last 40 years, due mostly to the establishment in the 1960’s of a now world-renowned wine industry. The Busselton Shire’s GVAP increased from $23 million in 1982-88 to $62 million in 1999-00, with much of this rise attributable to the growth of viticulture. At present over 50 per cent of wine producing members of the Margaret River Wine Industry Association are located in Busselton Shire, and wine is also the major manufacturing sector in the region (Busselton Shire 2011).

Busselton has been a coastal holiday town since after the Second World War, but in recent decades it has grown increasingly popular as a holiday destination, offering wine, surfing, natural beauty and close proximity to Perth. Tourism WA estimated that there were around 3.6 million visitors to the South West Region per year on average in 2005, 2006 and 2007, or 20 per cent of all visitors to the State. While broad acre agriculture is still important to the Shire, wholesale and retail trade has taken over as the dominant area of employment. Manufacturing, recreation, and personal services have also steadily increased, and new industries have begun to develop including agricultural value-added produce and boutique artisan production. The trend as population and tourist growth has accelerated in the last two decades has thus been both diversification and polarisation in the local economy.
A Sea Change Town

In recent decades in Australia, as the disposable income of the middle-class has increased and transport and road access has improved, coastal areas that are within a four-hour drive from capital cities have become more affordable, and a high proportion of their migrants are from the capital cities. Busselton is a clear example of this phenomenon, and after about 1970 it and the broader Margaret River region began ‘booming’ as ‘weekender’ and ‘sea change’ destinations (Kelly and Haslam McKenzie 2005). The word ‘sea change’ has come to represent those wanting to escape their busy urban lives for recreation or alternative lifestyles. The Shire had an average annual growth rate of 4.9 per cent between 1996 and 2001 and 2.9 per cent between 2001 and 2006. In per centage terms, this was well above the State average of 1.6 per cent (Busselton Shire).

Busselton has quite a diverse employment mix – especially by regional standards, scoring 28.8 on the Diversity Index. The trend has been towards consolidation around existing dominant industries (the top five industries holding 55 per cent of employment: Construction, Retail, Hospitality, Health Care and Manufacturing). It is important to note, however, that some to some extent Busselton Shire is a ‘dormitory area’ with 18 per cent of the Shire’s working residents in 2006 working outside the Shire – most of these in Construction, Mining and Manufacturing. The Diversity Index for jobs in Busselton is 29.6, slightly higher (less diversity) than that for jobs that the Shire’s residents do (28.8).

The broadening of the area’s economy and increasing employment opportunities have been reflected in the Shire’s changing demographic structure, with a reduction in the significance of the area’s ‘retirement’ function. This is highlighted by the change in the per centage of residents aged over 55 from 29.1 per cent in 1991 to 26.4 per cent in 2006, while the per centage of residents aged 5-54 increased from 67.5 per cent to 69.9 per cent during that time.

Coastal ‘getaways’ such as Busselton have been found to be attracting a growing number of people whose work does not require them to be permanently based in the city (Gurran et al. 2005). The accessibility of these communities also allows retirees to retain links to family remaining in the city. A high proportion of property owners in these locations are absentee landlords, who own holiday houses or weekenders; the Busselton Shire’s ratio of unoccupied private dwellings is approximately 26 per cent, which is very high in comparison to the rest of Western Australia.

Ballarat

Introduction

Ballarat is one of the largest inland cities in Australia, about 100km northwest of Melbourne, and with a current population of around 90,000. Ballarat also has a unique history: the discovery of gold in the area in 1851 led to it being one of the most significant early ‘boom’ towns in Australia. Despite this, Ballarat did suffer decline after its gold rush. While Ballarat was traditionally a city that prospered on mineral and agricultural resources, the key industries in the city are now manufacturing, tourism, health and community services, education and retailing (Ballarat Shire Council). These industries have strengthened Ballarat’s role as a regional service provider and have helped it grow as a prosperous regional centre. The figure below shows Ballarat’s population growth over the last century.

Figure 13
Population trends, Ballarat
The Gold Boom

On 19 August 1851, John Dunlop and James Regan struck gold at Poverty Point and within days of the announcement prospectors rushed the area; by the end of September of the same year, nearly 1000 miners were digging for gold on the Ballarat field. In the coming years numerous alluvial and deep mining leads sprang up in the Ballarat district, and by 1853 there were more than 20,000 miners of many nationalities working on the field. At its peak, in 1868, the Ballarat goldfield supported 300 companies and the population of the settlement was estimated at 64,000.

Ballarat earned the nickname “The Golden City” during its gold boom, and the confidence of the city’s early citizens in the future of their community is evident in the sheer scale of many of the early public buildings (for example, the Town Hall built in 1871), generous public recreational spaces, and the opulence of many of its commercial establishments. There was also significant investment in industrial infrastructure, such as the opening of the Geelong-Ballarat railway line in 1862. Despite the wealth and growth of these early decades, the gold rush began a decline in the 1870’s and Ballarat’s last mine closed down in 1918.

Finding a New Identity: Life after Gold

Development continued in Ballarat after 1870 as the city transitioned towards a more diverse manufacturing and industry-based economy. Construction of Gong Gong reservoir as a permanent water source was completed in 1877, and a Melbourne to Ballarat railway line was completed in 1889. Despite this, by the turn of the century and up until the First World War, Ballarat’s population declined and stopped growing. The stagnation was brought on by the wane of the mining community, the closure of the two most important factories in the town, the young men lost to the First World War, and the over-clearing and subsequent lack of timber resources (Bate 1993).

Despite these challenges, Ballarat’s community sustained itself, helped by its social institutions, excellent infrastructure and the industrial skills of its population. Ballarat’s resilience before the First World War was in part due civic organisations that rallied the citizens and projected a confident image to the outside world. For example, the Ballarat Progress Association, founded in 1906, promoted the area politically as well as to manufacturers and professionals. The promotion and expansion of industry was also built on the many skilled workers that remained in the town as mining declined. In 1901 the Statistical Register of Victoria recorded 138 factories employing 2695 people in the city. In 1911, despite a drop of 6000 in the population, the number of factories had risen to 203 and their workforce to 4854 people. In addition, although the First World War contributed to population loss, it also stimulated the metal industry, the woollen mill, meat preserving and many other enterprises (Bate 1993).

In 1947 the population of Ballarat was 40,231 people, compared with 46,793 in 1901. Yet the workforce was stronger and more diverse, helped by the stimulating effects of the two World Wars, and Ballarat was well positioned to take advantage of the post-war boom, underpinned by capital and migrants from Europe. The Ballarat council and various citizen groups combined to identify and attract suitable industries, and were fortunate to have large tracts of crown land available for development (Bate 1993). Ballarat began to grow much more quickly during this period, to the point where there was a housing shortage. The Ballarat West Estate, now part of broader Wendouree, was a Victorian Housing Commission development to ease this shortage. Planning for the estate began in 1949, but development and infrastructure was considerably slower; most of the construction, consisting of 750 prefabricated timber and concrete single story cottages, occurred between 1951 and 1962, and many homes were not serviced with sewerage and sealed roads until the late 1950s. During the 1970s a further 500 brick veneer houses were built and sold privately to many of the early residents (wendoureewest.com).

The overall shape of Ballarat changed rapidly, as did the emphasis within the old city, as housing and industry moved outward and financial and commercial functions of the city centre strengthened. In 1963-64 the building surveyor reported to the Ballarat Council that only 11 per cent of permits for new construction related to dwellings, even though they exceeded 100 for the first time in four years. The most rapid increase in houses was 23.7 per cent of permits between 1947 and 1954, then 15.4 per cent between 1954 and 1961. After that, investment moved almost completely into the commercial and public sector (Bate 1993).
By the 1970s, Ballarat had begun to officially recognise and actively preserve its cultural and historical heritage. With the opening of Sovereign Hill, the city made a rapid shift to become a major Victorian tourist destination. Approximately 1.8 million domestic day trip visitors come to Ballarat each year, contributing $139 million to the local economy. In addition, at least 13 per cent of the 1.1 million overseas visitors that come to Victoria annually visit Ballarat. Overall, 4.8 million day trippers and 2.2 million overnight visitors toured the Goldfields region (of which Ballarat is a part) in 2000 (Ballarat City Council). Although the tourism ‘industry’ is a relatively recent phenomenon, Ballarat has always had a privileged geographic position, at the centre of Victoria’s most important freight and transport routes, thus enjoying an influx of capital from recreational travellers and prominent visitors since the turn of the last century.

A Bright Future

Ballarat has continued to grow at about the national average over the last thirty years, and is planning for substantial growth into the future. The City of Ballarat currently has three interrelated projects that respond to growth pressures: the Ballarat West Growth Area, the Ballarat Western Link Road and the Ballarat West Employment Zone. The Ballarat West Growth Area will provide about 18,000 new houses to accommodate a population of over 40,000 people, and the employment zone is a long term project to develop a precinct in the west of Ballarat for future industry and manufacturing. A strategy for the development of the CBD was also released in 2010, aiming to “ensure Ballarat continues to be the retail, educational and cultural capital of Western Victoria” (Ballarat City Council).

Ballarat has a reasonably diverse employment mix – especially by regional standards, scoring 29.3 on the Diversity Index. The trend has been for increasing diversity. Ballarat’s employment diversity is very much ‘home grown’, with the City a net importer of workers (1 per cent) from surrounding areas in 2006. An analysis of the jobs held by the resident population in City of Ballarat in 2006 shows the three most populous industry sectors were: Health Care and Social Assistance (5,222 persons or 13.9 per cent), Retail Trade (5,096 persons or 13.6 per cent) and Manufacturing (4,799 persons or 12.8 per cent). Industry diversity has continued to be a major strength of Ballarat’s economy (SGS Economics 2010). The city has extant and emerging clusters in automotive, industrial machinery, food processing, furniture production, textile and clothing sectors, and the majority of employment is generated by a group of major operators which include Masterfoods Australasia, Haymes Paints, Maxitrans (Australia’s largest supplier of road transport trailing) and McCain Foods.

Population-driven Regions Lessons and Implications

Busselton, a relatively young coastal town, has grown steadily since the mid 1970s, and as a new development area, its economy looks to have been ‘born diverse’. Ballarat’s steady population growth extends back to its re-emergence from the post-gold slump, and it is now one of Australia’s largest inland cities, and is still showing steady population growth.

The two regions represent two different drivers – lifestyle seeking population in the case of Busselton, and job-seeking population in the case of Ballarat. In 2006 Ballarat imported 1 per cent of its workforce from surrounding areas, whereas Busselton exported 18 per cent of its employed residents – mostly in Construction, Mining and Manufacturing industries.

In a report to the Sea Change Task force, Gurrain et al. (2005) found that residential and tourism development associated with the sea change phenomenon does not necessarily lead to sustainable economic growth or improved socio-economic outcomes for local populations. This is because growth in sea change areas is associated with new jobs in lower paid occupational sectors such as retail, restaurants, tourism, and care giving, and these jobs are frequently part-time and subject to seasonal fluctuations. The growth of a mobile and unskilled labour force can lead to economic vulnerability, other indicators of which include a relatively high incidence of single parent families compared to State averages, underemployment, a significant number of households paying high proportions of their incomes on housing and a considerable proportion of aged households (all displayed by Busselton and its surrounding area). The nature of demand in growing coastal communities tends to be “at the low-end of the service economy... because the economies are [usually] narrowly based and not dynamic” (Burnley and Murphy p. 238, 2004; Kelly and Haslam McKenzie 2005).
Busselton shows some of these characteristics, and while the high per centage or residents working elsewhere in well-paid Construction, Mining and Manufacturing jobs lessens the statistical impact on average wages and on unemployment, there are still signs of social disadvantage. Despite the construction of expensive homes, both as holiday and permanent residences, and the proliferation of wine and boutique food businesses in the Margaret River-Busselton region, there is a proportion of the permanent population whose assets, education and personal income descriptors convey a picture of disadvantage (Kelly and Haslam McKenzie 2005). For example, over the last decade, households that constitute couples with children have increased by 42 per cent but single parent households with children have grown by 105 per cent in the same period (Pendergast et al. 2004). Furthermore, 72 per cent of the latter households received a weekly income within the bottom two quintiles of income. This cohort and singles generally are highly likely to be dependent on rental housing. ‘Open’ markets such as sea change communities have a heightened demand for properties because of an inflated number of competitors (locals, second home buyers, investors, retirees), reducing housing affordability and access for those on lower incomes (Kelly and Haslam McKenzie 2005).

In contrast to Busselton’s reliance on jobs in other regions to support incomes and population diversity, Ballarat’s steady population growth and employment diversity are very much home grown. The impact of Ballarat’s early economic, cultural and political prominence on its later resilience in times of economic hardship cannot be underestimated. The aspirations evident in the grand public buildings, which also led the town in the early years of the twentieth century to compete with Melbourne and Geelong as the centre of Victoria’s economic and cultural life, meant that the community there never lost a sense of its defining role in the formation of Australia, both in a historical sense and in terms of the ongoing progress of the nation. Thus despite periods of economic decline, Ballarat was able to capitalise on the industrial skills of its citizens through a strong sense of self-confidence, political vision and community activism.

The way in which capital from Ballarat’s mining boom was invested and used was also an important lesson in creating resilience. According to Bate (1993), at the turn of the twentieth century gold returns were diminishing but, because far sighted citizens had turned to mining investment elsewhere, the stock exchange flourished and many family incomes remained high, sustained by Western Australian gold, the silver-lead ores of Broken Hill and copper at Mount Lyell. Money had also been prudently channelled into property, government securities and shares in banks and trustee companies. Thus families that had made their fortune from gold often had large portfolios of shares and well as grazing estate and urban property, securing capital in the town.

As Ballarat continues to diversify, the balance between its “knowledge economy” and manufacturing sector is likely to be a key part of its resilience into the future. In the last twenty years, while many suburbs recorded increases in the proportion of their workforces employed in “knowledge economy” industries, the spatial pattern of those industries has become quite dispersed. In 2006, there were two main concentrations of people with university qualifications. The first corresponded with the location of the University of Ballarat. The second was in an arc of suburbs stretching from Alfredton in the west, through the established suburbs in the northern part of Ballarat out to Nerrina in the northeast. Some of these suburbs also have the highest proportions of people currently working in “knowledge economy” industries (Dept of Planning and Community Development 2010).

Busselton’s planning and development issues are quite different. The combination of increasing tourism numbers, a narrowly focused economy and an increase in ‘non-permanent’ property owners has created complex planning issues in Busselton, including pressure on the natural environment, changing social demographics, increased property prices, lack of affordable housing and strong demand for infrastructure and services.
Agricultural Regions Case Studies

St George

Introduction

St George is the principle township of the Balonne Shire. The Shire of Balonne is located in Queensland on the New South Wales border some 500 km from the east coast of Australia and has an area of approximately 31,000 km². St George was founded in around 1850 as the district centre of what was then mainly a wheat-sheep area. This was true until the mid-twentieth century, when the community began a transition towards irrigation production, mainly of cotton. The Balonne regional economy has always been highly reliant on agriculture, with 2006 Census data indicating that 36.1 per cent of employment was in agriculture, or 10.6 times the ratio for the whole of Queensland. The value of agricultural production for Balonne Shire in 2005–06 was $221 million, of which $134.1 million was crops of mainly cotton (MDBA 2010).

While the population of St George has always been relatively small, it has seen two major fluctuations associated with the fortunes of its primary producers: an increase beginning in the late 1940's due to irrigation development and diversification, and a recent decline associated with drought and water availability. St George’s population has always been tied to agricultural producers in the wider shire, particularly in the last ten years with the affect of prolonged drought (see Figure 14).

Irrigation and New Opportunities

There was strong private and public investment in irrigation infrastructure in Balonne Shire during the 1950’s and 1960’s, helped by government enthusiasm for development and money from the boom in wool prices. The construction of weirs and holding tanks improved grazing, by tempering the erratic flows of the Balonne River, and allowed diversification into irrigation cropping. The St George Irrigation Area was established in the mid 1950’s based on supply from Jack Taylor Weir on the Balonne River and the construction of the original St George supply channel. The system was extended in the following decades, with completion of the Beardmore Dam and the Buckinbah supply channel. This expansion increased economic activity in St George, which developed much more than the surrounding towns that were more reliant on grazing.

There was a 30 per cent increase in population during 1954-66, which led to significant investment in the town². The booming wool prices meant graziers were prospering at the same time that significant labour would have been coming into the area to help with the irrigation development including dams. The irrigation development boosted prospects in the area, attracting residents to the town. The expanding economy of St George also created a housing squeeze in the 1970’s; to fulfil demand houses were transported from the surrounding grazing regions, which were experiencing a decline in population (Lucas 2004).

The irrigation infrastructure in Balonne eventually led to cotton becoming the predominant crop in the area, and the first Queensland cotton gin was built in St George in the early 1970’s. The late 1990’s saw the addition of the Dirranbandi cotton gin and a second cotton gin in St George. At the present time the St George Irrigation Area covers approximately 19,000 ha. Apart from cotton, other irrigated crops produced in the region include sorghum, wheat and barley. There is also a smaller area under irrigated horticulture including grapes, melons and some vegetables (MBDA 2010).

**Drought and Regional Decline**

In the five years from 2001 to 2006, Balonne Shire lost almost 15 per cent of its population. St George lost approximately 600 people (22 per cent) in the same period. This contrasts with the MDB (1.1 per cent growth in the same period) and 10 per cent growth in Australia as a whole (Stubbs 2010). Drought was a major factor in the decline, and Figure 15 shows the change in water availability over this time. The Mean Annual Diversion (MAD) for the Balonne during the period 1995 to 2008 was 420,053 ML/year. The MAD represents a modelled long run average volume of water available for consumptive use. The average volume of water used in the Lower Balonne for the period 1995-96 to 2006-07 was 226,986 ML per year, and the actual use has been much lower for most years after 2000 (MDBA 2010). Due to these drought conditions, and the resultant fluctuations in the cotton crop, recent years have seen a limited diversification of irrigated agriculture into crops such as grapes and more dryland cropping.

**Figure 15**

Water use in the Lower Balonne

![Water use in the Lower Balonne](image)

Source
Murray Darling Basin Authority 2008

The dependence of the Balonne shire on cotton combined with the inherent lack of certainty in cotton price has meant that the community surrounding St George has relatively low resilience to cope with material reductions in water availability. The Murray-Darling Basin Authority has found that producers are currently struggling with relatively high debt levels, limited access to capital and off-farm income, and very limited commercial opportunities for diversification within the agricultural sector. In addition, the proportion of the population that is in the most disadvantaged quintile is almost twice the Queensland average. Suggestion has also been made that recorded unemployment has remained relatively low in recent years as outward migration has continued as people seek opportunities elsewhere (MDBA 2010). Compounding these factors are the current proposed changes to water allocation in the Murray-Darling Basin; modelling by Stubbs (2010) has suggested that Balonne Shire is likely to be very vulnerable to a permanent reduction in irrigation water, with significant job and population loss, and considerable adverse impacts on a range of socio-economic indicators of community resilience and wellbeing projected into the long-term.
Richmond River

Introduction

The Richmond Valley is located in Northern NSW, with major towns in the area including Lismore, Ballina and Casino. The region was first colonised by Europeans in the 1840’s, primarily for timber, and the growth of the logging industry in the 1850’s and 1860’s prompted a considerable increase of river traffic, helping the area to grow its industry base. As land was opened up for farming, logging gave way to dairying and sugar production, which remain important industries in the area. Agriculture has continued to diversify in the Richmond Valley and now includes horticulture, beef cattle, sheep and cropping. The figure below shows population growth in the area in the last century (including historical shires such as Casino, Tomki, Woodburn and Copmanhurst).

Milk and Sugar

By the turn of last century there were farms established all over the Richmond River district, particularly on the most fertile soils. In the late 1880’s there was an upsurge in the dairying industry in the region, due to an influx of experienced dairy farmers from the south, and improvements in technology such as refrigeration and cream separators. In 1901 the New South Wales Government began a long period of regulation of the industry, and all dairies had to be registered. The First World War benefitted the farmers, with Australia becoming established as the chief supplier of dairy products to Britain. However, prices became unstable and then fell dramatically after the war. It was felt that more controls were required to stabilise the industry, and the Australian Dairy Produce Board was established in 1924. To stabilise prices a levy was placed on all home consumption so that export sales could be subsidised.

The varying fortunes of the dairies were also reflected in Richmond Valley’s sugar industry. While the First World War had seen a surge in demand for sugar and dairy products (with corresponding increased farm income), after the war the sugar industry was hard hit by a shortage of labour, particularly for cane harvesting, and during the depression farm incomes declined as prices fell. Such problems were also exacerbated by periodic droughts. Despite the difficulties, the region’s population continued to increase, helped by Australia’s increased post-war migration, and industry in the area began to diversify. The late 1930’s saw the beginning of sand mining which extracted zircon, rutile, and other minerals from the rich deposits in the beaches between Ballina and Brunswick Heads. In addition, banana and vegetable production emerged, with the Northern Rivers being a major producer of tomatoes, peas and beans for metropolitan markets until the 1980’s.
**Fruit and Vegetables**

By the 1960’s dairying was in decline and a short-lived whaling operation near Byron Bay had closed down. The region’s banana industry was also being threatened by competition from Queensland growers. As some farmers fell on hard times, others continued to do well, and much of the dairying land became occupied by beef cattle operations. The beef industry has continued to be very important for the area, with Casino claiming to be the “Beef Capital” of Australia. The first large-scale macadamia orchards were also planted at this time, and expanded rapidly in the 1970’s. Other commercial horticultural operations emerging included low-chill stone fruit, hydroponic vegetables, custard apples, sweet potatoes, zucchinis, passionfruit, lychees, mangoes, limes, avocados and mandarins.

In the 1980’s and 1990’s, vegetable industries in the Richmond Valley declined due to large scale and year round production in Queensland. However, the investor-led and tax-driven macadamia industry developed into a highly successful exporting industry. Less traditional crops such as coffee, tea, native foods, herbs and bamboo have also established themselves.

**Migration to the Coast**

The yearly struggle of the farming communities in the Richmond Valley (including relatively recent deregulation of the dairy and sugar industries) has not been reflected in the population growth in the area, which has been at an increasing rate since the Second World War. There has been a trend in Australia in the last fifty years towards population migration to non-metropolitan coastal areas, and the north-coast of NSW has enjoyed great popularity due to its relative proximity to capital cities, warm climate and natural beauty. Growth in Ballina Shire is a good example: The resident population is estimated (as of 2006) at approximately 40,000 people, and in the twenty years between 1986 and 2006 the population of the shire increased by 60 per cent at an average rate of 728 additional residents per year. Tourism is also an important industry for the Ballina, with an average of 14,000 international visitors and 238,000 domestic overnight visitors (spending $79 million per year) in the four years to 2007 (Tourism Australia).

The Richmond Valley is part of a broader region which is continuing to experience strong population growth: With a current population of 265,000, the Northern Rivers region has been growing at a rate of over 4,000 people (1.6 per cent) per year, one of the highest rates of growth in an Australian region outside the capital cities (Northern Rivers RDA).

**Agricultural Regions Lessons and Implications**

The town of St George and the Richmond River valley region are different in size and scale, but similar in their experiences of transition and adaptation. In St George the exposure to the peaks and troughs of wool and dryland cropping production has been softened by the capital works and then productive capacity of irrigated cotton farming. Recently, however, the environmental constraints from water availability have injected another layer of vulnerability to this part of the area’s economy. In the Richmond River valley the richer agricultural lands have seen several transitions already – from timber to dairy to beef to vegetables to macadamias, coffee and other niche crops. The local population and economy has been severely affected during each of these transitions, with the ingenuity and tenacity of local landowners an important factor in the region’s ability to continue to adapt.

Irrigated farming has allowed the St George community to thrive and grow. The significant decline in population from 2001 to 2006 was quite different to the upward trend in population generally experienced by Balonne Shire over the past 30 years. The population increase occurred at a time when irrigated agriculture became a more significant component of the local economy, offsetting climatic variability and the resultant job losses and population decline that have been experienced in other remote communities where dryland agriculture is the dominant land use.

St George and its surrounding region are now highly dependent on irrigated agriculture both directly and indirectly as a major source of economic activity and employment; crops account for approximately 60 per cent of the total value of agricultural production. Analysis by Price Waterhouse Cooper in 2000 for the Condamine–Balonne concluded that direct and indirect employment was around 25.5 jobs per thousand hectares, compared to 3 jobs per thousand hectares in dryland farming. In other words,
employment intensity in irrigated agriculture is approximately 8.4 times as high as for dryland farming. A regional economy focused in this way is clearly vulnerable to changes in external circumstances that do not suit its specialisation, and this has been shown to be the case in the recent drought. St George and its surrounding area should thus see diversification into irrigated agriculture as part of a strategy of social and economic resilience, but not as the ‘end point’ of adaptation.

The Richmond River valley is also still undergoing substantial social and economic change. This is due to the effects of population shifts, global competition and industry restructuring. The rapid increase in the region’s population, together with changing land use, is impacting on the natural environment, on infrastructure requirements of the region and on business and industry needs.

The economy continues to have a diverse agricultural sector, as well as a strong service base. In 2006, the highest per centage of the working population in Richmond-Tweed Statistical Division was employed in retail trade (13.8 per cent), health care and social assistance (13.1 per cent), and education and training (8.6 per cent). The agricultural sector also employs a significant number of people (5.6 per cent), but farm profitability can be volatile. For example, the NSW Department of Primary Industry points out that in the beef industry in the Northern Rivers there has been a steady decline in the prices received (after adjustment for CPI) for both light veal and store weaner calves over the last 10 years, making many coastal beef-breeding enterprises unprofitable.

The area also has a high unemployment and significant social disadvantage, reflecting its status as a ‘lifestyle’ area. Australian Research Council’s publication ‘Fault Lines Exposed’ cites several indicators of disadvantage in the Richmond-Tweed ‘rural sea-change region’ including low incomes, high mortgage and rent payments, more single-parent families and families with no working parent than average, high general levels of unemployment, and high levels of income support and pension payments. Broadening the economy and improving social outcomes in the face of high population growth and environmental constraints are thus significant challenges.

The key challenge for St George too is to diversify its economy and associated income base in ways that allow it to thrive into the future. The Murray Darling Basin Authority (2010) have pointed out that there is currently little manufacturing in the community and transport related services are predominantly reliant on the continuation of primary production. There are several firms in the region that service agriculture (e.g. machinery supplies and maintenance, agronomists etc.), and these firms have ‘already contracted to reflect changes in regional production during the drought.’ The building sector is characterised by limited growth and growth prospects due to low population growth. More positively, there is a small but expanding tourism industry, largely centered on the region’s natural and historic heritage attractions and recreational activities.

**Interpretation**

This paper examines the underpinnings of economic sustainability in regional Australia and finds that population, employment diversity, commodity prices and adaption play important roles.

Population is commonly thought to be a driver of regional economies, though our analysis of population growth and per capita income finds that while population levels will determine the level of services available in a region, per capita income has only a weak relationship with population size, and higher populations do not bring higher levels of per capita income. Australia’s economic history has more in common with the Canadian-derived ‘staples thesis’, which puts resource exploitation as the driver of economic activity, with population movements following.

In answering the questions “Which is the driver – people or jobs?”, it is clear from the case studies that for resources and commodity-based regions jobs are the driver of economic viability, and that jobs follow the capital investment made to reap a return from the resources available (either renewable or non-renewable). Recent experience also shows that high wages are required as an incentive to attract labour to regional locations – especially mining regions. Movement of people alone, as occurred post-war in the development in Australia’s capital city outer suburbs, or in many coastal areas as part of the ‘sea change’ phenomenon, has left those areas with lower levels of local jobs and/or higher levels of unemployment. Busselton marries the sea change with access to remote jobs to reduce the impact of the lower level of local jobs. By extension, this interpretation suggests that the incentives provided
by some small country towns to attract residents, in the hope this will lead to higher levels of business activity and more local jobs, may well be misguided, or at best only a short term solution.

Quantitative analysis has suggested that a ‘critical mass’ for a sustainable population is around 15,000 people. Below this level of population the ratio of flow-on jobs to natural resource base jobs increases rapidly, and above it the ratio stabilises. The ratio is another approach to assessing the diversity of a region’s economy, and the balance of local servicing and exporting jobs. The way the ratio increases with population and then stabilises above 15,000 people is an indication that a population of that size can support a broad enough mix of businesses and jobs to sustain a vibrant local servicing economy more resilient to external shocks. Below that level there are risks that dwindling services on offer will only serve to heighten population decline – risking a viscous spiral of decay.

**Resource price impacts**

At the national scale, recent analysis (Battacharyya and Williams 2011) suggests that there have been three episode of price volatility and external price shocks on the Australian economy:

1. 1920-25 surge in wool prices
2. 1950-55 surge in wool, agricultural; commodity and resource prices

Each of these shocks affected the national economy differently, and the authors conclude that:

> “While export commodity price volatility is still an Australian attribute, its impact has diminished because of industrialisation and post-industrial forces: first, by reducing export concentration, and raising the manufacturing export share (with more stable prices); and second, by reducing the relative size of agriculture and mining activity in the economy. Mining [currently] accounts for almost half of Australian exports. Wool and agriculture no longer appear to be important exports, so mining prices are doing all the work.” (p158)

Exchange rates also peaked through each of these episodes, though the authors find no strong evidence for an Australian version of the ‘Dutch Disease’ whereby high commodity prices and exchange rates force de-industrialisation during the upswing of a boom cycle.

Compared to other resource and agriculture exporting countries, Australia weathered these external price shocks quite well. The authors suggest that economic diversity has been a key ingredient:

> “Diversification made (and makes) the difference – a big and growing industrial sector before about 1970, and a big and growing service sector after about 1970.” (p172)

Current resource sector practice is reducing the impact of capital investment in mining areas on wider regional economies. The chronology of approaches to exploiting opportunities starts in the 19th and early 20th centuries with the rise of mining towns, long term settlements built on a grand scale, reflecting both the wealth that was accruing to the region and the optimism and expectations of the future.

Post war the practice changed following the visible boom and bust cycles of some once-large towns – Queenstown (Mt Lyell) in Tasmania, many of the gold towns and, more recently, Broken Hill being good examples. Resource sector practice then moved to a preference for building in the expectations of eventual decline through relocatable ‘company towns’ with much less emphasis on social infrastructure beyond that necessary to keep miners and their families engaged for the term of their contract. People and, buildings and accommodation were designed to be moved in or out as they were needed.

Current practice is based heavily on the fly-in fly-out model, where mine site economic and social infrastructure is kept to a bare minimum. Miners and their families reside in nearby ‘muscle towns’ – the staging posts for shift rotations – or even further afield in cities or regions with a desirable lifestyle (and good enough transport links to get to the airport!) like Busselton. Current practice is creating tensions in the regions where the mine workers live, as the residential towns commonly experience strong population growth with accompanying price distortions and significant lags in the development of matching social and community infrastructure. This is exacerbated by the expectation that the local or state government is responsible for funding this infrastructure, whereas in a classic mining town it was the mining company itself, the owners (who were usually predominantly local business people), or other...
local identities who seeded the wider community infrastructure which was desired as a stamp of social standing separating a mining camp from a wealthy community (eg Blainey 1954 and Blainey 2004).

There is another economic challenge at the end of the life of a mine as well. Just as the establishment of a mine requires capital, so there are capital costs in scaling down and a community’s transition out of reliance on mining. In current practice this transition is effectively paid for by the wider community (local, state or federal governments) as the spending and population loss that accompanies a mine closure happens far from the mine site itself. This is makes good economic sense from the viewpoint of the mining companies, as their owners are global investors rather than local entrepreneurs, and their interests are, naturally, in profit maximisation. It is a natural progression in business strategy from the post-war relocatable town approach, as with that approach much of the transitional costs were borne by the mine owners. In current practice, the costs of transition are borne by the community and the state. This evolution of practice has, effectively, enabled mining firms to more effectively privatise the profits and socialise the losses of their operations. It is not surprising that these approaches are followed most in mines for resources most subject to volatility in price and demand (energy and iron ore).

The case studies have also shown that price signals come in various forms, not just in direct minerals, energy or commodity prices. The significance of changes in relative prices too is clear in all of the case studies – though the way these manifest themselves varies. Price changes can be due simply to increased demand pushing prices up (as in the current mining and exploration boom), or to suppliers in other areas increasing supply so that prices fall (as with vegetable growers in the Richmond Valley), or to changes in regulations removing (as in the woolgrowing) or creating a fixed price (as in dairying in the 1920s), or to changes in technology such as Australia’s loss of competitiveness in shipbuilding, or the ability to create enough irrigated land for cotton farming in St George.

**Dynamics of adaptation**

In this paper we have tracked the prosperity of eight case study regions against external influences of commodity prices and tourist numbers through the three major boom-bust cycles since Federation. There is evidence that many regional economies became more diverse as they weathered these external shocks – though some have maintained specialisations which leave them vulnerable to future price shocks. We have found a weak link between population size and diversity which suggests that older regional economies are more likely to become more diverse with time, while regions of new population growth may be ‘born with diversity’.

Adaptation is a hallmark of regional economies and in the eight case study regions since Federation, there have been major cycles of growth and decline of population – especially in the agricultural and resource-based regions. Many of these changes align with cycles of external commodity prices, but others reflect institutional changes (deregulation of dairying, for example), changes in relative prices or changes in consumer preferences (in tourism and housing preferences). In the case study regions periods of high growth created strains on sustainability as much as periods of decline, and that the efficiency of regional economies has been constrained by inability to transition fast enough alongside price/institutional or demand movements.

The analysis presented here suggests that it is helpful in understanding mechanisms driving sustainability in regional Australia to differentiate regions according to their recent trends and prospects in terms of economic diversification and population. A suitable typology is set out in the two figures below.

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**Figure 17**

Typology of population and diversification dynamics

<table>
<thead>
<tr>
<th>Increasing</th>
<th>Growing around dominant industries, exposure to external shocks, <strong>muscle town</strong></th>
<th>Growing and diversifying <strong>thriving/reviving town</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreasing</td>
<td>Consolidating around dominant industries – no structural adjustment <strong>dying town</strong></td>
<td>Effective ‘structural adjustment’ <strong>turnaround town</strong></td>
</tr>
<tr>
<td>Decreasing</td>
<td></td>
<td>Increasing</td>
</tr>
</tbody>
</table>

| Employment diversity |

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Characteristics of economic sustainability in regional Australia
The typology recognises the importance of structural adjustment to overcome regional economic dependencies and vulnerabilities, and its interplay with population growth. Growth in both population and economic diversity marks a region as thriving, or perhaps reviving from a period of change. Where population is increasing but economic diversity is not, a region is in the midst of a dominant-industry driven growth phase – the circumstances of the so-called ‘muscle towns’ which are satellites to regions of high investment in mining. Where population is not increasing but economic diversity is, a region is in the midst of a structural adjustment phase – shedding reliance on a dominant industry for growth in other industries, while still losing population as a result of reduced activity in the (formerly) dominant industry. Where neither the local population is growing nor the local economy is diversifying a town or region is dying, as jobs dry up, people leave, and the flow-on employment base falls in consequence.

The following figure positions the case study regions in this typology.

*Figure 18*  
**Case study examples**

<table>
<thead>
<tr>
<th>Increasing</th>
<th>St George Ballarat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Mtns</td>
<td></td>
</tr>
<tr>
<td>Gold Coast</td>
<td></td>
</tr>
<tr>
<td>Busselton</td>
<td></td>
</tr>
<tr>
<td>Richmond River</td>
<td></td>
</tr>
<tr>
<td>Decreasing</td>
<td>Mt Isa Whyalla</td>
</tr>
<tr>
<td>Decreasing</td>
<td>Increasing</td>
</tr>
</tbody>
</table>

Employment diversity

The analysis in this paper suggests that there is a third dimension to this typology which drives a region from one quadrant to another – prices (as a proxy for demand for resources, commodities or destinations). The impact of prices is shown in Figure 19. Price movements determine which quadrant a region falls in, providing the link between the current status of a town or region and its exposure to external shocks. In the current economic environment, the high exchange rate is an important external price signal affecting international prices for agricultural and other commodities, manufactured goods, and tourist flows.

*Figure 19*  
**Factoring in price impacts**

<table>
<thead>
<tr>
<th>Increasing</th>
<th>Price bubble (dominant commodity dependency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreasing</td>
<td>Change in relative prices, restructuring of employment</td>
</tr>
<tr>
<td>Decreasing</td>
<td>Increasing</td>
</tr>
</tbody>
</table>

Employment diversity

In St George and Ballarat, commodity prices no longer underpin the local economy as some diversification has occurred. And for St George, climate related production (inversely linked to price for many agricultural commodities) is the main external risk factor.

In Mt Isa and Whyalla, diversification of the local economy is progressing, as both regions are recovering from major slumps in the 1970s. While substitute economic drivers have not yet emerged (populations still falling) the local economies are exploiting other opportunities. Both regions have potential for population growth to occur soon as a result of each becoming a regional hub for mining activity spawned by the current resources boom.

In the other four case study areas, growth is concentrating around their existing local specialisations, and the price signals stem from property prices and tourism demand. The Gold Coast, Blue Mountains and Busselton all have some role as dormitory towns (attractive lifestyle areas) for nearby capital cities,
with the latter two areas not yet matching population growth to provision of local jobs. Richmond River has already been through several large scale structural adjustments from one agricultural commodity to another, and has become a lifestyle and service region with reduced reliance on agriculture. The current trend in both Richmond River and the Gold Coast is for consolidation in employment growth around the service-sector foundation industries – retail, hospitality and public sector services.

Adaption and social capital

Finally, the paper has found that the depth of local social and financial capital is a vital ingredient in adaptation. In mining communities the shift from local ownership and local returns to global ownership and global returns has removed one of the pillars formerly available to those communities to support adaptation and transition. The Ballarat case study suggests that its transition in the early twentieth century was facilitated by the diversity of investments that those who had profited from gold mining had already made, setting up a well-capitalised foundation to a more diversified economy in the same location. These local ‘deep pockets’ are also recognised as important in farming communities – both as buffers against bad seasons or price falls (or both), and as platforms for alternative economic activities. Similar signs are evident in St George – of the value and ongoing significance of local capital to funding new irrigation infrastructure and the costs of establishing cotton crops.

Surviving a downturn and subsequent population loss requires a replacement economic base to motivate a new group of people to settle there – with important ingredients being both alternate activity and adequate local economic diversity. Adaptation is facilitated by a mix of ‘critical mass of population (to bring alternatives)’ and wise local investment so that the families and firms who profited from the good times have diversified their activities and retained a solid foundation to the local economy. This might be more important than, say, government initiatives to drive economic development. Local networks/institutions are an important part – if they go when the boom goes then the community has to start again, but if they survive there’s a good base for further adaptation.

The case studies suggest that economic diversity adds to sustainability, but also that lack of diversity (building on strengths) can be an asset if boom/bust cycles are well managed.

Conclusion

In conclusion, the findings from this paper suggest that economic sustainability in regional Australia appears to be more dependent on adaptation and capacity for regional transitions than on population growth. Population growth is a means to an end, but cannot be said to be the end in itself and the 19th and 20th century notions of ‘populate or perish’ have no real basis in Australia’s current economy.

Australia’s regions are likely to be still highly vulnerable to changes in commodity prices, exchange rates and consumer preferences, and that there are no mechanisms to help regions squirrel away gains from boom times for use in lean times. In fact recent history shows the opposite, that regions will reap all they can from a boom on the expectation that government assistance will help bail them out of the next bust. This pattern runs counter to the neoliberal policy framework which emphasises self reliance at the level of the business owner or farmer or region.

A key issue for policymakers is how to assist with the transitions most effectively, and clear goals will help determine the most suitable tools. A goal that no resident or worker is displaced from a transition will require one set of responses, while an alternative goal that no-one leaves in difficulty would require another. This is particularly important when calls for action are frequently driven by communities in crisis, who instinctively want to maintain the status quo, seeking support to prop up businesses that are struggling or have closed. The big picture suggests that regional economies are always volatile and supporting adaptation and transition is more fruitful in the long term.

Adaptation since Federation seems to have been helped by a mix of regulatory factors (such as supporting producer prices for example) which have worked in the short-term, and through the fortunate circumstances and the tenacity (or wealth) of local populations. An important question for policymakers is “How can adaptation be facilitated in a more strategic way?”. Other questions are “How do you build the likelihood that a community will be able to adapt?”, and “Should ‘muscle towns’ even be trying to diversify?”.
The implication for policymakers is that predicting and preparing for boom-bust cycles and assisting regions with the consequent transitions is a more forward looking and effective policy goal than using short term assistance measure to preserve the recent status quo. This is even more important when many communities are finding their growth constrained by external environmental factors, which may well prove much more difficult to adapt to or diversify around.

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